

TEACHING INTELLECTUAL PROPERTY EDUCATION IN DIGITAL ERA : CHALLENGES AND SOLUTIONS*

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Not all the teaching should be done by the teacher. Not all the learning should be done by the students (Charles I. Gragg).

ABSTRACT

In digital era, IP education has important role to educate society for grappling digital world on how society will thrive, fully participate and diffuse information legally in cyberspace. This paper analyzes the need for IP education is no longer limited to university students, lawyers or IP practitioners. Therefore, this paper advocates new context of “new IP paradigm” that IP is necessary at many different levels of groups and IP education must be designed to support diversified needs in inter-disciplinary manner. However, globalization and the rapid proliferation of information-technology in digital era, coupled with the intangible nature of IP create challenges to structure effective IP teaching methodologies. This paper examines the current challenges of IP education on how: (a)eliminating gap between IP theories and practices; (b)updating programs to keep up with dynamic and rapid changes in IP laws and emerging IP issues;(c)capacity building of IP human resources/lecturers;(d)enhancing the curriculum and teaching methods in interdisciplinary approach. To overcome the challenges, this paper recommends the setting out “hybrid IP teaching method” of combining substantive IP law with skills training; developing the inter-disciplinary IP curriculum; developing IP building capacity mechanisms; and promoting “distance learning courses/e-learning”

Keywords: Intellectual Property, education, teaching, digital and information era.

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1. INTRODUCTION

It has been accepted that knowledge and innovation play an important role in economic growth and development, therefore the increasing use of IP system has been seen as one of several key factors for a successful economy. These understandings are impacting also on the IP education form and choice of content that should be taught in universities and educational institutions, which makes the creation of programs geared to the IP teaching goals in establishing IP culture. The establishment of a culture of IP, either at country level, or at educational institutions depends on the level of awareness of the importance of valuing creative ideas, the importance of respecting IP rights of third parties, of the possibility of the exploitation of research results, as well as IP education.

IP has come to be closely related to issues of trade and competitiveness, which conferred on these rights a more wide-reaching aspect. In this context, new actors such as engineering and business students, non-governmental organizations, among others need to address issues such as the patenting life or biodiversity products, stem cells, the repercussions of piracy, among other issues that are not consensual. These new actors recognize the important role of IP education to address their problems. In digital age, IP education has also shown its important roles in educating society for grappling digital world on how society will thrive, fully participate and diffuse information legally in cyberspace. Therefore, the need of IP awareness and knowledge is no longer limited to lawyers, IP practitioners or university students. The incorporation of the teaching of IP for multidisciplines at different levels (basic, intermediate or advanced) is intended to provide students not only with a set of specific skills directly related to their future areas of activity, but also in a broader sense, aims at fostering a culture of respect and

appreciation of the value of creative idea. The need for IP education has grown along with the goal of achieving IP knowledge, the importance of IP roles in economic and innovation development, and IP exploitation for greater advantage of financial benefit.

In relation to this matter, this paper has structure that part 2 of this paper advocates new context of “new IP paradigm” that IP is necessary at many different levels of groups and IP education must be designed to support diversified needs in interdisciplinary manner. Then part 3 exposes the challenges to structure effective IP teaching, such as: eliminating gap between IP theories and practices; updating programs to keep up with dynamic and rapid changes in IP laws and emerging IP issues; capacity building of IP human resources/lecturers; enhancing the curriculum and teaching methods in interdisciplinary approach. To overcome those challenges, part 4 recommends solutions by setting out “hybrid IP teaching method” of combining substantive IP law with skills training; developing the “inter-disciplinary IP curriculum” tailored to different target groups needs; developing IP building capacity mechanisms such as student/teacher exchanges/trainings, international joint researches and publications to find common grounds for the further development of the IP system; and promoting “distance learning courses/e-learning.

