

Awareness of Intellectual Property Rights in Learning Materials at Vietnamese University Libraries

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Abstract:

Purpose: This article analyzes the current situation of intellectual property rights awareness and implementation in some typical universities of Vietnam. The article analyzes the challenges in the enforcement of intellectual property rights as well as solutions that Vietnam's higher education system needs to approach to implement in line with international practices.

Methodology/research design: The article synthesizes documents through legal documents of the Vietnamese government on intellectual property rights enforcement. 650 semi-structured survey samples were conducted at 10 major universities in the North, Central and South of Vietnam to survey and collect important information for research purposes

The result: A significant proportion of universities are not really interested in intellectual property rights and intellectual property. Besides, there are certain violations related to copyright in the teaching materials designed in the training program

Conclusion: Enforcement and protection of intellectual property rights is an important tool to bring benefits, such as enhancing the brand of Vietnamese universities. With existing intellectual property, universities need appropriate solutions to enforce current intellectual property rights

Value: The article raises the efficiency and awareness of intellectual property in universities today in Vietnam. By improving the effectiveness of IP rights enforcement in universities, it will create motivation for continuous thinking and creativity, improve competitiveness and bring many benefits and values to the university and society.

Keywords: Intellectual Property Rights, Intellectual Property Law, University Lecturers, learning materials, library, Vietnam

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I. Introduction

The university is the cradle of creation of new knowledge and technology, but up to now, the number of applications for establishment of industrial property rights protection, especially inventions, still accounts for a low proportion of the total number of applications registered at the National Office of Intellectual Property (IP). That affects the commercialization of research results and the reinvestment in scientific research. Improving IP capacity for universities, with appropriate intellectual property governance models is a current issue for universities and IP management agencies.

The IP Department said that at major universities in the world, IP issues play a very important role. Some universities have introduced IP into teaching, specialized training in IP at postgraduate level or established a dedicated IP department to manage intellectual property. These activities contribute to improving the quality of scientific research works and affirming the brand of universities. Meanwhile in Vietnam, IP in universities is still quite new. Although there have been a number of universities implementing IP activities, starting to set up dedicated IP departments, the operation is still confused. At the recent IP seminar, Mr. Dinh Van Phong, Vice Rector of Hanoi University of Science and Technology said that the university is in the top 400 leading universities in the world in technology and engineering and in the top 500 in computer science, so the university always focuses on IP and technology transfer. Since 2008, the university has established BK-Holdings Company to transfer technology and recently established a technology transfer department. But the problem is that the school's intellectual property management capacity is still weak. Mr. Tran Van Nam, Dean of the Faculty of Law, National Economics University, said that in some cases, two patents were granted, foreign experts valued technology lines worth up to millions of dollars but were struggling to commercialize their technology products.

The reason for the ineffective protection of IP rights at universities is that most schools do not have IP regulations suitable to the operating conditions of the university, leading to difficulties in distributing profits when intellectual property is commercialized. The establishment of the right to register patent protection for scientific research products has not been fully recognized by scientists, many research results have not been registered for patent protection. Although in recent years the number of university papers published in scientific journals has increased significantly, many scientists are not aware of the need to simultaneously carry out patent protection for such research results. In addition, many schools have not established organizations with the function of IP and technology transfer to support and advise scientists in registration, establishment of IP rights and technology transfer.

In fact, in order to create new value based on intellectual property, businesses cannot only rely on self-research and development but are required to link with universities. Universities must actively shake hands with businesses, set requirements to promote technology transfer. According to IP experts, to do this, schools must form organizations and human resources with expertise in IP and technology transfer. For schools that do not commercially exploit intellectual property, it is only necessary to establish a department or staff dedicated to intellectual property. Sharing about this trend, Ms. Elizabeth Ritter, an expert of the World Intellectual Property Organization (WIPO), said that in the United States, before 1980, public universities and research institutions did not focus on transferring research results, but the demand for intellectual property changed the relationship between research institutes, university to business. Since the introduction of regulations on public research institutes and universities owning inventions funded by the state to establish technology transfer centers, intellectual property management, transfer of research results and inventions in universities have changed rapidly. A similar process is taking place in Brazil. In 2000, Brazil had only 4 schools interested in intellectual property. In 2006, Brazil enacted the Law on Innovation and Science and Technology, which requires universities to focus on transferring research results and establishing technology transfer centers. Up to now, 400 universities have established technology transfer centers, the number of patent applications of universities has increased. Funding from technology transfer has given universities significant resources to reinvest in research. Vietnam's universities cannot deviate from this trend.

