

7 Methodology for Promotion of the Development of Human Resources Related to Intellectual Property

In the course of developing human resources engaged in IP affairs, it is of critical importance to develop not only high-level specialists but also personnel who assist/aid or support them, further expanding the volume of “supporting human resources” in the IP field. As an institutional measure for encouraging the development of such human resources, in this research study, we examined the idea of establishing a new certification, accreditation or qualification.

As a result, it has been revealed that among IP assistant specialists who assist/aid or support IP core specialists (e.g. patent attorneys and personnel of IP departments), those engaged in “IP clerical assistance/aid work” demand a certification or accreditation, and it will be effective to establish a new certification or accreditation targeting such personnel.

We have also developed possible models of schemes for awarding a quasi-academic degree to people engaged in management and technical work who also play an active role in the field of IP management.

On the other hand, in order to increase the “public awareness of intellectual property,” it is necessary to make young people realize “respect for originality,” and to this end, a certification or accreditation targeting instructors of children may be more effective than the one targeting children.

I Introduction

1 Introduction

Japan is currently putting forward strategic initiatives to achieve the national goal of becoming an intellectual property (IP)-based nation. In addition to designing proper systems, one of the most important tasks in this area is to develop necessary human resources. In order to establish a platform for making Japan an IP-based nation, it is an issue of utmost urgency to develop a sufficient number of personnel that are fully capable of promoting activities in the field of intellectual property and assign the right personnel to the right positions.

As advocated in the 2005 JPO research study on industrial property system issues entitled “Ideal Scheme for the Development of Human Resources Related to Intellectual Property,” in the course of developing human resources engaged in IP affairs, it is of critical importance to develop not only high-level specialists but also personnel who assist/aid or support them, further expanding the

volume of “supporting human resources” in the IP field. One effective and efficient institutional measure for encouraging the development of such human resources would be to consider how to promote the development of human resources related to intellectual property by means of a certification, accreditation or qualification.

Based on this recognition, we formed a committee with experts and relevant people in this field, and conducted a research study focusing on certifications, accreditations and qualifications designed to assure the quality of human resources, provide motivation for learning, and promote mobilization of human resources as a result. We successfully found a direction toward tackling these issues through discussions.

We hope that this report will contribute to the “development of human resources who create, protect, and exploit intellectual property,” on the road to making Japan an IP-based nation.

2 Background and Aim of the Research Study

IP human resources can be divided into three categories: IP specialists (first category), human resources related to intellectual property (second category), and the entire public including future generations who will have the potential to be engaged in the IP field (third category).

The first category consists of (i) *core* human resources specializing in protecting and obtaining IP rights, such as personnel of IP departments of private companies, patent attorneys and lawyers, and JPO examiners/trial examiners, and (ii) those who “assist/aid or support” such *core* IP specialists, or in other words, “IP assistant specialists.” In this study, we focused on the latter category of human resources as the major subject, exploring the possibility of establishing a new certification, accreditation or qualification so as to create an environment for the *professionalization* of IP assistant specialists.

The second category consists of those engaged in the “creation” and “exploitation” phases in the IP creation cycle. The challenge in this area is to promote the development of “R&D personnel from the perspective of IP management” and “management personnel with the ability to exploit intellectual property.” One desirable measure would be to enable the currently active personnel to have “double major degrees.” However, considering time constraints, it would be more feasible to establish a minor or quasi-academic degree in the IP field (e.g. a “postgraduate diploma in IP management”), thereby encouraging the acquisition of both “major and minor” degrees. We examined the feasibility of this dual-degree scheme.

The third category consists of the entire public excluding those in the first and second categories. What we should aim at in regard to this category is to “increase the public awareness of intellectual property” or “foster a graceful national culture underpinned by the respect for creativity.” We investigated the current status of IP education as a means to achieve this aim. In particular, we

discussed a certification or accreditation designed for developing creative ability in schoolchildren and students, as well as a certification or accreditation regarding creative activity instructors/supporters.