2. THE NEW PARADIGM OF ROLE AND THE NEED OF IP EDUCATION

Given that a well functioning IP education is one of the crucial factor in digital era, the need of IP awareness and knowledge expand to non lawyers or IP practitioners. There is

a “new IP paradigm”¹ that IP knowledge is necessary at many different levels of groups and IP education must be designed to support diversified needs in inter-disciplinary manner. Students from wide range of disciplines could benefit from IP education, thus many teaching programs should include IP in their curricula and courseworks. For basic law degree program, IP course offers general understanding of theories, philosophy and application IP law. For some economy/business faculties, IP education is important for business students in order to have a basic understanding of the role of IP in modern and day to day realities of economic and trade.² For faculties of science and engineering, the need for students to understand the role of IP in the R&D and technology projects management including topics of IP acquisition and management (licensing, co-financing, collaboration) can be accommodated by IP course. Kaplan noted that “IP knowledge is important for engineers, engineers should try to understand IP basics to protect their creations. Also, IP searches can indicate the growth of different engineering fields. Furthermore, the proper use of IP promotes the progress of engineering field.”³

It is also a new IP paradigm of lifelong IP education that IP education starts at an very early stage and continues later on with a view to fostering culture which respects creativity and strives to prevent IP abuses. Introducing IP concept and principles to early age student is solely for future gain. Interesting IP introduction can foster creativity by allowing them to recognize that their creativity, imagination and dreams can result in actual creations. It also

¹Yo Takagi, Larry Allman, Mpazi A. Sinjela, *Teaching of Intellectual Property : Principles and Methods*, Cambridge University Press, New York, 2008, p. 4.

²*Ibid.*

³Kaplan, Lt. J. Kaplan, *Incorporating intellectual property into Engineering education session*. Proceedings of the American Society for Engineering Education Annual Conference & Exposition, 2003.

teaches IP awareness by respecting original works of others and their owns, and giving them a sense of how the power of human intellect, creativity and innovation can drive the economy in a sustainable manner.⁴ For adults group, IP education is specially designed for obtaining basic or additional IP skill or updating knowledge about emerging IP issues applicable to business activities or career management. Organizations of IP professionals often offer IP specialized training project to obtain additional skill such as patent drafting, IP negotiation, IP licensing and management, etc. IP courses have been included in the corporate educational programs in some technological corporations to provide the understanding of corporate IP strategy and policies for all engineers, researchers and managers contributing to the generation and exploitation of IP assets.

3. THE CHALLENGES OF IP EDUCATION

Globalization and the rapid proliferation of information-technology in digital era, coupled with the intangible nature of IP create challenges to structure effective IP teaching methodologies. This paper examines the current challenges of IP education in Indonesia on how: (a) eliminating gap between IP theories and practices; (b) updating programs and teaching materials to keep up with dynamic and rapid changes in IP laws and emerging IP issues;(c) capacity building of IP human resources/lecturers;(d) the curriculum and teaching methods in interdisciplinary approach.

The most difficult challenge is helping students develop the analytical skills to apply the IP theories to new factual situations/practices, identify emerging IP issues and predict future IP development or policy. The challenges exists because of the increasingly dynamic

⁴Kamil Idris, Hisamitsu Arai, *Intellectual Property –Conscious Nations*, WIPO publication No. 988, www.wipo.int/about-wipo/en/dgo/wipo_pub_988/index.html.

nature of IP law and emerging IP issues such as the digital technology threat, open source/free access movement, biotechnology revolutions, digital fairness and social welfare issues, etc.

Furthermore, IP has a broad field of subject matter that must be taught. Due to the time constraint, the IP teachers face difficulty in covering all the IP contents in one semester. Teachers have to attempt to throw everything into one subject and student then do not know the important topics that have to be left out due to time limits.⁵ More over, due to continuous advances in science and technology, the scope of IP has increased rapidly. The development of information technology, communications technology, e-commerce, biotechnology, traditional knowledge and a number of other emerging areas has led to the increasing centrality of IP in the agenda of businesses and nations.

In addition, as mentioned earlier, IP education is needed for non law student, however teaching of IP is still strongly tied to law courses, and IP is still studied and researched, most frequently in law schools, thus teaching perspective adopts a predominantly legal approach.⁶ Accordingly, when teaching IP to non law student, IP law teachers face the challenge of educating non-legal professionals since the depth of legal knowledge imparted to other disciplines students must be customized according to their needs. It means that the problems are associated with demystifying the law for non-legal students.

Capacity of IP human resources is also still big problem, particularly in Indonesia since many universities has no IP professors or IP specialists. According to WIPO research, there

⁵ Kathy Bowrey, Michael Handler, Dianne Nicol, *Emerging Challenges in Intellectual Property*, Oxford University Press, Melbourne, 2011, p. 287.