The Ministry of Science and Technology said that the world is fiercely competitive in terms of economy, especially in IP, so it is necessary to develop a development strategy in the field of IP, including promoting IP activities at universities. Currently, the Intellectual Property Development Program managed by the National Office of IP has projects to improve IP capacity for universities, organize intensive training classes, create professional human resources on IP at schools. At the same time, the Department of IP is also working with WIPO to implement the IP environment creation project to create an IP ecosystem, build a network of IP organizations of research institutes and universities, helping IP activities develop strongly. Within the framework of the project, there will be foreign experts with extensive experience in technology transfer at research institutes and universities around the world to analyze intellectual property management, technology transfer and commercialization of intellectual property to share benefits. From there, it will help schools build an intellectual property management model, promote technology transfer.

Since the promulgation of the IP Law in 2005, IP activities in general and in universities in Vietnam in particular have made progress. In the period 2006 - 2016, the total number of industrial property applications received by the Department of Intellectual Property (Ministry of Science and Technology) on average each year increased by about 10% - 15%;(Minh Duc & Candidate, n.d.; D. Xuan et al., 2020) The Department of Horticulture (Ministry of Agriculture and Rural Development) received 927 applications for protection of rights to plant varieties and granted 432 protection certificates for plant varieties, of which, applications establishing rights of Vietnamese origin accounted for a much higher proportion than applications originating from abroad (about 2.5 times)(Thi et al., 2022). In 2019, the IP Department received 68,386 establishment applications, an increase of 18% over the same period in 2018. Of which: 7,290 patent applications (including 1,128 applications of Vietnam); (Tech. & 2008, 2008)3,091 industrial design applications; 48,374 national trademark applications; 9,017 international trademark applications registered through the Madrid system; 10 applications for geographical indications, 244 applications for international registration of Vietnamese origin. (Tuan Anh, 2012)Along with that, IP activities in universities have also gradually increased, for example, in the period from 2008 to now, the number of IP applications of VNU-HCM has constantly increased, the average new registration rate reached 130%/year. Since the beginning of 2015, VNU-HCM has focused on intellectual property with high commercialization ability; The total number of applications for IP protection as of June 2019 is 445.(B. Xuan, 2008) Of which, 176 applications were granted, reaching 39.5%; 176 applications are in the content appraisal stage and 93 applications are in the formal appraisal stage; Of the total number of applications granted, accounting for more than 50% are inventions, utility solutions and integrated circuit layout designs, along with a number of training institutions such as Hanoi (T. Dao et al., n.d.)National University, Hanoi University of Science and Technology (in 2019 in the top 400 universities in the world in technology and engineering and in the top 500 in science computer. Since 2008, the university has established BKHoldings Company for technology transfer and has just established a technology transfer department), Ton Duc Thang University (According to the Web of