3 Current Status of Certifications, Accreditations and Qualifications

The primary purpose of qualifications is to assure people’s ability to perform certain professional operations. On the other hand, certifications and accreditations are also intended to motivate people to learn by declaring the level of ability assured.

In particular, in the case of national qualifications, making a false statement of one’s qualifications and using a title of a qualification similar to that of a national qualification are legally prohibited.

Since certifications and accreditations only serve to prove that those who have obtained the relevant certification or accreditation have a certain ability, they must not be confused with qualifications that authorize the qualified persons to exclusively perform certain professional operations, and any attempt to intentionally cause such confusion should be prevented.

As operations to be performed in a particular field become more sophisticated and complicated, people who specialize in the field are required to upgrade their activities. Specialists should make necessary efforts to advance and broaden their capabilities, but at the same time, they need assistance or aid in carrying out their professional work or support from people around them. In other words, such needs lead to the generation of assistance/aid or support work in the periphery of specialized core work. People engaged in performing such assistance/aid or support work gradually improve their capabilities while working and finally reach the level of *specialists*. In the field of medical services, doctors are assisted and supported by *professionals* in nursing, inspection, rehabilitation or medication. Similarly, in the IP field area, patent attorneys need assistance and support from personnel around them, and it is now required to

develop such personnel in charge of assistance or support work as specialists. In this context, it would be worth considering the establishment of a “new qualification, certification or accreditation” so as to assure the quality of such personnel and provide them with a motivation for learning.

Core specialists are capable of performing all operations in their specialized fields, whereas assistant specialists are supposed to work under the direction and supervision of core specialists. This means that there is an irreversible “complementary” relationship between specialized core work and specialized assistance/aid or support work and between core specialists and assistant/aid or support specialists. If such assistant/aid or support specialists become more like *professionals* and enhance their relationship with core specialists, a synergy effect will be realized in the IP field as a whole.

Core specialists, by “broadening” the range of their capabilities so as to cover peripheral operations relating to their specialized fields, will be able, paradoxically, to further advance their capabilities in their specialized fields. If core specialists in such peripheral fields also “broaden” the range of their capabilities, collaboration between core specialists will further advance and enhance their work performance (mutual broadening of specialized fields). Through mutual interaction, these groups will also be able to educate each other. A desirable means of motivation for learning and quality assurance would be a “double major degree” scheme, but more realistically, it would be worth considering the establishment of a minor degree in the IP field as a “quasi-academic degree” under the “major-minor dual degree” scheme in order to effectively broaden specialists’ specialized fields.

When designing a new certification, accreditation or qualification, we set the following principles:

- Precluding the idea of establishing a new *national* qualification from the scope of subjects in this research study;

- Fully examining whether or not a new certification, accreditation or qualification will cause any adverse side-effect; a new examination, etc. would be acceptable if it is suitable for the intended users and free from any adverse effect on other people;
- Giving due consideration to consistency with the existing national qualifications, etc. even if the new qualification, certification or accreditation is established as a private one;
- Being fully careful to avoid establishing a new qualification that is liable to be mistaken for (confused with) or misused as any existing qualification; for instance, a new qualification should not be used by those not qualified as a patent attorney when they perform the operations which patent attorneys are exclusively authorized to perform.

II Main Discussion

1 Development of IP Associate Human Resources

(1) Clerical work related to intellectual property can be roughly divided into three functions.

The function to help preparing application documents for obtaining industrial property rights (excluding patent/utility model descriptions), carrying out regular application procedures, and performing other operations in general incidental thereto is called “IP clerk function.”

The function to assist the document management, time management, and fee management is called “IP administration function.” This function requires not only legal knowledge but also knowledge on computer systems.

The function to assist patent attorneys’ legal services is called “IP legal assistant function.” This function requires capabilities (knowledge, skills, judgment ability) in dealing with legal and other relevant issues in general in the IP field.