⁶ Ana Maria Nunes Gimenez, Maria Beatriz Machado Bonacelli, Ana Maria Carneiro, "The Challenges of Teaching and Training in Intellectual Property", *J. Technol. Manag. Innov.*, Volume 7, Issue 4, 2012, p.178.

is a lack of professors dedicated full-time, a lack of teaching material and, therefore, little discussion and reflection on IP themes.⁷ In addition, IP educators particularly in Indonesia have a little academic networks for conducting joint researches or other academic collaborations. Even, it is difficult to them to publish their researchers or papers internationally due to the language constrain. Also, such IP educators face difficulty in developing the inter-disciplinary IP curriculum, combining substantive IP law with skills training, updating programs, and promoting “distance learning courses/e-learning.

4. SOLUTIONS

To overcome the challenges, this paper recommends the setting out : (a) developing the “inter-disciplinary IP curriculum” tailored to different target groups needs; (b) “hybrid IP teaching method” by combining substantive IP law with skills training; updating programs to keep up with dynamic and rapid changes in IP laws and emerging IP issues and promoting “distance learning courses/e-learning” (c) developing IP human capacity building such as student/teacher exchanges/trainings, international joint researches and publications to find common grounds for the further development of the IP system.

4.a. Interdisciplinary IP Curriculum

In majority, IP curriculum contains general IP programs primarily focusing on the nature and extent of the rights protected under IP law, the impact and the role of IP in the

⁷ WIPO Intellectual Property Handbook: Policy, Law and Use. WIPO Publication n° 489 (E). Second Edition, Geneva, 2004, <http://www.wipo.int/aboutip/en/iprm/index.html>.

knowledge based, globalized economy.⁸ Whereas, universities in some countries, IP curriculum offer comprehensive and specialized IP courses. For instance, a few technical universities in Japan offer a year long IP course in junction with the other technology-related disciplines, while in France, IP courses have been a compulsory in the science faculties curriculum.⁹ To create appropriate model of IP curriculum, it is important to enhance the curriculum that is suitable for an inter disciplinary approach in such field as economic, science and technology, engineering, legal education, etc. In introductory IP courses which are designed to give basic broadly overview of various field of IP, it is important to raise the interest of students and provide the better understanding that IP is surely relevant to daily lifes. An effective technique to teach general IP course is to present specific facts related to current topics involving IP, then correspond the topics to how and in what ways the topics impact the daily lives of the students.

Basicly, IP courses curriculum should be reflected into a comprehensive and detailed syllabus containing the coheren outline or the entire topics to be presented in the course, and reading materials which correspondend which each topic. Enhancing teaching curriculum for faculty members and the creation of guidelines in syllabus establishes more coherently and decisively the teaching IP. The design of IP syllabus will be influenced by the student's core discipline, however students should not focus solely on the IP right most appropriate to their discipline, they are encouraged to consider the potential for any innovation to spawn more than one IP right.

⁸ Yo Takagi, Larry Allman, Mpazi A. Sinjela, *Op. Cit*, p. 5.

⁹ *Ibid*.

The IP curriculum have to be designed for achieving of the ultimate goal of IP teaching which is not simply to impart knowledge of IP law, but rather to educate student to have analytical skill to apply IP law to new factual situation. Therefore, Charled R. McManis argued that one of the most important tasks for IP teacher is helping students develop ability to identify emerging IP issues and predict future development in IP law and policy.¹⁰ According to Kathy Bowrey, it is important to consider the application of IP law to new technologies and meet other social challenges.¹¹ To respond the new technology and social challenge, IP curriculum designs a learning outcome with a domain knowledge that student will acquire : (a) a good knowledge and understanding of the various IP subject matters such as trademarks, patents, copyrights, etc. as well as IP protection nationally and internationally. (b) good understanding of IP protection system nationally and internationally and its implication for bussiness, R&D development, technology inovation and transfer, etc; (c) IP significance as a tool of economic development and wealth creation; (c) an in-depth appreciation of the current issues related to IP in the digital era; (d) a broad multi-jurisdictional perspective on the IP subject and the various multi-faceted issues closely linked legal, economic, management and social issues, and the controversies brought about by advancement in science and technology, particularly in the areas of biotechnology, computer technology and the internet. At the end of the course, IP curriculum must be designed that the students will have skill and ability: (a) to conduct independent research in areas of their interests; (b) to formulate and articulate arguments with clarity of thought and expression; (c) to deliver