Science or WoS database (Clarivate, USA), in 2019 ASEAN countries have published a total of 63,445 works in ISI journals. In the group of 10 leading universities in ASEAN, Vietnam has a representative of Ton Duc Thang University (TDTU), ranked 7/10 on the ranking, Duy Tan University, Can Tho University... there have also been strides in IP activities.(Hai et al., n.d.) However, in the general level of the higher education system, the enforcement of IP rights in universities is still modest, not focused on comparing both domestically and regionally.(QJ & 2009, n.d.) Many universities do not have regulations, there is no department in charge of IP management, the value exploited from intellectual property is not high, awareness and violations of IP rights still exist,... Therefore, the brand and competitiveness of education in Vietnam compared to the region as well as in the world are still limited. (Review & 2019, n.d.)The study of the current situation of grasping and enforcing legal regulations on IP to offer solutions to improve the effectiveness of IP rights enforcement in universities helps improve the brand and competitiveness of each school and the whole higher education system, is the basis for the development of education, knowledge economy, international integration and socio-economic development(V. Nguyen, 2008)

II. Methodology

According to Clause 1 Article 4 of the Law on Intellectual Property 2005 (amended 2009, 2019), intellectual property rights are the rights of organizations and individuals to intellectual property, including copyright and rights related to copyright, industrial property rights and rights to plant varieties.(T. N. Dao et al., 2021)

- Copyright is the right of organizations and individuals to works created or owned by them.
- Copyright-related rights (hereinafter referred to as related rights) are the rights of organizations and individuals to performances, sound recordings, video recordings, broadcasts, satellite signals carrying encrypted programs
- Industrial property rights are the rights of organizations and individuals to inventions, industrial designs, semiconductor integrated circuit layout designs, trademarks, trade names, geographical indications, business secrets created or owned by them and the right against unfair competition.
- Rights to plant varieties are the rights of organizations and individuals to new plant varieties they choose to create or discover and develop or enjoy ownership rights. (Clauses 2, 3, 4, 5 Article 4 of the Law on Intellectual Property 2005 (amended 2009, 2019)(Miroshina et al., n.d.)

The grounds for arising and establishing intellectual property rights are specified in Article 6 of the Law on Intellectual Property 2005 (amended 2009, 2019), specifically as follows:(Spoo et al., n.d.-a)

- Copyright arises from the time the work is created and is expressed in a certain material form, regardless of content, quality, form, medium, language, published or unpublished, registered or unregistered.
- The relevant right arises since the performance, sound recording, video recording, broadcast, satellite signal carrying the encrypted program is shaped or performed without prejudice to the copyright.(Property & 2014, n.d.)
- Industrial property rights are established as follows:(C. P.-Colum. J. A. L. & 2008, n.d.)
- Industrial property rights to inventions, industrial designs, layout designs and trademarks shall be established on the basis of decisions on granting protection certificates by competent state agencies according to registration procedures prescribed in the Law on Intellectual Property 2005 (amended in 2009, 2019) or recognition of international registration under treaties to which the Socialist Republic of Vietnam is a contracting party.(Duong, 2018)
- Industrial property rights to well-known trademarks are established on the basis of use, regardless of registration procedures.
- Industrial property rights to geographical indications shall be established on the basis of decisions on granting protection certificates by competent state agencies according to registration procedures specified in the Law on Intellectual Property 2005 (amended 2009, 2019) or under treaties to which the Socialist Republic of Vietnam is a contracting party;
- Industrial property rights to a trade name shall be established on the basis of lawful use of such trade name;
- Industrial property rights to business secrets are established on the basis of lawfully acquiring business secrets and implementing the confidentiality of such business secrets;(D. Nguyen et al., n.d.)
- The right against unfair competition is established on the basis of competitive activities in business.(E & 2021, 2021a)
- The right to plant varieties is established on the basis of a competent state agency's decision to grant a plant variety protection certificate according to the registration procedures specified in the Law on Intellectual Property of Vietnam in 2005 (amended in 2009, 2019).(2175-0947) & 2024, 2024)

This study was conducted with 10 Vietnamese universities currently teaching majors such as business administration, banking and finance, law, social work, logistic, e-commerce, tourism and travel, cultural management, etc.(R. N.-Brook. J. I. L. & 2001, 2001)

650 questionnaires were conducted with quantitative information collection to learn about perceptions and behaviors performed by lecturers currently teaching directly to students at higher education institutions.

