

6. INTELLECTUAL PROPERTY TEACHING IN IRAN

Mitra Aminlou*

ABSTRACT

In the current century, knowledge is an important source of value; intellectual asset management is of paramount importance. The history of Intellectual Property (IP) dates back to the 15th century, although its legislation dates back to the 19th century.¹ Since IP is not confined to lawyers, and the law belongs to the public, IP education particularly affects the process of law enforcement. However, the history of IP education only dates back to about three decades. These tutorials are based on scattered case education and academic trainings added over time. The history in Iran is nearly two decades. Due to the wide scope of IP, various institutions have been designed their own training. In this research, a collection of units related to the subject of IP and its training in the framework of the WIPO Platform have been extracted for the first time in four categories of general, specialized, distance learning and university academic education. Information is also tailored to the target groups of the training.

In the end, given the variety of training in the field of IP, the type of training and target groups, recommendations for the training of IP have been introduced: standardization of educational resources; provision of educational content in the local language; training of the trainers; requirement for an IP course for all graduate students; an IP major designed for students; and development of education for the public and schoolchildren.

* Mitra Aminlou, PhD. Student, Management of Technology, Allameh Tabatabaei University, m_aminlu@yahoo.com.

¹ Kenneth Carlaw et al., 'Beyond the Hype: Intellectual Property and the Knowledge Society/Knowledge Economy' (2006) 20 J. Economic Surveys 633
<<https://onlinelibrary.wiley.com/doi/pdf/10.1111/j.1467-6419.2006.00262.x>> accessed on 19 April 2019.

¹ Thomas Fiala, 'Intellectual Property Rights in the Knowledge Economy' (Swiss Re Institute, 15 September 2011).

² David Kappos, John Villasenor and Tiffany Misrahi, 'Intellectual Property Rights in the Global Creative Economy' (World Economic

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1. INTRODUCTION

Though the history of Intellectual Property (IP) dates back to 15th century, IP legislation began after a few centuries of delay. Over the years, the role of IP in the process of innovation and development of the knowledge-based economy has become more and more evident. The impact of the first industrial revolution and how to protect IP afterwards is an issue of importance in reducing uncertainty, technology development and complementary property.¹ Two major theories have created the basis of IP rules in these years: reward theory and incentive theory.² IP legal systems have been challenged in creating interactions between the needs of innovators for profit, and the community's need to benefit from the results of innovations. This challenge has increased with the growth of digital technology (Withers 2006). IP laws have attempted to serve as tools for regulating and facilitating trade in knowledge of innovative goods and services.³ Although IP may be a legal concept beyond the technical, commercial, and industrial areas, its fruits appear in all spheres of human life and industry.⁴ Therefore, in addition to IP laws, training is important not only for lawyers, but also for professionals in other areas. IP training has started for more than its legal impact. These trainings have become more important in IP in the past three decades with the growth of new issues and they are academically pursued. The existence of international laws and agreements, such as the TRIPS Agreement, has led to the development of a

Forum, Davos, October 2013)

<http://www3.weforum.org/docs/GAC/2013/WEF_GAC_IntellectualPropertyRights_GlobalCreativeEconomy_Report_2013.pdf> accessed on 19 April 2019.

³ *ibid.*

⁴ Jeremy de Beer and Chidi Oguamanam, 'Intellectual Property Training and Education: A Development Perspective' (ICTSD Programme on IPRs and Sustainable Development, 2010).

range of training both in terms of content and development for developing countries.⁵

In a follow-up to the World Intellectual Property Organization (WIPO) Round Table held in 1979 for instructors in industrial property laws, the International Association for the Advancement of Teaching and Research of Intellectual Property was launched in 1981. The organization has annual meetings for members from all over the world, and its director and board are elected every two years.⁶ Considering that in the modern world IP is beyond protection and positive, the teaching of IP at college level, along with case studies, has become increasingly important.⁷ Teaching IP is a challenge in comparison with teaching other areas, both in terms of the fact that IP is an interdisciplinary field, and in addition to theoretical knowledge, it needs practical capabilities.⁸ The application of the IP is different in each of its functional areas. For example, the teaching style for law students differs from the teaching style for students without legal background.⁹ Training in this field is also needed not only at the student level, but also for technical professionals, judges and even the public.¹⁰ Different pedagogic approaches are required in view of the educational audience and the educational objectives. These approaches can be problem-based learning, inquiry-based learning, project based, active learning or experiential learning.¹¹ The issue of IP education

in developing countries has other considerations in addition to determining the audience and educational objectives. WIPO has responded by launching educational and research programs to raise public awareness in these countries.¹²

A preparatory program for the training of WIPO personnel was implemented as part of the WIPO development cooperation programs. Then, educational programs were implemented at universities in some of these countries, which led to the development of IP knowledge.¹³ Due to the limited resources of the organizations in the developing country's government, specialists, IP organizations and WIPO assisted them as well.¹⁴ IP education, therefore, was a critical tool for governments, the industry, the private sector, and in diverse government sectors. Nowadays, IP education has found new dimensions due to the high pace of technological development, social development and economic development.¹⁵ More IP professionals should be trained and empowered on this path. Their expertise in IP and simultaneously application areas should be broadened to overcome business challenges. This issue in some countries is not only subject to the limited number of professors, but it also faces qualitative challenges.¹⁶ On the other hand, the teaching of international rules and procedures is also required with the convergence of international laws along with teaching national laws.¹⁷ An important topic in IP training is to answer the three main

⁵ World Intellectual Property Organization (WIPO), *WIPO Intellectual Property Handbook* (2nd edn., WIPO 2008) available at <http://www.wipo.int/edocs/pubdocs/en/intproperty/489/wipo_pub_489.pdf>.