¹⁰ Charles R. Manis, "Teaching current Trends and Future Developments in Intellectual Property" in Yo Takagi, Larry Allman, Mpazi A. Sinjela, *Teaching of Intellectual Property : Principlless and Methods*, Cambridge University Press, New York, 2008, p. 299.

¹¹ Kathy Bowrey, Michael Handler and Dianne Nicol, *Australian Intellectual Property:Commentary, Law and Practice* (Oxford University Press, 2010, p. xxxv.

presentations in class and to engage in questions and answers sessions; (d) to assess critically information, arguments and opinions disseminated in class, arrive at conclusions and stand ready to defend the positions taken.

IP curriculum can apply a *student-centered learning* or *outcome-based education method*.¹² A student-centered learning approach is to empower students towards learning on their own with the help of clear and easily accessible learning objectives, while, outcome-based education is a method of curriculum design and teaching that focuses on what the students can actually achieve and do after they have been taught.¹³ In relation to student centered learning, Christudason notes that the teacher's role is not just to assist students to gain content knowledge.¹⁴ To make learning more meaningful and shifting paradigm from teacher-centred to student-centred learning, the educators should aim to: (i) assist students to apply their knowledge; (ii) inculcate the skills of legal analysis to some extent, so that students can recognise the process and attributes of legal analysis in the context of their likely professions and (iii) help students to assimilate their learning of IP subjects with their learning of other subjects and (iv) enable students to see how IP subjects are going to be relevant to them in "real life".¹⁵ The outcome-based education approach in the design of IP curriculum is usually applied to IP course for business, engineering and humanities students

¹² Susana H.S.Leong, "Teaching intellectual property in a business school", in Yo Takagi, Larry Allman, Mpazi A. Sinjela, *Teaching of Intellectual Property : Principles and Methods*, Cambridge University Press, New York, 2008, p. 194.

¹³ *Ibid.*

¹⁴ A. Christudason, "Challenges of Teaching Law to Non-Law Students," abbreviated version of a paper presented at the 2004 Society of Legal Scholars Conference, www.warwick.ac.uk:080/ukcleadm/directions/issue10/christudason.html.

¹⁵ *Ibid*

in the university. In adopting an outcome-based education method of curriculum design and teaching, the content of the modules must be reviewed from time to time so as to ensure that the goals of learning are achieved. The learning objectives of IP are clearly defined in the course outlines which are made available and are posted on the websites. To meet the learning objectives, it should be adopted teaching instructional such as lectures and tutorials, role playing and debates, etc. and strategy of assessment such as short quizzes, group presentations, project work, written examinations, class participation, etc.. Timely feedback and assistance are given to students so students can develop their maximum potential.

In digital context, an interdisciplinary curriculum must be based on a comprehensive understanding of IP. It should enable participants to build up complementary skills, so as to combine practical IP experience with theoretical knowledge. However, in many universities, IP still trains students in a single disciplines : law, economics or technical studies afforded a specific perspective on IP. Lawyers view IP through the legal lens in various jurisdictions, while economists look at IP from an innovation/technology perspective and seek to identify how benefits from innovation systems can be maximised most effectively and efficiently. Technicians/engineers are thrilled by the prospect of advancing science and offering new solutions to technical challenges. However, IP should be seen as a very open field with a possibility extension beyond a particular area. It should be avoided to apply the strict separation of disciplines, thus the inter disciplinary approaches must be developed. Today, the discipline of IP —both domestic and international— has become increasingly multidisciplinary.¹⁶ According to Gimenez, et all and Samaddar, although IP is still strongly

¹⁶ Peter K.Yu, “Teaching International Intellectual Property Law”, *Saint Louis University Law Journal* , Vol. 52:923, P. 945.

tied to law courses with the perspective adopted predominantly legal approach¹⁷ and has its foundation from legal studies, it encompasses applicability in a wide variety of disciplines.¹⁸ The study materials provided should balance the various backgrounds of students and encourage their self-study. Engaging IP in interdisciplinary research or teaching include the fresh perspective gained from presenting IP legal concepts to non-lawyers, and the synergistic research opportunities presented by working across disciplines.¹⁹ Since the digital real life challenges with cross disciplinary issues can rarely be resolved through one dimensional approaches, it is important for university to develop IP multidisciplinary program and hire experts in interdisciplinary minded lecturers and researchers.