On the other hand, in-depth research was conducted with 50 managers in Vietnamese universities on intellectual property enforcement mechanisms as well as other contents mentioned in this study.

Respondents	Amount	Ratio
Faculty-Department Leaders	50	7.61
Lecturer	250	38.4
Waitresses	50	7.61
Student	300	46.15

III. Result and finding

Understanding of IP law is considered in aspects such as: learning about IP laws and regulations; participate in IP classes, trainings, or seminars; have a basic understanding of IP,... In particular, focus on IP rights violations in universities such as not citing references, having IP regulations as well as equipping anti-plagiarism tools. The survey results were conducted with a number of learners and staff and lecturers of 18 universities; Interviews were conducted for a number of lecturers, learners and faculty administrators for the data according to (Figure 1)

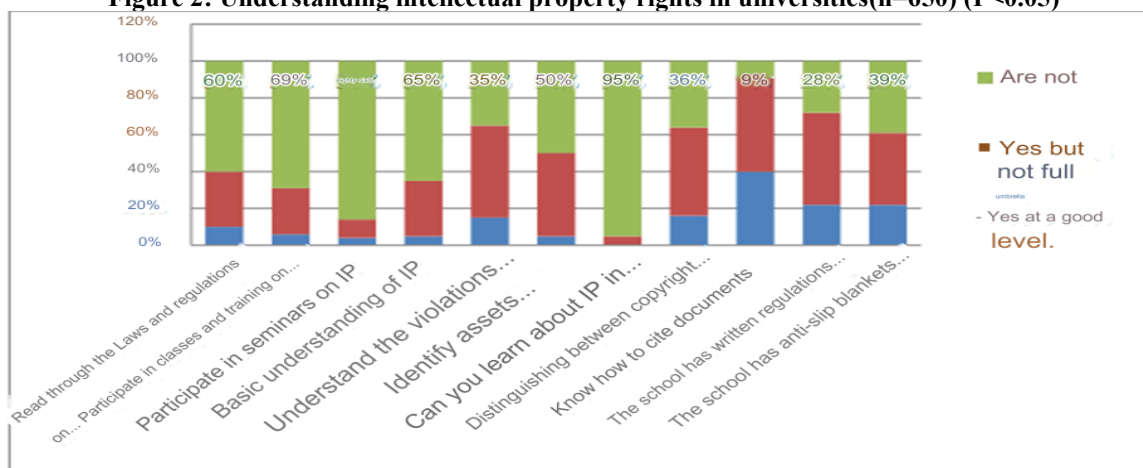
Figure 1: Legal awareness survey on intellectual property in universities (n=650) (P<0.05)

Content	Yes at a good level.	Yes but not full	Are not
Read through Laws and regulations on IP	10%	30%	60%
Participate in classes and training on IP	6%	25%	69%
Participate in seminars on IP	4%	10%	86%
Basic understanding of IP	5%	30%	65%
Understand clearly IP violations	15%	50%	35%
Identify intellectual property assets in the school	5%	45%	50%
Can you learn about IP in the e-learning program?		5%	95%
Distinguish between copyright and ownership of works	16%	48%	36%
Know how to cite documents	40%	51%	9%
The school has written regulations on intellectual property	22%	50%	28%
The school has anti-copying (plagiarism) software.	22%	39%	39%

Source: analysis results from survey data, 2023

Data shows that the number of staff, lecturers and students with IP awareness in universities accounts for a low proportion, the average percentage of IP knowledge accounts for about 30%, of which only 6.3% have a good level of IP knowledge and nearly 70% of staff, lecturers and students are not concerned about IP rights. The survey results also showed that about 42.5% of staff, lecturers and students were not aware of IP violations as well as did not identify intellectual property in the University. This is because the organization of propaganda, organizing seminars and training on IP rights enforcement in universities is not concerned, the rate of learning about IP in the training program accounts for only 5%. At the same time, the survey results also showed that only 22% of schools have a written system of IP regulations and have good anti-plagiarism software.