⁶ Yo Takagi, Larry Allman and Mpazi A. Sinjela, *Teaching of Intellectual Property Principles and Methods* (1st edn., WIPO & Cambridge University Press 2008).

⁷ WIPO Department for Transition and Developed Countries, 'Intellectual Property Teaching in Countries in Transition: Version One' (WIPO, 2013).

⁸ Ruth Soetendorp, 'Approaches to IP Teaching in Different Disciplines' (EIPTN July 20, 2009) <https://www.ipmall.info/sites/default/files/hosted_resources/Teaching_IP/Ruth%20Soetendorp.pdf> accessed on 20 April 2019.

⁹ World Intellectual Property Organization, *WIPO Intellectual Property Handbook* (2nd edn., WIPO 2008) available at

<http://www.wipo.int/edocs/pubdocs/en/intproperty/489/wipo_pub_489.pdf>.

¹⁰ Soetendorp (n 9).

¹¹ WIPO (n 8).

¹² *ibid.*

¹³ *ibid.*

¹⁴ Takagi (n 8).

¹⁵ *ibid.*

¹⁶ Peter K. Yu, 'Teaching International Intellectual Property Law' (2008) 52 St. Louis U. L. J. 923 <<http://law.slu.edu/journals/archive/SLULJ/v55-3>>.

¹⁷ Such as the Agreement on Trade-Related Aspects of Intellectual Property Rights, Apr. 15, 1994, Marrakesh Agreement Establishing the World Trade Organization, Annex 1C, 1869 U.N.T.S. 299, 33 I.L.M. 1197 (1994); Paris Convention for the Protection of Industrial

questions of why, what and how. IP lecturers should answer these three questions in setting goals and curricula so that they can achieve educational goals and expected outcomes.

2. INTELLECTUAL PROPERTY HISTORY IN IRAN

IP laws in Iran formally began 93 years ago with the adoption of the first industrial property law, which generally referred to brands at the time. One year later, the trademark registration office was established in Iran. The law on the reform of the subject of inventions entered the law in 1931. The IP laws of Iran were amended in 1959 by joining the Paris Convention and conformed to international law. In 2002, Iran joined the World Intellectual Property Organization (WIPO) treaty and then joined a number of treaties related to this organization.¹⁸ IP training was held in the form of meetings and public speeches before 2003.¹⁹ A course in intellectual property rights (IPR) was established for academic and postgraduate degrees at the University of Tehran for the first time in 2003. This course was for law students, and thereafter, several other universities set up the postgraduate course in the following years. This was the first national experience in educating academic students in this field.²⁰ In 2006, the Iran Nanotechnology Initiative Council launched three infrastructures with the aim of developing nanotechnology; one of them was focused on intellectual property. Thus, 10 national universities and research institutes were selected in terms of high ranked research activities. A representative from each was selected and was trained IP in three stages. Tutorials included elementary, advanced, and supplementary training; the final series of trainings was held in the presence of foreign professors, including from Germany. During these courses, in addition to teaching theoretical foundations, practical activities, especially in the field of patent searches, were taught by teaching specific

software in this field (QPAT). The results of this continuous and ongoing training to a steady target group also had some positive outcomes, which led to the establishment of academic IP offices. In the following years, other IP management organizations gradually developed and structured their organization's education. During these years, several educational courses were organized by the WIPO in cooperation with various executive agencies, in particular with the National Intellectual Property Center (IPC). One of these efforts was the launch of Iran Patent Center under the supervision of the Vice President of Science and Technology which aimed to develop the formation of academic IP offices, to raise the level of awareness and structured IP training and to assist researchers for patent filing abroad. More details will be provided in the relevant section. Another program has been launched jointly with the IPC and WIPO named TISC (HUB & Spoke), with the main objective of the scientific empowerment of a number of leading universities and institutions. These tutorials focus on aspects of IP content, technology development, and commercialization. Finally, leading and trained institutions should also help other institutions to upgrade. The government approved a proposal through the Ministry of Justice in 2016. Accordingly, the Ministry of Justice has the mission of planning and directing IP training. The Intellectual Property Training Center (IPTC) was set up at the Ministry of Justice in line with this bill of the Cabinet of Ministers; its executive activities will be explained in the next section.

If we want to look at the upstream rules on IP, it should be acknowledged that the national comprehensive scientific

Property, March 20, 1888, as revised at the Stockholm Revision Conference, July 14, 1967, 21 U.S.T. 1538, T.I.A.S. No. 6903, 828 U.N.T.S. 305.

¹⁸ Hamid Zaboli, 'An Introduction to Intellectual Property' (*yazdsabt*, 4 September 2017) <<http://yazdsabt.com/?p=3645>> accessed May 2018.

¹⁹ Tarbiat Modares University, 'Intellectual Property Rights' (2018) <<http://www.modares.ac.ir/?siteid=58&pageid=4672&owner=4672>> accessed May 2018.