Teaching IP for across disciplines need the condition that IP teacher must develop an effective communication skills by explaining and communicating very difficult legal concepts with clarity and adopting “hybrid IP teaching method” of combining substantive IP law with skills training. The main learning objective is to provide them with adequate legal knowledge so that they are able to appreciate the implications of the IP law when making business decisions (for business students) or protect their creations, R&D and technology projects management including topics of IP acquisition and management (licensing, co-financing, collaboration) for engineering students. IP law educators have task to make law accessible to these students and to ensure accuracy and correctness of the law imparted to them. In that respect, the case-method will be very effective. By learning through cases, students are able

¹⁷ Ana Maria Nunes Gimenez, Maria Beatriz Machado Bonacelli, Ana Maria Carneiro, *Op.Cit*, p.178.

¹⁸ Shefalika Ghosh Samaddar, “Teaching Quality Intellectual Property Management using Information Technology in Indian Pedagogy”, *IPEDR, IACSIT Press, Singapore*, Vol.5, 2011, p. V.2.190.

¹⁹ Ruth Soetendorp, “Teaching intellectual property to non-law students”, in Yo Takagi, Larry Allman, Mpazi A. Sinjela, *Teaching of Intellectual Property : Principles and Methods*, Cambridge University Press, New York, 2008, p.237.

to overcome their initial fear and dislike for the subject and subsequently develop a genuine interest in the study of the law. With regard to teaching IP laws as a subject in non law student, the foremost challenge presented is in generating students' interests in the subject since they must be equipped with a wide range of subject disciplines in order to be ready for the job market. IP law can be extremely technical and uninteresting to students. The ability to capture their attention and to stimulate their interest in IP topics is the key to effective classroom teaching. Since IP law is not a core discipline in the non law curriculum and may be offered only as an elective, the enrolment of the module is low and even may not be offered. Therefore, the modules offered must be interesting, useful and relevant to the students. This requires the teacher to sustainably update the teaching materials and improve on teaching methodologies.

4.b. Hybrid IP Teaching Method

The content and application of IP law are becoming increasingly dominated by new and more complex technology. The rapid changes and developments occurring with respect to the subject matter of IP are reflected not only in the substance of teaching contents but also in teaching methodologies. IP teaching method should be also designed as "hybrid IP teaching method" consisting a combination of theoretical material with implementation through usage of internet and computers. It emphasizes a techno-legal framework and deviates from the traditional approach taken for IP education. It is important to have the connection of legal procedure, beyond its mere application, with technological development and the business

strategy that drives it.²⁰ The hybrid IP teaching method links the real world issues to be brought into the place of IP theories. The hybrid IP teaching combining theoretical material with implementation must be adopted since IP exhibits its value only when it is utilized in society. The utilization of IP in the real sense cannot be achieved without education that covers the role of creation. Since IP education is needed for cultivation of creativity, IP educational aims at cultivating humanistic individuals who can contribute in building a peaceful and creative society through IP education.²¹ It means that IP education should produce individuals who would be creative and pay respect to the creation, understand the importance of IP, possess sufficient knowledge of IP issues, and be able to put that knowledge into practice. This is not just education to provide knowledge about IP system, but is education aiming at society's development and its sustainability.

The hybrid IP teaching method combining substantive IP law with skills training is needed because the most difficult challenge is helping students develop the analytical skills to apply IP theories to new factual situations/practices, identify emerging IP issues and predict future IP development or policy. To respond these challenges, IP teaching method must support to achieve the ultimate goal of IP teaching which is not simply to impart knowledge of IP law, but rather to educate student to have analytical skill to apply IP law to factual circumstances. Therefore, the most important tasks for IP educator develop method of teaching that helps students develop ability to identify emerging IP issues, predict future development

²⁰ C. Junghans, A. Levy et al., *Intellectual Property Management: A Guide for Scientists, Engineers, Financiers and Managers*, J. Wiley Inc., 2006.