Figure 2: Understanding intellectual property rights in universities(n=650) (P<0.05)



Source: analysis results from survey data, 2023

IP assets in higher education institutions are very diverse, but the full awareness of IP assets and products is not much, thereby leading to the establishment and exploitation of intellectual property in the university is not high; as well as problems of IP violations that occur a lot. Identification and understanding of intellectual property in universities is considered in terms of the number of intellectual property listed. Survey results according to (Figure 3)

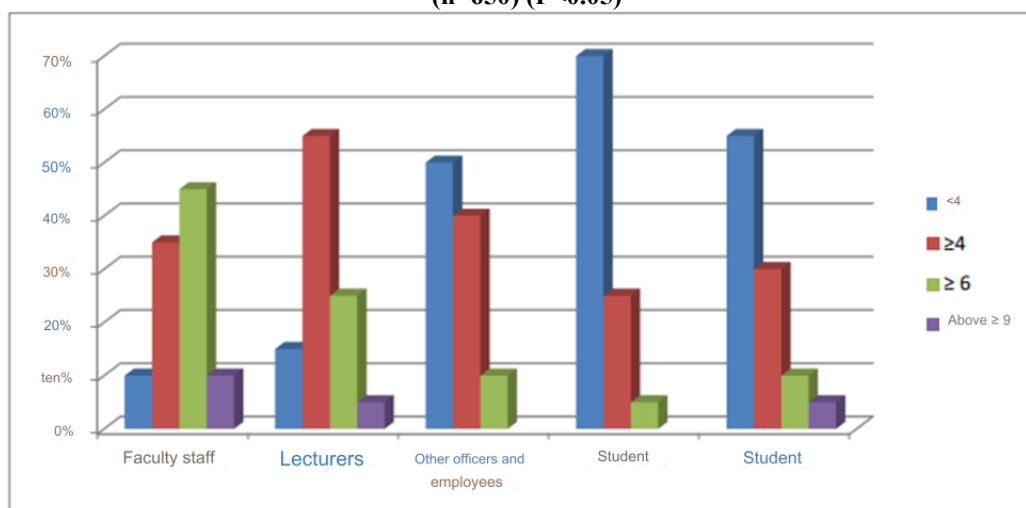
Figure 3: Survey listing intellectual property in universities (n=650) (P<0.05)

Object of investigation	Number of products listed			
	<4	≥4	≥6	Above ≥9
Faculty staff	10%	35%	45%	10%
Lecturers	15%	55%	25%	5%
Other officers and employees	50%	40%	10%	
Student	70%	25%	5%	
Student	55%	30%	10%	5%

Source: analysis results from survey data, 2023

According to the results of the survey Figure 3 and interviews, many staffs, lecturers and students do not recognize many IP "products" in the school, but only list some IP "products", such as: Textbooks, books, scientific reports, theses, dissertations, initiatives, management software, computer programs. While IP assets in higher education institutions are very diverse, such as: Dissertations, dissertations; Textbooks, books, lectures; Scientific works; Research topics at all levels; Technical solutions; Computer programs, management software systems; Scientific reports; Articles published on the website of the school and its units; Speeches and other speeches; Products of scientific and technological research topics, projects, tasks; Curriculum, set of evaluation criteria, subject description, subject detailed syllabus, lecture syllabus, research situations, entrance exam questions, exam banks; Plant varieties from research results of teachers and students; Industrial design; Website, email, domain name; School name, brand;... The survey and analysis results also show that the level of awareness varies between schools in localities such as Ho Chi Minh City on average higher than in the province, as well as between staff, lecturers and students also differ between courses and the duration of seniority in education of lecturers (without in-depth analysis of student surveys between disciplines, sector) (figure 4)

Figure 4: The level of awareness of intellectual property rights among groups within the university (n=650) (P<0.05)