²⁰ Law No. 48584 of January 4, 2011 on Global Scientific Roadmap, <<http://www.wipo.int/wipolex/en/details.jsp?id=14430>> accessed 20 April 2019.

plan was approved in January 2011.²¹ Its executive policy was approved by the Supreme Council of the Cultural Revolution two years later. In paragraph 3.1 of the Macro strategy 1, there is emphasis on industrial property over all concepts, international laws, and functions of the intellectual property system. Moreover, in paragraph 3.7 of the Macro strategy 1, the issue of education and development of human resources associated with industrial property has been emphasized. Paragraphs 3-8 and 3-9 focus on the strengthening of national research in this field and the development of culture in the field of wealth creation in IP. However, in the 5th Five-Year National Development Plan (2011-2015), Note 2, Clause V and Article 8 of this Law, it is inserted that IP, assets and know-how created from contracts with universities and public institutions belong to the university.²² This case has been repeatedly reiterated in Article 64 of the Sixth Development Plan (2016-2021).²³ Moreover, the government is obligated in Article 4 of the Sixth Development Plan to provide mechanisms for protecting property rights and wealth creation and value creation. The subject of technology education in the same article emphasizes innovation with the aim of developing export markets and technology transfer. Often, laws that are introduced are monitored annually by progress reports. The present study is conducted, based on the assignments mentioned in the master documents with the purpose of drawing up the status of education and teaching of IP in Iran. Though different organizations have done case studies for IP reporting and planning, the collection of information from all IP organizations in a single unit, analyzing the status quo and presenting a policy solution has been done for the first time in this research. However, information from some organizations may not be fully identified and documented. This research is presented in several sections. The next section covers the methodology of current research, followed by a summary of the status of each organization

presented separately. There was no information in some organizations or there was no access to information, but major cases have been identified and reported. In the subsequent section, the results of the organizations are presented in comparative tables and an analysis of the status quo and future policy suggestions for decision makers are presented in the final section.

3. RESEARCH METHOD

Research can be defined as a systematic and organized activity to investigate a specific issue, which requires a solution. Therefore, what has been done in the current research is a set of steps, with the aim to illustrate the state of IP teaching in Iran as well as to analyze findings and present policy suggestions for this area in Iran. The first step is the identification of IP related entities in Iran. Then, extraction of IP teaching data is taken from these entities. Finally, data were examined in several two-dimensional matrices in the areas of type of training provided, and areas covered by IP (including industrial property rights, copyright and related rights). Thereupon, analysis on the results were accomplished and suggestions were made (These suggestions can provide useful information for policy makers and researchers that enable them to make decisions). In the first step, all relevant organizations in the judicial system and government, which had IP-related activities were identified. Official reference for the registration and protection of IP rights lies in the judicial system, which is under the management of State Organization for Registration of Deeds & Properties. This organization, the IPC, is the most important IP entity in Iran. Fifteen institutions were identified in the government, whether in the ministries or in independent organizations that each of them is in some way affiliated with IP issues. The method for collecting information in this step was to interview, in person or by telephone, a manager or expert

²¹ Law for the Fifth Development Plan of the Islamic Republic of Iran, entered into force January 15, 2011 <<http://www.wipo.int/wipolex/en/details.jsp?id=14565>> accessed 20 April 2019.

²² Law on the Sixth Five-Year Economic, Cultural, and Social Development Plan for 1396-1400 (2016 - 2021) (2016) available in

Arabic at <<http://rise.esmap.org/data/files/library/iran-islamic-rep./Energy%20Efficiency/EE.2.1.4..pdf>> accessed 20 April 2019.

on IP issues. Oral information and data were received in written files.

Based on the Research Onion model which Sanders et al. presented in 2009, this is an applied research with qualitative approach and field strategy and information gathering through semi-structured interviews, and its result analysis is descriptive and qualitative. Information from organizations was gathered at a fixed time. However, the information of each organization has been gathered as much as possible in the past years in line with its historical record.

The WIPO Academy platform was the basis of work in this research to determine a model for data collection. WIPO Academy provides the tutorials in four general categories. Academic education includes master's degrees and Ph.D.; the second category of general education includes workshops and summer schools on the basic concepts of IP; the third category of specialized training includes workshops and training programs in specific fields for specific target groups with advanced concepts; and the final category is virtual and distance learning. During interviews, interviewees were asked to provide their organization training in these four categories based on their target group. The target group could be inside or outside the organization. The following section summarizes the status of each organization. Moreover, the information gathered from all organizations is presented in tables in the results section. Suggestions are provided in the analysis section on policy-making opportunities and gaps.

4. EDUCATIONAL ACTIVITIES OF ORGANIZATIONS RELATED TO INTELLECTUAL PROPERTY IN IRAN

A. STATE ORGANIZATION FOR REGISTRATION OF DEEDS & PROPERTIES (INTELLECTUAL PROPERTY CENTER (IPC)):

The IPC has the official responsibility of registering and protecting industrial property in Iran. This organization plays the most important role in IP and pursues activities in the field of education. According to the rules, 70-100 hours of training will be provided to the examiners of the center by internal instructors. These trainings are tailored to the

field of work of individuals in patents, trade-name/trademark and industrial designs. The examiners of the centre also take distance learning (DL) courses provided by WIPO. These tutorials are provided in four courses for each examiner. In addition, in a few cases, the IPC's examiners, in collaboration with foreign countries, will take courses at the national IP offices of these countries, including South Korea and Italy.

The other part of the IPC training is in partnership with WIPO. These courses, which are held 4-5 times annually, are also for the experts of IPC, which train 40-50 people per course. General courses for researchers are also being held in the number of 100-200 people. In special cases, specialized courses will be held in collaboration with WIPO in industry specific fields for researchers and inventors. These courses are offered at the request of specialized organizations or at the suggestion of IPC. IPC also holds IP training courses for other countries, including Afghanistan, Iraq and the ECO countries.