²¹ Japan Patent Office, *Intellectual Property Education as a Means to Nurturing Creativity*, 2008, p. 12-14

in IP law and policy, apply IP theories/law to address new technology and meet other social challenges.

Traditionally, the conventional method of teaching IP is in-person interaction in the classroom. This method uses a specific number of lectures, tutorials, and follow-up sessions with an instructor and learning was based on interaction at a fixed time and place. According to Shaheen E Lakhan and Meenakshi K Khurana, the biggest challenge of traditional method was the availability of trained IP staff, a severe shortage of staff exists and, even in the presence of IP staff, as well as a lack of funds²². In Indonesia, the situation is even more dismal for the traditional classroom method of teaching in some universities, particularly in outside Java.

Teaching method of IP in law schools and into other disciplines is continuously evolving and expanding. The growth and the advanced technology help IP lecturers to improve teaching method in basic, intermediate and more sophisticated level. At basic level, traditional IP program provided audio and video recording by using taped lectures in cassette form, or more recently through compact disk (CD).²³ However, the cassettes or CDs are difficult to be update and have to be rerecorded to incorporate new material. At intermediate level, the utilization of technology, primarily the internet is for more flexible communication tools between teachers and student, allowing students to raise concerns, obtain clarification, and engage in discussion relating to subject materials and to learning activities.²⁴ At the

²²Shaheen E Lakhan, Meenakshi K Khurana, "The State of Intellectual Property Education Worldwide", *Journal of Academic Leadership*, Volume 5, Issue 2, 2007, p. 3.

²³Philip Griffith, "Using the new technologies in teaching intellectual property (distance learning)" in Yo Takagi, Larry Allman, Mpazi A. Sinjela, *Teaching of Intellectual Property : Principles and Methods*, Cambridge University Press, New York, 2008, p. 268.

²⁴*Ibid*, p. 269.

sophisticated level, the technology is used as primary means for dealing with every aspect of administration and delivery of the course, from enrolment to completion of the program including learning and assessment.²⁵ At this level, teacher must adapt the traditional face-to-face teaching and learning activities to an online context, designing and incorporating new features which the technology facilitates, and designing and implementing an effective online assessment system. However, it should be bear in mind for IP teachers that technology is just a tool used to provide an opportunity for students to acquire information, skills, competencies and perspectives, it is not an end of IP education goals. The content and perspectives and skills that the students need to engage should be decided first and then think about effective ways of using the technology to achieve those goals.

Concept of distance learning has been applied as a form of online learning activity by changing traditional face-to face methods and inventing new virtual class method. This method is especially useful in postgraduate courses or courses where at least some of the students have particular knowledge and expertise which can be usefully shared with other students and provide the teacher with opportunities to expand course content.²⁶ Initially, distance learning included course materials sent out via regular mail and students interacted via mail or e-mail. Students went to a testing center to take an examination at the end of the semester. Since the enourmous amount of information are available in the internet, student should be stimulated to find out the relevant sources for reading assignment and up date issues using the internet, specially in a number of websites and portals dedicated to IP subjects

²⁵*Ibid.*

²⁶*Ibid* , p. 272.

and IP issues. Some organizations use technology to provide access to IP course documentation such as course outlines and class list and teaching materials such as readings, extracts of documents, tutorial topics, IP issues, etc. Then, recent changes in distance learning have introduced more technologically advanced methods, such as video and audio conferencing, recorded lectures transmitted via satellite, e-mail, live chat, websites and internet databases. The traditional mode of distance learning was supplemented by these multimedia learning devices and methods to allow for a more interactive relationship closer to the traditional classroom method and at much less cost.²⁷ Re-usability of the recorded and digital material allows for instruction to be delivered to expanded audiences and, after payment of royalties and obtaining permission from owners, the cost is still much less than any traditional method. Further, the problem of locating trained IP staff is solved, because one instructor's course can be used for multiple school locations.