Source: analysis results from survey data, 2023

The awareness of the importance and interest of many university leaders about IP is not high, in some cases IP activities are less neglectful than training and promotion activities for enrollment. Since then, there has not been adequate investment in IP management, so there have been no policies in encouraging the promotion of thinking, creativity and scientific research in the university; not resolute in preventing and handling IP violations in schools, leading to low awareness of a part of staff, lecturers and learners about IP rights protection and protection, not having a sense of proactively protecting their own rights as well as respecting the IP rights of others. Many universities (over 50%) do not have a dedicated IP management department as the focal point for detecting, guiding and supporting IP procedures (6/10); The team dedicated to scientific activities is insufficient and weak. Regulations on IP are not yet available (5/10), in some cases there are but the functions and tasks of this department are still general and not specific

The above fact shows that the phenomenon of violations of IP regulations in most universities is still many, some common violations: - Copyright is infringed in the case of lecturers, students doing scientific research, there are cases where teachers guide students, students do dissertations, dissertations ... After completing the project, the instructor shall announce the work of his students and students for scientific research works, used for different purposes, in some cases staff and lecturers use scientific research topics and works to obtain work achievements for individuals.

Figure 5: Survey of intellectual property violations in universities (n=650) (P<0.05)

Survey content	Are not	Have			Forget
		1-2 times	>3	Don't remember the number of times	
Photocopy textbooks and study materials		55%	25%	18%	2%
Use photocopied documents and textbooks		65%		33%	2%
Using non-copyrighted computer software		70%	5%	25%	
Handled for IP violations	100%				
Reporting acts of IP violation	100%				
Buy documents, download essays, theses, and dissertations on the internet	5%	45%	35%	15%	
Do not cite or incorrectly cite reference sources	3%	57%		37%	3%

Source: analysis results from survey data, 2023

It can be seen that the level of IP violations in most schools is still widespread, complex and increasing. Common IP infringement in universities is the phenomenon of copyright infringement (printing, photocopying, using textbooks; using copyright-free computer software, not citing references,...).

IV. Discussion

There exist and limitations in the enforcement of intellectual property regulations in universities in Vietnam today, according to us, due to the following reasons:

Registration of intellectual property protection. In universities, there are many research works of lecturers and researchers who are creative compared to the technical level in the world but do not register intellectual property protection for many reasons. This makes the intellectual property of scientists not protected under the law and at risk of being "stolen" Copyright is likely, especially solutions that are difficult to keep know-how (Rahul Mishra et al., 2024) In fact, in recent years, the registration of intellectual property of scientists in universities has been very limited, especially intellectual property that must be registered to establish rights and protection under the law (such as inventions, inventions, useful solutions, etc ...) or to minimize the burden of proving rights (works, video recordings, sound recordings,...). According to statistics of the National Office of Intellectual Property, by the end of 2006, there were 18,157 applications for patents/utility solutions filed at the National Office of Intellectual Property, of which about 2,106 were from Vietnam (accounting for about 11.5%), foreign accounted for 88.5%. The number of patents/utility solutions granted to Vietnamese is 9.9%, to foreigners is 90.1% (Daneshmand et al., n.d.). From the above data, although in our country the legal system on intellectual property is increasingly improved, registration procedures are simplified, but the interest in registering intellectual property protection of scientists in general and scientists in universities in particular has not become a habit and demand.(E & 2021, 2021b)

Information on science and technology is not up-to-date. Information about science and technology has become the property of mankind. Lack of information will hinder creative activity. In fact, many scientists register science and technology topics and tasks but are not interested in information on intellectual property. Individuals and organizations do not have the habit and need to use patent information before researching the topic, leading to low or overlapping research results in the process of creating research results that have been revealed in the patent information data. According to statistics, every year only about 200 people are interested in exploiting information about inventions even though there is a patent information system (Al-Khaled et al., n.d.) As we know, the registration (establishment of rights) or the widespread publication of research results in universities not only benefits scientists and universities but also adds to the arsenal of human intellectual property. On that basis, scientists and organizations can look up when choosing scientific topics and tasks,... Avoid duplication that costs money and effort but does not bring efficiency. In our opinion, in addition to the patent/useful solution information system of the National Office of Intellectual Property, information on science and technology needs to be publicized into a system of specialization in each field, research and implementation projects,... for the most favorable lookup. Currently, the National Office of Intellectual Property has built intellectual property libraries in Da Nang, Thua Thien Hue, Binh Dinh with necessary tools and inventions, but it is necessary to have a wide notice of to those in need and guide the search and application of patent information in these localities. (Dinh et al., 2021)