B. Presidential Deputy for Science and Technology (Iran Patent Center (Patent Center)):

The Iran Patent Center (Patent Center) has also begun serious IP training activities under the supervision of the Presidential Deputy for Science and Technology in the last three years. The Patent Center, which has been established to empower universities and research institutes in areas of IP, especially patents, using the experience of Iran Nanotechnology Initiative Council, has also focused on helping universities to identify inventions and patents abroad, as well as training and empowering organizations to set up and strengthen IP offices. These trainings are planned for universities and research institutes under the supervision of the Ministry of Science, Research and Technology (MSRT) and the Ministry of Health and Medical Education (MOHME) and partner colleges connected to the Patent Center by introducing a representative. The Patent Center offers 1- to 4-day training both at elementary and advanced levels. It also offers specialized training in the field of health, patent analysis, patent drafting and patent-based businesses as well as specialized courses to empower patent examiners. The Patent Center has provided more than 60 training courses for about 2,700 people and under

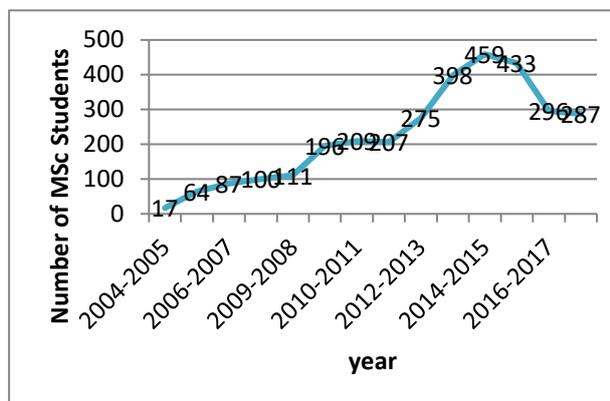
10 educational titles. It is planning to set up virtual education courses through one of the universities and to negotiate with universities in order to incorporate a syllabus for IP into their curriculum.

C. Ministry of Science, Research and Technology

The Ministry of Science, Research and Technology (MSRT) is the only institution responsible for holding academic IP training courses in Iran. The Intellectual Property Law discipline was first launched in 2004 at the University of Tehran at the master’s degree level. This discipline for law students was established in leading universities such as Shahid Beheshti University and Allameh University thereafter, allowing students to study this discipline at 5 universities of Iran.

The statistics of enrolment of students in the last 14 years are listed below.

Figure 2. Number of MSc students accepted in universities in IRAN (2004-2017)



Source: Institute of Research and Planning in Higher Education, MSRT, June, 2018

Information on whether the IP lesson was taught as a course in other fields of science and engineering was not available (except for the teaching IP in technology management and entrepreneurship). MSRT also has responsibility for business incubators, and science and technology parks in addition to universities. Approximately 2 to 4 general and specialized workshops on IP are held annually in all universities, parks, and business incubators. Some of them are held in cooperation with IPC. During the research until the writing date of the study, there have not

been any reports of the existence of a system or virtual or distance training program in the field of IP in IPC.

D. Ministry of Health and Medical Education

Ministry of Health and Medical Education (MOHME) is responsible for the universities in the field of health in Iran. Business incubators and science and technology parks also exist in this ministry. MOHME does not have an academic discipline in IP. However, it is taught in very limited courses of innovation and IP as an optional unit in some disciplines, such as pharmacy and biotechnology. Most IP training in these universities is in the format of general and specialized training workshops. 114 general and specialized workshops have been held in 36 universities for 500 researchers, faculty members, students and spin-off companies from 2013 to 2018. These tutorials, in addition to general IP training that emphasizes inventions, have been about how to manage IP, its commercialization, record and protection, and how to search and analyze information on inventions. The ministry has also launched a virtual education platform in 2015 (visit the website_www.htdo.tums.ac.ir). There are 134 modules in this platform, each of which has 4-17 subheadings, and training on technology, entrepreneurship, commercialization, intellectual property, and business are presented. Module 15 of this system deals with seven subheadings for general and specialized IP training. The MOHME established an Intellectual Property Policy Council for IP planning at the ministry and universities under its supervision. The ministry intends to focus on the segregation of IP education in the upcoming spatial planning of educational areas of the Ministry of Health and Medical Education (consisting of ten major macro regions, each of which contain three to seven universities).

E. Ministry of Justice

Since the IP Policy & Coordination Council is at the Ministry of Justice, the ministry plays the role of coordinator of IP-related activities in the government. There are representatives from various government agencies in the council. On March 29, 2017, the Ministry of Justice signed a Memorandum of Understanding with the WIPO Academy to set up the National Intellectual Property Training Center.

Based on the terms of the memorandum, IPIC, as the representative of WIPO in Iran, was responsible for providing specialized training in this field. An executive plan was set as the first course. A comprehensive training course for organization representatives was organized in four steps. The first step of this course (called teaching method) was completed. Subsequently, content tutorials including patents, industrial design, brand, GI, SME, TK and some other topics will be presented. The Ministry of Justice also held specialized training seminars for other organizations such as the Cultural Heritage, Handicrafts and Tourism Organization, Islamic Republic of Iran Broadcasting, Islamic Republic of Iran Customs Administration, Ministry of Science, Research and Technology, Ministry of Sport and Youth, and the Ministry of Education. Its cooperation with South Korea has been high on IP. The Knowledge Sharing Program (KSP) project has been defined based on the cooperation, and three courses have been organized for five educational organizations. The fourth training course was held at the Islamic Republic of Iran Customs Administration on June 24, 2016.

F. Ministry of Economic Affairs and Finance

The Islamic Republic of Iran Customs Administration has the most effort and activity in the field of IP in the Ministry of Economic Affairs and Finance. There is an office entitled Office of Research, Studies and Capacity Building and the Regional and International Education Group in the Customs Administration, which are responsible for providing IP training. These tutorials are presented in four categories. In the first category (mainly research activities), the financial and spiritual support of the master's thesis and doctoral thesis is done by the customs. These studies also provide learning and education. The second category is attendance training, where its program is being prepared every year and will be held in the form of general and specialized, short-term, long-term training courses and workshops for customs experts.