A certification or accreditation

concerning the capabilities (knowledge, skills, and judgment ability) to perform this “IP clerical assistance/aid work” is highly demanded as a means of ability assurance or motivation for learning especially among clerical staff currently working at patent attorneys’ firms and therefore expected to be effective in human resource development in this area. Potential needs for such a certification or accreditation can also be found among those who are interested in finding jobs in the IP field or those registered as temporary staff at personnel agencies. It will be a future task to fully consider the contents of a new certification or accreditation, while accurately understanding such needs.

(2) The function to practically assist the operations relating to technical matters at patent firms is called “IP technical assistant function.” Knowledge on technical matters is absolutely necessary for patent practice. In particular, drafting of patent descriptions requires high-level expert knowledge on technical matters. Further advanced technical knowledge is needed when analyzing the technical scope of a patent right in patent disputes or lawsuits. A certification or accreditation intended to improve the capabilities of personnel in charge of “assistance work on patent and technical matters” is needed among patent firms and expected to be effective in human resource development in this area. Personnel agencies may also be interested in such a certification or accreditation. It will be a future task to fully consider the contents of a new certification or accreditation, while accurately understanding such needs.

(3) Accurate interpretation and translation are required on various occasions of dealing with intellectual property, e.g. filing applications for foreign patent offices and negotiating contracts with foreign companies (called “IP translator function” and “IP interpreter function”). Translation is indispensable when preparing patent descriptions and other application documents to be submitted to foreign patent offices, whereas interpretation is important when

involved in disputes and lawsuits with foreign companies. With regard to “IP interpretation and translation work,” there is an opinion that human resources capable of performing such work will grow naturally out of the need to carry out corporate activities, even where there is not any particular certification or accreditation. It is also argued that it is difficult to forecast to what extent a certification or accreditation will be effective in developing high-level specialists. Furthermore, initiatives for human resource development should target not only Japanese people but also Chinese and other foreign people studying in Japan. The future discussion should also examine whether or not a certification or accreditation in this area will serve to motivate such foreign people to improve their skills.

(4) In dealing with intellectual property, it is an essential task to search for a vast amount of information on technical and legal matters. The function to perform such an information search is called “IP searcher function.” In particular, those engaged in patent information searching are required to be capable of performing information retrieval using information technology or performing technology analysis. In the area of “information search work,” since different capabilities are required depending on the purpose, technology, and industry, a certification or accreditation will be effective only with regard to the basic operations of the search work. If we focus on the area of basic search techniques, we can find that most of this area is covered by searcher training programs implemented by the National Center for Industrial Property Information and Training (INPIT) and various other training services provided by private companies. Nevertheless, it would be a desirable measure to award a certification or accreditation to those who have completed training programs as a means of motivation for learning and ability assurance.

2 Introduction of a Postgraduate Diploma (Quasi-Academic Degree)

(1) Background for discussing the possibility of introducing a postgraduate diploma

In order to provide human resources capable of playing an active role in a wide range of IP management, it is necessary to develop specialists in the fusion area where relevant fields such as IP legal affairs, science and technology, and business management overlap. Those currently specialized in relevant fields are also expected to study IP management. In short, specialists are now required to study expertise in other fields and broaden the range of their capabilities.

Meanwhile, universities and other equivalent institutions should, in addition to awarding conventional diplomas, also consider implementing various IP courses and programs and awarding qualifications as credits for the completion of these courses and programs.

One desirable measure would be to establish a "double major degree" scheme for enabling people to obtain diplomas and special qualifications in several related fields. However, this would be "desirable" but not very "feasible" in reality due to time constraints for working people. A more feasible alternative would be to establish a system or environment where working people can effectively and efficiently acquire IP-related knowledge, skills and judgment ability in an intensive manner during a short period of time. This may be called "major-minor dual degree" scheme.

More specifically, it would be more realistic to establish a postgraduate diploma (PG diploma), which is popular mainly in Europe, as a minor or quasi-academic degree, and encourage people to obtain it.