Some science and technology topics in universities have not met social requirements, research results are less competitive, so it is necessary to create and promote Ny to develop a technology market. However, "technology must be distinguished from the characteristics of the accumulated gray matter content, which is transferred through teaching in technological training schools at the postgraduate, undergraduate, college and intermediate levels. Operative technologies are often the subject of production know-how established on the basis of patents and licences informed, consulted and brokered for application in production and business" (Benyamin Esho, 2021) Therefore, post-research (creating new, specific results, low-cost, competitive applications) is especially important to be able to find partners to apply research results, technology transfer brings new practical effects to manufacturers, interested businesses. According to incomplete statistics, during the 5-year period from 2001 to 2005, schools in the engineering – agriculture, forestry – fishery sector have implemented 10,250 science and technology contracts and technology transfer, achieving revenue of over VND 1,000 billion. For research results (not basic science) but not associated with social and business life, subjects often do not care about intellectual property. In this regard, it was commented that "Many scientific research topics related to engineering, technology, economics and agriculture have not taken the main goal of serving enterprises, so scientific research activities are also divided equally to calculate points, appoint positions, etc Titles, research results that are far from the goal of serving the business are inevitable" (Tsegaye et al., 2021). In scientific research at universities, there must be interdisciplinary coordination, real competition and adequate funding investment to be able to produce research results of recognized quality, protected and transferable technology.

Universities do not yet have a mechanism to establish, enforce, protect infringed intellectual property rights and implement technology transfer. Scientists in universities focus only on the research of creating

intellectual property without knowing or caring about the registration procedure for establishing rights to such assets. Currently, most universities do not have specialized departments or centers for intellectual property and technology transfer to advise or register intellectual property protection, acting as a bridge between scientists and businesses,... Experience of Hanoi University of Science and Technology has established and put into operation the Intellectual Property Department under the Department of Science and Technology since 2006, operating very effectively (E & 2021, 2021b). Also from the experience of this school, due to not registering for protection, the continuous brick kiln building of standing type, composite trash can has lost copyright after only one technology transfer. According to statistics before the establishment of this group, there were 20 patented inventions/useful solutions, since its establishment, it has supported procedures for 30 a.m., 100 patented inventions/useful solutions and 15 trademarks with the owner being Hanoi University of Science and Technology (Le et al., n.d.). In fact, the fact that intellectual property offices and technology transfer are still very new in universities has created invisible barriers to the commercialization of faculty research results and discouraged creativity and the ability to develop ideas among students

From the above-mentioned issues, we believe that the role of intellectual property is very important in scientific research and technology transfer at universities on the basis of the cycle: Creation of intellectual property - Protection of intellectual property - Exploitation of intellectual property - Qualification improvement, bring economic efficiency (motivation to continue creating intellectual property).

The valuable intellectual property system protects the intellectual property of scientists and universities. Through the registration of rights (inventions, inventions, useful solutions, protection certificates for plant varieties,...), intellectual property is protected by law and from there we are completely assured in technology transfer and have the right to request sanctions against any individual, organizations that commit infringement. In case research results are not registered for protection, other individuals or organizations can take advantage of the opportunity to register and be recognized in accordance with the intellectual property law, scientists will face many troubles in litigation or become violators again (if technology transfer of their research results but has been registered for protection by others). (Zhou et al., 2019). Thus, in the university environment, the environment of intellect - brainpower, scientists need to be fully aware of the role of intellectual property to protect the fruits of their creative labor and their legitimate rights and interests. In order to effectively implement intellectual property protection, universities need to have an Intellectual Property and Technology Transfer Team. For universities with many research results, it is necessary to establish support centers on intellectual property and technology transfer to help scientists in identifying such research results as inventions, useful solutions, copyrights, trade secrets, etc ... establish, enforce, protect intellectual property rights, assess commercial viability and find "outputs" for intellectual property. (Spoo et al., n.d.-b)