The third category is correspondence education, which is generally in the form of specialized and long-term courses. The last category is international or regional education, which is organized in cooperation with other organizations like the judiciary or Islamic Consultative Assembly or foreign

organizations such as the customs of other countries such as South Korea, UAE or non-governmental organizations such as JICA in Japan, KIPA, WIPO and WCO. The trainings started in 2004 and a two-year training course was held by 2015. The number of these courses has increased since 2015, and there are annually 4 to 5 training courses. Although the main target group is customs experts, participants from other related organizations have also participated in these courses. Out of customs courses are planned and implemented at the request of specialized agencies. Though the whole domain of IP is covered in the training courses, most courses have covered trade-name/trade-mark. Almost 50-60 people have been trained in each course. Islamic Republic of Iran Customs Administration has also provided training courses for neighbouring countries such as Azerbaijan, Iraq, Afghanistan and CIS countries.

G. Ministry of Industry, Mine and Trade

The Bureau of Supporting Industrial Ownership is responsible for the training of IP in the Ministry of Industry, Mine and Trade. This bureau is responsible for training provincial offices of 31 provinces. The Ministry of Industry, Mine and Trade has provincial offices, and their experts are required to have training in the field of IP. Training has begun systematically since 2014, and general courses are held annually for experts from the Ministry of Industry, Mine and Trade and provincial offices. Professional training courses are held annually for 100-150 experts in the areas of national and international registration of the brand and industrial designs. Given the importance of brand, brand manuals are provided for all units in addition to continuous training. Educational training sessions have been held in the field of geographic indicators (about 7-8 rounds) since 2015. The holding of these specialized meetings has led to an increase in GI registration of products. It has also begun international cooperation with South Korea in 2017 in the area of technology valuation and commercialization.

H. Ministry of Culture and Islamic Guidance

The Ministry of Culture and Islamic Guidance is responsible for protecting copyright, and is the copyright registration authority in the country. The ministry is engaged in

registration activities by the literary and artistic registration system under the supervision of the Legal deputy. Eight rounds of specialized congress and forum in the field of copyright education have been held for judges, lawyers, artists, academics as well as the general public in the Ministry of Culture and Islamic Guidance in recent years. These courses are held with a focus on literary and artistic ownership on the topics of cinematic works, cyberspace, folklore and literacy and artistic ownership strategies.

I. Islamic Republic of Iran Broadcasting

IP training in Islamic Republic of Iran Broadcasting began in 2011. However, these trainings became systematic and planned from 2015. The trainings are held at four levels. The first level is for managers; these tutorials investigate more the fields of copyright and industrial ownership (mark, name and industrial design) in addition to general IP. Moreover, case studies, bills, and laws are reviewed at meetings and training sessions. The second level is the organization's experts; they get specialized training depending on the type of their job. These courses are on average a workshop in each season. The third level is for the producers of video and radio program to attend a general workshop each season on average. Finally, the fourth level is the external stakeholders and the general public, for which public programs are held in the form of a TV-based dialogue program (generally by Channel 4) and radio programs (generally, Goftogo Radio) with a public addressee. These programs are about 60-70 radio programs and 40-50 television programs annually.

J. Cultural Heritage, Handicrafts and Tourism Organization of Iran

This organization is responsible for registering works in the field of geographic indications and intangible and folkloric heritage. The IP training of this organization is divided into internal and external divisions. In the internal division, given that the organization has a single office in each province, training courses are held for deputies and experts in the provinces. These courses are on general IP, which is a kind of briefing period for service. They are also held in 1- or 2-day workshops with an annual number of one to two workshops with subject matters of registration, technique

registration, geographic indication and intangible heritage registration. National and international laws are also being taught in this area. The professors of these courses are selected within the organization by network method of cultural heritage deputy.

Training courses for craftsmen will be held individually, at a workshop or at exhibitions in the section of external training. These trainings became more serious from 2014, when the courses were organized as one-day workshops and offered about 5 times a year. The structuring of the training increases the quality and quantity of registered applications.

The instructors of these courses are also training themselves. References for these tutorials include WIPO distance learning courses, Ministry of Culture and Islamic Guidance in the literary and artistic section and the IPC in the industrial section. Industry education is mainly done by NGOs and artists' associations, which includes close to 50 organizations.

K. Ministry of defence and Armed Forces Logistics

The ministry is responsible for the registration of defence patents, and this activity is done in one of the units of the Ministry of Defence and Armed Forces Logistics. In this ministry, training is provided to three groups of people. The first group is the staff of the IP centre of the ministry who receives education in two levels. IP general training that has been held in six courses so far and specialized training, such as patent search and patent analysis and evaluation, has been held in four courses so far. The second group is judges and examiners of patents. This group takes specialized patent search and analysis courses; so far, four courses have been completed. The third group is R&D experts and managers who take courses specialized in patent applications and prosecution in addition to general IP courses. The latter courses will also be held at the request of the Ministry's subsidiary organizations. Most of the training is in the field of patents and in other areas of IP, and only general courses are considered sufficient.