However, according to Philip Griffith, providing lectures through audio or video conferencing is a possible alternative to recordings but there can be difficulties in organizing students in different time zones.²⁸ To respond this view, Shaheen E Lakhan and Meenakshi K Khurana argue that radio, television, telephone, and the internet provide means for delivery of material and expand the reach for universities and colleges. Time and location constraints are, to a large extent, also lifted. While the student must reach a specific location where the satellite or taped lecture will be delivered, this location can now be much closer to home.

²⁷ Shaheen E Lakhan and Meenakshi K Khurana, *Op.Cit*, p. 3.

²⁸ Philip Griffith, *Op.Cit*, p. 269.

To give the sense of relation with the teachers and each other classmates, the educator or course coordinator creates “online learning communities”²⁹ or “virtual learning communities”³⁰ by introducing a number of discussion aiming at exchange information, a free ranging discussions on any IP topics and provide a problem solving discussion where a problem and hypothetical is posted and students are required to submit answer, analysis and comment. Online learning communities is necessary to be established since for most students or teachers, the education has been regarded as an essentially social activity and personal interaction. Therefore, online teaching learning must create an interactive social connection, not only between teachers and students, but also amongs the students in the course. In online learning community, the online tutor should be introduced to put up notices, monitor, add comment and direct discussion. The assesment system includes the participation in this discussion and is also operated online by providing examination or assignment papers are made available on website and students must answer and submit to the electronic drop box. Another range of tools can be used in assesment such as setting online quizzes or short answer test automatically graded by the software program, submission of essays, projects or reflexive journal which can be created as online blog and online examination. Grade, results and feedback can be provided online by sending the grade to each individual as private communication, or public announcement or grade book.

In advanced course, IP teachers must change pedagogical approach from instruction to facilitation by developing the concept of IP teachers as facilitators. It should be avoided he

²⁹K. Shelton and G. Saltsman, “Tips and Tricks for Teaching Online: How to Teach Like a Pro!” www.itd.org/journal/Oct_04/article04.htm; J.V. Boettcher and R.M. Conrad (1999), *Faculty Guide for Moving Teaching and Learning to The Web*, Mission Viejo, CA: League for Innovation in the Community College.

³⁰ Philip Griffith, *Op.Cit*, p. 296

classic lecture format where teacher speaks and the rest of the crowd tries to pay attention. As a facilitator, the traditional role of a teacher conveying knowledge to the students is shifted for the more interactive roles of a moderator of issues and arguments presented in class. The imparting of knowledge via traditional lecture style is reduced to a minimum. Teaching by facilitation should be based on case studies and teamwork. The case studies will likely encourage students to translate theories into practical matter and develop critical thinking. According to current research, participants have greater recall of teaching content when it is communicated through teamwork rather than through a lecture.³¹ Feedback from participants will enable an interactive university to improve continuously and will help to ensure that it offers the highest-quality teaching. Teaching by facilitation encourages student of a greater discussion and debate on complex issues of IP subject matter. Through teaching by facilitation, students are constantly challenged to look at the issues and arguments presented by themselves and their classmates. This method encourages students to share their views in class and to further understand, analyze and integrate the subject matter of IP into their existing assumptions or body of knowledge. Through the discussions in class, IP is transformed into an factinating and interesting array of issues that urge the students to explore further into the subject and to conduct independent research on topics of interest.

A seminar style can be adopted as one form of teaching by facilitation, especially for a small class size. Seminar format provides the ideal educational vehicle for exposing students to meticulous readings of review articles or cases in their entirety³² and allowing students

³¹ Roya Ghafele, et.all, "It's time to rethink IP education", *Intellectual Asset Management*, December/January 2007, p. 32.

³² Roberta Rosenthal Kwall, Raymond P. Niro, "Teaching an Intellectual Property Seminar Through The Legal Literature", <http://ssrn.com/abstract=1021891>, p.1.

in better position to understand IP principles, its implications and the relevance of studying them. Extracurricular seminars and internal presentations are a good opportunity to learn not only through coursework, but also from the different knowledge and skill sets that participants bring to class. The seminar affords both professors and their students of variety and deep intellectual engagement.³³ A related benefit is that teaching a seminar through IP literature or cases allows students to examine a particular area through a multi-dimensional perspective.³⁴ The discussion and analysis of cases in seminar will be a useful and helpful teaching tool since through an interactive discussion of the cases, students are presented with true to life accounts and real issues of contention. Students are given a list of cases, textbooks, reference books, journal articles and legislation before the seminar and at the seminar, the instructor acts as a facilitator in a discussion session. This teaching methodology encourages independent learning and challenges the intellect of the students.