By introducing a PG diploma in the field of IP management, we will be able to (i) assure the quality of education, (ii) provide motivation for learning, and (iii) promote mobilization of human resources in the IP field as a result.

(2) Example of PG diploma (United Kingdom)

A diploma is a title generally awarded to those who have completed a certain educational course, and the one awarded for the courses at postgraduate schools is called postgraduate diploma. In particular, in the British Commonwealth of Nations, a PG diploma is treated in the same manner as an academic degree. In this sense, it can be generally regarded as being in between a bachelor's degree and a master's degree. The most advanced PG diploma is the one prevailing in the United Kingdom, especially in England and Wales, and it is a basic model that is most popular worldwide, mainly in the British Commonwealth of Nations.

A PG diploma is awarded for those who have already obtained a bachelor's or higher degree. There are three types of standard PG diploma courses: (i) the PG diploma course for obtaining the diploma as a quasi-academic degree, (ii) the PG diploma course combined with a master's degree course, and (iii) the PG diploma course as a professional training program.

(3) Possibility of introducing a PG diploma in the IP field

If we consider the introduction of an educational course for obtaining a PG diploma in Japan as a measure to promote the development of human resources in IP management, one possible method would be to encourage people who are currently playing an active role in the IP field or expected to enter this field to obtain an "IP PG diploma" in a broad or narrow sense.

From the viewpoint of assuring the quality of education, universities and other equivalent institutions can be the major entities to implement PG diploma courses. Considering that a PG diploma can be regarded as a kind of qualification or credit for the completion of a certain course for developing specialists rather than as an academic degree, and that lecturers should be appointed from IP practitioners, it may also be possible for universities and IP-related organizations to jointly design and implement IP PG diploma courses

(academia-industry collaboration in education).

There are three possible models of PG diploma schemes.

[Model 1: Digest version of an IP course at postgraduate school]

This is an IP PG diploma course established by selecting necessary subjects from those included in the existing IP courses at postgraduate schools related to or specialized in intellectual property. Currently, a number of students take IP-related courses at IP-specialized postgraduate schools, but they will never be able to obtain an authoritative accreditation of how many courses they complete. A PG diploma would be a significant incentive for those who study intellectual property at such specialized postgraduate schools.

[Model 2: Selection of subjects from undergraduate IP course]

An IP PG diploma of this model consists of required subjects selected from an undergraduate IP course, together with special subjects of an advanced level. However, at present, there are only a limited number of undergraduate courses specialized in intellectual property, and therefore it is very difficult to provide educational programs in convenient hours for working people (in the evening on weekdays, and in the daytime on weekends). The University of the Air and other equivalent entities may be able to satisfy the needs of such people, but they need to increase the number of programs in the IP field in order to implement an IP PG diploma course with sufficient programs.

[Model 3: New educational program for working people]

The third option is to create new IP PG diploma courses and subjects. There may be two types of courses, MBA-level courses (for developing junior IP managers aged around 30) and executive-level courses (for developing senior IP managers aged around 40 or broadening the range of capabilities of

those who currently act as patent attorneys or other IP specialists). This model is advantageous in clearly distinguishing an IP PG diploma from other kinds of diplomas or degrees and designing and implementing programs suitable for educational purposes. However, it faces a problem due to the difficulty in securing resources (e.g. budgets, teachers) compared with the other two models.

3 Intellectual Property Education for the Public

The third category of IP human resources is the entire public excluding those in the first and second categories. It is a group of people that supports the first and second categories, while producing members of these categories. Detailed measures for human resource development should be promoted, targeting individual categories of people, including working people as well as students in respective school grades.

Currently, different entities provide various opportunities for IP education.

At universities, engineering departments and postgraduate schools in engineering provide introductory programs on intellectual property, focusing on the phase of creation of intellectual property (from the viewpoint of inventors). On the other hand, IP departments and IP-specialized postgraduate schools focus on protection and exploitation of intellectual property.