L. Ministry of Agriculture Jihad

The Seed and Plant Certification and Registration Institute (SPCRI) is responsible for IP affairs within the Ministry of Agriculture Jihad. The training of this organization, which is managed by the Deputy for Identification and Registration of Herbal Cultivars, is being accomplished in three sections of general education (public IP), registration of herbal varieties and technical education. All staff in this department, about 12-13 people, take UPOV distance courses, including general and advanced courses. The organization has signed a memorandum of understanding with the Naktuinbouw Institute in Netherlands according to which the staff of this institution undergoes apprenticeship periodically for two weeks in Netherlands. These apprenticeships are theoretical and practical in administrative, legal and technical areas. Since the registration of herbal varieties requires numerous and detailed technical evaluations, this activity is taught by the institute to other sub-institutes. General training for these institutions includes technical tests. Institutions outside the SPCRI are also trained, and assist in these matters such as National Institute of Genetic Engineering and Biotechnology and Zanjan University, along with other affiliated institutions. There are currently about 4 to 5 workshops in technical and legal fields. A workshop for 50-70 experts was held in 2017 with the presence of UPOV experts. A training course has been planned for the registration of plant varieties in cooperation with the Netherlands and France in 2019. Usually, general education courses are held with a higher number of participants (50-80) and specialized training courses with a limited number of participants (10-12).

M. Islamic Azad University

Islamic Azad University, along with state universities of the Ministry of Science, Research and Technology, is responsible for teaching students with a large number of branches. The Central Branch of Islamic Azad University has developed a plan for organizing the intellectual property of this university with a focused action over the last two years. Ten branches of this university have been active in this focused program. Moreover, one faculty member has been selected from each of the ten branches as a representative.

These representatives have received the necessary training from the elementary to the supplementary level through professional courses. These individuals are responsible for educating students and faculty members in their respective universities. Promotion courses are held at other campuses of the Azad University in addition to empowering selected branches. These courses are held as one-day workshops to teach graduate students, faculty members and branch directors. The rules and method of support of the Central Branch of Azad University have been taught in these courses along with general education. Almost 30-40 attendants have participated in each workshop.

N. Ministry of Communications and Information Technology

There was no information about IP training in the Ministry of Communications and Information Technology at the date of report compilation.

O. Ministry of Education

There was no information about IP training in the Ministry of Education at the date of report compilation.

5. RESULTS

As described in the second part of the study, various organizations have been identified in the field of IP teaching, and their information was collected in terms of three aspects. It is clear from the previous section that 15 organizations were identified in this regard. However, this does not mean lack of activity in other organizations. Rather, these organizations had the most affinity with IP according to their field of activities and teaching IP were deemed important for them.

The summary of the findings of the previous section is presented in three tables. In the first table, the information of various organizations is summarized by the content of the training (Table 1). Educational content is divided into four sections including copyright and related rights; patent; industrial property; and other rights like folklore and GI. Patent training has been reviewed separate from industrial property due to its importance and prevalence. In the second table, the information of different organizations is

classified according to the type and style of education from academic courses to general and professional education as well as distance educations (Table 2). Finally, in the third table, the information of the organizations is reflected in the table based on what audience and target group they were (Table 3).

We can see in Table 1, the distribution of educational content in different organizations is homogeneous regarding their mission. IP training is not focused solely on a specific field. For example, the Ministry of Culture and Islamic Guidance has had more copyright education in relation to its mission; the IPC focuses more on industrial property according to its field of work. The Ministry of Industry, Mines and Trade has IP training in all areas in this table. This is in line with the scope of the ministry's work ranging from cultural industries and handicrafts to high-tech advanced Industries, as well as Geographical Indications. Therefore, because the Ministry of Science, Research and Technology is the sole reference of academic training in national IP, the scope of its training is vast.

In the Table 2, different organizations are divided according to how they provide training. As is clear in the table, all organizations have provided public and professional education in person. However, academic education is provided only in the Ministry of Science, Research and Technology, and virtual trainings are also provided at the Ministry of Health and Medical Education and the Ministry of Economy and Finance. Virtual tutorials, in addition to the larger range of topics provided, can provide education at a lower cost and more speed to the reader even at distant points. Although virtual education does not have the quality and effectiveness of attentive and interactive tutorials, considering that educational facilities and IP instructors are generally concentrated in the capital of the country, distance learning can be considered as an appropriate alternative. In addition, given that, medical science universities are under the supervision of the Ministry of Health and Medical Education in Iran, but there is no academic intellectual education that leads to a kind of degree in these universities. However, an educational course has been included in some disciplines in recent years.

In the Table 3, the target groups identified by the National Center for Intellectual Property and the Iran Patent Center, as well as the Islamic Azad University, Cultural Heritage, Handicrafts and Tourism Organization, and the Ministry of Defence and Armed Forces Logistics have also trained other experts, in addition to training their own experts. This is while the supervised organizations of the Ministry of Science, Research and Technology and the Ministry of Health and Medical Education provide trainings for researchers and students, but they did not consider any educational system for ministry experts.

Another important point in this section is public education. In the Table 3, we saw that education to the public is seen only in Islamic Republic of Iran Broadcasting, while promoting public awareness in order to protect their own IP and non-infringement of the rights of others, have an important role in promoting IP at the national level. The vacancy of education for the public is evident in the programs of Intellectual Property Center, the Iran Patent Center, the Ministry of Culture and Islamic Guidance and the Cultural Heritage, Handicrafts and Tourism Organization.