For teaching large class size provided for basic level, learning methods must engage the students intellectually and to maintain their attention for the entire duration of the class by creating a fun and relaxed atmosphere in the classroom where students are not afraid of being challenged or contradicted. Classes should be designed as interactive as possible. A various strategies may be employed to effectively interactive session and avoid a monologue – passive learning. These strategies include: (a) personalizing the large class by chatting informally and getting to know the students personally and inviting student feedback at the end of the class; (b) making the lectures interesting and clear by an abundant using of stories

³³ *Ibid*, p. 7.

³⁴ *Ibid*, p. 2.

drawn from personal experiences and news headlines ; (c) encouraging students to ask and respond to questions in class.³⁵

4.c. IP Human Bulding Capacity

Developing IP human building capacity mechanisms since the quality of IP programs depends on the availability and the quality of the IP lecturers who have specific expertise in one or more aspects of IP. However, many universities in Indonesia do not have such IP specialists enough. In some universities, the problem has been solved by hiring practising lawyers to teach IP courses or inviting “outside” lecturers to contribute a comprehensive and high quality of IP program. However, in the some remote area, especially in outside Java, the practising and experienced IP lawyers are still scare.

Thus, to meet the strong demand of IP lecturers, there will be no instant solution. IP education needs attention and support, including financial assistance to enable universities to a creation of a critical masss of IP educators. The creation, in coupled with a training center in IP office or national IP academy or specialized training centres would contribute to IP education through the exchange of teaching materials, IP resource persons, and IP knowledge. The international joint researches and publications to find common grounds for the further development of the IP system will be also an effective way to capacity bulding of IP persons. The universities may also consider providing an informal platform for a an network that allows graduates and tutors to stay in touch and exchange information on recent trends in IP programs.

³⁵Albert Teo, “Interactive Teaching and Learning in Large Class”, *CDTLink*, vol. 6 No.1, 2002, p. 5.

In addition, to keep abreast with internet technology revolutionized the manner in which information is disseminated and exchanged, teachers must improve their ability by learning new technologies and apply them as a tool to aid teaching. Learning does not have to be confined to the classrooms, developing website is one effective way to allow students to access the teaching and reading materials at a time and place most convenient to them, especially for mature students who can access websites for modules and learn wherever they want. The interactive website, encouraging greater student participation will affect to circumstance that learning can be fun and interesting. IP teachers may also develop an online forum in university's virtual learning portal where the IP teachers post issues or problems for the students to consider and ponder and the students use this forum to post questions or comments, and they sometimes continue into cyberspace the discussion that they have left off in class. The electronic/digital medium will also add variety in which information and knowledge may be disseminated and this instruction mode should be encouraged. Digital materials allow students to see the subject matter of the cases rather than just reading verbal descriptions and enable them to apply the principles they read about to new, concrete examples. Students usually enjoy are more willing to speak up in class when they can see or hear for themselves and can point to specific aspects of the underlying materials.³⁶

5. Conclusion

³⁶Rebecca Tushnet, "Sight, Sound, And Meaning: Teaching Intellectual Property With Audiovisual Materials", *Saint Louis University Law Journal* , Vol. 52, p.1.

The rapid proliferation of information-technology in digital era, together with the dynamic and rapid changes of IP law and emerging IP issues contributes the challenges to structure effective IP teaching method that can be solved by enhancing interdisciplinary IP curriculum, adopting “hybrid IP teaching method”, updating programs, promoting online/distance learning and improving IP human building capacity.

IP teaching methods should be improved to support the ultimate goal of IP teaching which is not simply to impart knowledge of IP law, but rather to educate student to have ability to identify emerging IP issues, predict future development in IP law and policy, and have analytical skill to apply IP theories/law to address new technology and meet other social challenges. The growth and the advanced technology help IP lecturers to improve teaching method by using internet technology revolutionalized the manner in which information is disseminated and exchanged. However, technology should be seen as a tool used to provide an opportunity for students to acquire information, skills, competencies and perspectives, it is not an end of IP education goals.