Through registration of intellectual property establishment, publication of research results increases the prestige of scientists, enhances the brand for universities. On the one hand, research results that are registered for protection (such as patents/utility solutions,...) will be stored in the global information system. (Xuyen et al., n.d.) Therefore, not only researchers, domestic business organizations but also foreign scientists and organizations know about such intellectual property, creating many opportunities for exchange, cooperation, investment and technology transfer not only for scientists but also for universities. As a result, the "brand" reputation of scientists, research groups and universities is increasingly enhanced, scientifically grounded and gaining competitive advantages when participating in bidding for domestic and international projects and projects. (Economics & 2021, n.d.)

Research results in universities, if widely published, will create conditions for university staff and students to refer to in teaching and learning. In an educational environment at the university level, these scientific works will be a valuable reference resource for students and teachers. At the same time, on that basis, create conditions for learners to develop or apply in practice to bring efficiency to society (not just for business purposes). Scientific and technological research activities of universities must be associated with training, associated with scientific research in other training institutions and enterprises. Through the implementation of the application, technology transfer brings significant revenue to the University. (Sakshi & Khan, 2021) Many universities with large revenues from science and technology activities have invested significantly again in this field, becoming reliable centers of scientific research and technology transfer at home and abroad. However, valuable research results are easily copied and stolen, losing the novelty of intellectual property. Therefore, before applying or transferring technology, intellectual property should register for rights protection in accordance with the law on intellectual property. In the current conditions of building a knowledge economy in our country, scientific research activities in universities create different intellectual properties so that businesses have the right to choose applications that create a variety of goods, reasonable prices, Good designs compete with foreign countries. In fact, businesses and organizations in need often tend to import foreign technology (fast and cheap). Therefore, the State shall adopt reasonable investment policies so that many innovative and effective research results can be transferred or put into production to meet the interests of the State, the interests of enterprises and the interests of consumers. (Khanum et al., 2024)

V. Conclusion

One of the particularly important conditions for protecting findings from scientific and technological research, promoting technology transfer and attracting investors for technology development is the protection and enforcement of intellectual property. Intellectual property creates a system that allows scientists to have intellectual property that benefits from their own creation. Conversely, the existence and development of intellectual property must also be based on the creation of intellectual property. This is the core issue of developing the intellectual system and bringing efficiency and practical benefits to each country. In universities, scientific research activities are an important task to build the university into a center of training, scientific research of high quality and transfer of research results into life. In fact, most universities and scientists only focus on scientific research, but pay little attention to intellectual property protection, while students do not have a basic understanding of intellectual property and technology transfer. This has created a huge gap in knowledge and awareness of intellectual property in universities. Therefore, the creation of intellectual property and intellectual property protection in universities today is very necessary to meet the requirements: the State – Schools – Scientists – Manufacturers and enterprises. In order for the higher education environment to develop healthily, promote intellectual resources among staff, lecturers and learners, in order to bring value from intellectual property, increase the brand and class of the staff and the University, help socio-economic development, There is a need for mechanisms, policies and measures to improve the effectiveness of IP rights enforcement in universities, which depends a lot on the conception, attention and drastic level of university heads to IP rights enforcement, along with raising awareness and "IP culture" among staff, lecturers and learners. From there, it will promote and improve the effectiveness of IP rights enforcement in universities in the current Vietnamese educational environment.

Ethical Statement

No animals were used in this study; thus, no ethical approval is required.

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Declaration of Conflict of Interest

The author declares no conflict of interest.

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