Table 1. Training content of different organizations

No	Name of Organization	Copyright & Related rights	Patent	Industrial Property (Other than Patent)	Other (Folklore, GI, Genetic Resources and Plants)
1	Judiciary - National Intellectual Property Center (IPC)		√	√	
2	Vice-Presidency for science and technology affairs – IRAN Patent Center (IPC)		√	√	
3	Ministry of Justice – Intellectual Property	√	√	√	√
4	Ministry of Science, Research and Technology	√	√	√	√
5	Ministry of Health and Medical Education – Health Technology Development Office	√	√	√	
6	Islamic AZAD University	√	√	√	
7	Minister of Industry, Mining and Trade - Office for the Protection of Industrial Property	√	√	√	√
8	Ministry of Economic Affairs and Finance - Islamic Republic of Iran Customs Administration (IRICA)			√	√
9	Ministry of Culture and Islamic Guidance - Law Office and Intellectual Property	√			√
10	Ministry of Agriculture Jihad - Seed and Plant Certification and Registration Institute				√
11	Ministry of Defense and Armed Forces Logistics		√	√	
12	Islamic Republic of IRAN Broadcast	√			
13	Cultural Heritage, Handicrafts and Tourism Organization	√			√
14	Ministry of Communications and Information Technology	NA	NA	NA	NA
15	Ministry of Education	NA	NA	NA	NA

Table 2. Type and style of education

No	Name of Organization	Distance Learning (DL)	Professional Training	General Training	Academic Education
1	Judiciary - National Intellectual Property Center (IPC)		√	√	
2	Vice-Presidency for science and technology affairs – IRAN Patent Center (IPC)		√	√	
3	Ministry of Justice – Intellectual Property Training Center (IPTC)		√	√	
4	Ministry of Science, Research and Technology		√	√	√
5	Ministry of Health and Medical Education – Health Technology Development Office (HTDO)	√	√	√	
6	Islamic AZAD University		√	√	
7	Minister of Industry, Mining and Trade - Office for the Protection of Industrial Property		√	√	

8	Ministry of Economic Affairs and Finance - Islamic Republic of Iran Customs Administration (IRICA)	√	√	√	
9	Ministry of Culture and Islamic Guidance - Law Office and Intellectual Property		√	√	
10	Ministry of Agriculture Jihad - Seed and Plant Certification and Registration Institute (SPCRI)		√	√	
11	Ministry of Defense and Armed Forces Logistics		√	√	
12	Islamic Republic of IRAN Broadcast		√	√	
13	Cultural Heritage, Handicrafts and Tourism Organization		√	√	
14	Ministry of Communications and Information Technology	NA	NA	NA	NA
15	Ministry of Education	NA	NA	NA	NA

Table 3. Audience / target group of different organizations

No	Name of Organization	In-House IP	In house Stakeholders	External	Public
		Experts	(Other than Experts)	Stakeholders	
1	Judiciary - National Intellectual Property	√	√	√	
2	Vice-Presidency for science and technology affairs – IRAN Patent Center (IPC)	√	√	√	
3	Ministry of Justice – Intellectual Property Training Center (IPTC)	√		√	
4	Ministry of Science, Research and Technology			√	
5	Ministry of Health and Medical Education – Health Technology Development Office (HTDO)	√		√	
6	Islamic AZAD University	√	√		
7	Minister of Industry, Mining and Trade - Office for the Protection of Industrial Property	√		√	
8	Ministry of Economic Affairs and Finance - Islamic Republic of Iran Customs Administration (IRICA)	√		√	
9	Ministry of Culture and Islamic Guidance - Law Office and Intellectual Property	√		√	
10	Ministry of Agriculture Jihad - Seed and Plant Certification and Registration Institute	√		√	
11	Ministry of Defense and Armed Forces Logistics	√	√	√	
12	Islamic Republic of IRAN Broadcast	√	√	√	√
13	Cultural Heritage, Handicrafts and Tourism Organization	√	√	√	
14	Ministry of Communications and Information Technology	NA	NA	NA	NA
15	Ministry of Education	NA	NA	NA	NA

6. ANALYSIS AND SUGGESTIONS

All those involved in IP emphasize the importance of training in this area because of its impact. The need for colleges and universities to become familiar with new issues of IP and for those who work in the field of higher education and postgraduate education is certain. Learning, teaching, curriculum design and research strategies reflect these changes by changing expectations of the entry and participation of university graduates in the economy of a country. On the other hand, the growing global trends regarding the knowledge-based economy, as well as the approaches of the Islamic Republic of Iran and the emphasis of these approaches in the upstream laws of the country on changing the approach from an oil-based, resource-based economy to a knowledge-based economy reliant on tangible and intangible assets, points to the importance of IP education.

The exploitation of IP is increasing in the world. Therefore, training in this sector should also proceed at an appropriate speed. IP will increasingly be an important tool for the government, private sector, industry and other sections of society. The importance of teaching IP is more evident today. The development of technology and the social and commercial benefits of thereof showcase this need.

The purpose of this study is to provide an overview of the teaching of IP in Iran. Initially, in partnership with the Intellectual Property Training Center (IPTC) at the Ministry of Justice, organizations in which IP played a role in their activities were identified. Then, the responsible person was identified in each organization and through personal interviews or telephone interviews; information about the status of teaching of IP in these organizations was reviewed. Given the extracted condition, a summary of which was reflected in the tables in the previous section, there are controversial points and policy decisions in this regard.

IP is an inter-disciplinary field. Economy, business and management of IP as well as registration and legal aspects are very important. However, more attention has been paid to legal aspects in teaching IP, including training courses and especially in academic courses. The fields related to management and economics and their commercialization

are not defined throughout the country. Therefore, the lack of such an approach is seen for students in science, engineering and medicine. More importantly, it is necessary that students who study law get familiar with the economic and management aspects of IP issues to have a more comprehensive view.

On the other hand, knowledge of the theory of IP is not enough to accomplish practical tasks. As seen from the interviews, major IP training address aspects of problem theory. Although this has somewhat been addressed in areas such as agriculture, herbs, cultural heritage and craftsmanship, enabling and learning skills, mainly learned through apprenticeship and practical courses, were less observed. In this way when a specialized institute hires an IP law expert, they are mainly experts in IP theory and not in the practical needs of that institute. They therefore face challenges to find a common language.