Private companies send their personnel to participate in training programs for human resources related to intellectual property, which are provided by IP-related organizations, such as the Japan Intellectual Property Association (JIPA) and the Japan Institute of Invention and Innovation (JIII).

The Association of Intellectual Property Education implements the "IP Proficiency Test" for working people and students in general. Grade 1 is for "IP personnel at private companies" and Grade 2 is for "general personnel at private companies (engaged in management, legal or IP affairs, publicity, sales, etc.), working people in general, and students." Among the

participants in the Grade 2 test, the percentage of those who are not engaged in IP affairs (including students) is increasing. This test can now be appreciated as a test for examining the proficiency in this field.

The JIII organizes “Invention Clubs for Schoolchildren” and provides schoolchildren and students with experience-based educational programs so as to enable them to have the opportunity to create inventions. The activities of the invention clubs can be highly appreciated. In the future, efforts should be made to “establish invention clubs in all municipalities” and “consider complementary functions that invention clubs can perform in addition to education in intellectual creativity at elementary and junior high schools, and introduce an accreditation or certification scheme.”

As a measure to increase the incentive for learning in the IP and IP management fields, we examined the necessity and effect of a scheme for awarding an accreditation or certification for schoolchildren and students, and found that it is difficult, at least for private entities, to continue to implement schemes for awarding accreditations that would not serve as useful advantages for progressing to higher education or finding jobs. Special consideration should be given to ensuring profitability of accreditation services targeting the public including children. Therefore, we then discussed the possibility of establishing an accreditation scheme for teachers or instructors separately from that for children. A creative activity instructor/supporter accreditation scheme would be effective for improving the teaching ability among teachers and instructors as well as assuring the quality of instructors and increasing their incentive. Further investigation and discussion will be required in the future.

In the area of IP education for the public, there is also an urgent need to educate various business operators, especially those engaged in distribution, retail, and rental services.

III Conclusion

The future initiatives for the development of IP human resources should aim for reform, not only increasing the quantity but also improving the quality of human resources. The committee focused on “certifications, accreditations, and qualifications” as a means to promote a new way of human resource development, exploring the potential and limit thereof. The findings in our study are as follows.

(1) There is a limit to the performance of IP-related operations only by “core IP specialists” such as patent attorneys and personnel of IP departments, and they now need assistance/aid or support from “IP assistant specialists.” It will be important to clearly define the specialized fields of IP assistant specialists and raise their professional awareness, while developing an institutional framework for motivating them to improve their capabilities and learn. With regard to “IP clerical assistance/aid work” and “assistance work on patent and technical matters,” it has been revealed that a certification or accreditation is needed among patent firms and expected to be highly effective in human resource development. On the other hand, with regard to “IP interpretation and translation work,” although a shortage of human resources in this area is strongly recognized, we should further closely examine to what extent a certification or accreditation would be effective in satisfying the needs for such personnel. Similarly, although the needs for human resources engaged in “information search work” are rapidly increasing, we were unable to clearly find out the effect of a certification or accreditation.

(2) Establishing a PG diploma as a quasi-academic degree and encouraging people to obtain it may be effective for enabling people currently engaged in IP affairs as well as those engaged in management or technical affairs to study IP management. We developed three feasible models for introducing a PG diploma in Japan. In the future, we should consider how

to realize these models and put them into practice.

(3) In order to increase the “public awareness of intellectual property,” it is necessary to make people, especially when they are still young, realize “respect for originality” (the incentive for creation activities and the refusal of counterfeits and pirated copies). To this end, we have reached a conclusion that a certification or accreditation targeting instructors of children would be more effective than the one targeting children. However, there is still room for consideration of this measure, and we should carry out further investigation on this issue.

The important task in the future will be to consider details of the methods for establishing certifications or accreditations regarding “IP clerical assistance/aid work” and “assistance work on patent and technical matters” mentioned in (1) and establishing an IP PG diploma as a quasi-academic degree mentioned in (2). Investigation should also be made with regard to the issue mentioned in (3).

(Senior Researcher:
Takashi HORINAKA)