IP is mostly emerging in the technical areas and industrial sectors. Thus, to teach in this area, specialist instructors in engineering, biotechnology and computer science are also required to leverage IP instructors. Teachers' training is also important for standardizing teaching and content of the materials to be presented, which the IPTC has understood and addressed in recent years. Although, just gathering experts from specialized organizations for training programs is not enough, there must also be specialized training regarding to each one.

The field of IP is constantly changing as new issues and challenges arise in this area. Strong bilateral ties are important between legal and technical areas. Although each organization may not have academic students, the strong link between technical sections and universities and the examination of the current challenges in these can examine various aspects of the subject. On the other hand, the development of technologies also leads to the creation of new issues in IP which need to be considered in an appropriate approach and solution.

Contrary to the past, where IP laws and procedures were more territorial, a new chapter in IP knowledge has been created with approaches to converge and the integrate laws and the conclusion of international treaties, both in

the field of law and in technical fields. Therefore, teaching and learning these new issues requires not only the presence of experienced professors from international organizations, but IP apprenticeship in IP offices of other countries, international organizations or their respective organizations in other countries is also important. Types of training in the form of internship, especially for the National Intellectual Property Center's examiners are more essential. Learning by doing in this respect would be more practical and efficient. To facilitate such training, the Islamic Republic of Iran may benefit from bilateral agreements with other countries and national IP offices and leverage from capabilities of international organizations such as the WIPO.

One of the most important obstacles and challenges in this regard is language. Educational content is rarely found in the national language and most of those limited resources cover legal aspects of IP as opposed to other economic and management aspects. Moreover, the understanding of educational content in a language other than national language (English contents instead of Persian materials) challenges a true understanding of the content and is time-consuming. However, in recent years there have been some attempts for providing content in local languages. However, for more standardized and reliable materials, translation from the WIPO on IP contents may be a better option. Furthermore, the fact that some other countries neighbouring Iran also speak Farsi can be utilized as well.

Despite IP and related laws of Iran having more than 90 years of history, this issue has not yet matured in Iran and it faces a small number of experienced technicians because IP teaching in the country is less than two decades old. However, in the public domain and legal sectors of Iran, there is a relatively high level of knowledge and accumulation of knowledge.

In the results section we mentioned that IP in the academic sector is taught only as a postgraduate degree at universities, and is not taught at the Ph.D. degree level. In the master's period, due to the short duration of study, there is no opportunity for students to deepen their subjects and topics. A four-year Ph.D. program would allow students and professors to study IP issues with greater depth. This will help deepen knowledge, create specialized

knowledge and expand new theories in IP regarding national technological development. Information resources and educational references are advanced in developed countries in a standard form and updated frequently. Although the presence of experienced professors with high knowledge of teaching in the area of IP was seen during the studies, standard educational content was less visible. Educational resources and manuals are provided both at the general and specialized levels by specialized agencies and their integration by the IPTC can help strengthen the IP training system.

Given that any part of IP is within the authority of an organization, it is important to establish a strong network among these organizations for IP knowledge exchanges. Creating a network to receive information as well as editing educational materials will help students and professors. This networking will also help the individual development of researchers in this field as well as policymakers and decision-makers. Both official real network and an unofficial virtual network is necessary and can work in this regard.

The transfer of professors and students as well as the transfer of specialists in the domestic and international industry will be a good way to create this network. By developing electronic communication tools, such as the creation of virtual network infrastructure will also help develop networking and accelerating communications. Last but not least, the importance of IP training should be explained to students early during school. Students' acquaintance with IP in school also helps develop personal creativity from an early age and generates respect for IP rules at a young age, which we did not observe in specialized education or related books in the educational system. IP, in this context should be considered as essential infrastructure for future innovation and creativity in society.

7. CONCLUSION AND POLICY SUGGESTIONS

The significance of IP in today's world is beyond intellectual creativity. Therefore, IP training is important for the development of innovation. According to the findings of this research, policy suggestions for teaching intellectual property in Iran are presented below.

1. Since in Iran, academic education in IP is only offered at universities as a master of arts degree for law students, and students with science and engineering backgrounds have no opportunity to continue their academic studies in the field of IP management or other relevant majors, it is suggested that some majors at masters and PhD level should be introduced for students with technical or medical background, such as biotechnology, nanotechnology and ICT.
2. Develop general IP training for the public and for specific groups such as students through mass media, environmental advertisements and textbooks.
3. Launch extensive training courses for students who study law at universities, in the industry as well as experts in other national offices and related organizations, nationally and internationally.
4. Hold Teaching of Trainers courses and standardize educational methods and contents.
5. Compile information, educational resources and references at various levels in the national language in cooperation with national and international organizations such as WIPO.
6. Develop virtual tutorials, improve their quality, create interactive training systems and motivate audiences by providing credible training certificates.
7. Hold multi-level training courses with a predetermined and proactive target group to deepen education along with broad-based public education.
8. Create virtual and real networks of different IP segments, such as industrial property, copyright and geographical indication through different organizations and institutes for knowledge sharing.
9. Each organization and institute has its own special needs regarding to IP issues. It is suggested that these institutions offer a form of scholarship or bursary for IP students. After the accomplishment of their education, these organizations may exploit their knowledge in their specialized field.
10. As having a general knowledge in IP is a pre-requisite for every student who study in technical or medical fields, it is worthy that university administrators include a general unit on IP for all students, especially post-graduates.

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