

CHALLENGES FACED BY DEVELOPING COUNTRIES IN TEACHING AND CONDUCTING RESEARCH ON INTELLECTUAL PROPERTY

*By Prof. Tom P.M. Ogada,
Moi University,
P.O. Box 3900, Eldoret, KENYA.
muhl@mutitechweb.com, proftomogada@yahoo.co.uk,
Tel: 254-0720870997, 254-0733831747*

I. INTRODUCTION

1. Intellectual property assets are valuable entrepreneurial products that should be carefully protected and their economic potential fully utilized. It is recognized that the protection and economic utilization of intellectual property rights (IPRs) is one of the factors that have precipitated the economic success in established market economies. This potential has not been adequately exploited in developing countries.
2. Whereas, there is strong need to promote the generation; protection and commercialization of IPRs in developing economies, the success of such efforts would depend on several factors. These include the level of awareness on IPR, the presence of critical mass of Professionals to offer services on IPRs, teaching and research on IPR and the perceived commercial importance of IPRs.
3. This paper looks at the challenges facing developing countries to teach and carry out research on intellectual property. Using Kenya as a typical example of a developing country, the paper starts with a brief presentation of the results of the IP Audit undertaken in Kenya in 2004. The results of this Audit provide a strong justification for the need to provide quality IP teaching and research in developing countries. This is then followed by a discussion on the difficulties and challenges, which developing countries may experienced when promoting IP teaching and research and some suggestions on how these countries can handle some of these challenges.

II. TYPICAL IP SITUATION IN A DEVELOPING COUNTRY

4. Universities and Training Institutions are expensive organisations and require a lot of resources to establish and operate. As a return on investment, the outputs from these institutions must benefit the society by contributing towards development requirements of a given country. Teaching, training and research programs must be directed towards solving specific needs for manpower development and knowledge creation.
5. Due to inadequate resources in developing countries, there is stiff competition for amongst different sectors for resource allocations. In most countries, priority for government resources go to programs such as health care, education, food security defence and infrastructure. Education in most cases takes the bulk of the grant. This means that creating new programs in the area of education for which government

funding is necessary requires good justifications. An IP Audit results normally provide useful tool for such decision making.

6. In 2004, the current author led a team of researchers to carry out a National IP Audit in Kenya. The project was funded by WIPO. Its objectives were:
 - a) To assess the level of public awareness on intellectual property within government and R&D institutions, universities, industries and SMEs.
 - b) To identify bottlenecks towards the commercial exploitation of IP assets and the level of use of IP in business and economic development in the country.
 - c) To review the existing national IP laws and policies as well as laws and regulations affecting the IP system and enforcement.
 - d) To review the provision of IP services both by national IP offices as well as professional IP service providers and understand how this has affected the promotion of IP in the country.
 - e) To draw conclusions and make appropriate recommendations.

7. In order to capture the relevant information from the key actors in the intellectual property systems, questionnaires were used as the key research instruments. The questionnaires was complimented by a review of relevant government documents, interview with selected IP personalities, case studies of selected success stories and articles from the print media. The results of the following three issues have been summarised for discussion:
 - a) Supporting Legal Framework on Intellectual Property
 - b) The level of public awareness on intellectual property within government institutions, universities, R & D institutions, industries and SMEs.
 - c) Professional Services

(i) Existing national IP laws and policies

8. The study showed that in term of legal framework and policies on intellectual property rights, Kenya is ahead of most African countries. There are three national offices in charge of Intellectual Property in the country. These are Kenya Industrial Property Institute (KIPI), Copyright Office and the Plant Breeders Rights Office.

9. Kenya Industrial Property Institute (KIPI) is a semi-autonomous department under the Ministry of Trade and Industry. It was established in 2002 upon the coming into force of the Industrial Property Act (2001). KIPI implements the Industrial Property Act (2001) which protects patents, utility models, industrial designs, and technovations as well as the Trademark Act Cap 506 that deals with registration of trademarks and service marks. The Kenya Copyright Act (2001) created the Kenya Copyright Board and the Copyright Office under Attorney General's Office. The Board is in charge of copyright and related rights. The Plant Breeders Rights (PBR) office was established in March 1997 and has operated under Kenya Plant Health Inspectorate Services (KEPHIS) since January 1998. The PBR Office implements the Seeds and Plant Varieties Act, Cap 326. It receives and process application for plant breeders' rights, performs the tests and maintain varieties granted rights, issues grants and publicize the information and maintains the register of plant breeders rights. The implementation of

this Act KEPHIS has had significant positive impact to the agricultural industry in Kenya.

(ii) The level of public awareness on intellectual property within government institutions, universities, R & D institutions, industries and SMEs.

10. Despite having in place adequate legal framework for intellectual property, the level of public awareness on IP has remained low. Many people in government, industries, universities and R & D institutions can not differentiate between patent, copyright, industrial design and utility models. Inventions are considered to be break-through technologies which require time, patience and knowledge and can only take place in universities and research institutions. There are also problems in understanding the roles of the three national IP offices. For example people questioned why business names are registered Attorney Generals office whereas for trademark, one has to go to an IP office. This low level of awareness is a clear indication for the need for IP education in the country.

Universities and R and D Institutions

11. Currently only one university and two international R & D institutions have IP policies, out of a total of twelve universities and over fifty R & D institutions. Only a few of these institutions have IP protection provisions in agreement which they enter into with employees, donors, suppliers and research collaborators. Very few institutions have filed IP application or commercialised IPR. These findings show a clear indication of the level of the importance researchers and government official attach to intellectual property. That researchers and decision makers in the country have not appreciated the importance of IP in the economic development is a clear justification for IP Education.

Industries

12. The level of IP awareness in the industries is even lower than in universities and R & D institutions. Although industries know the importance of trademarks to business performance, the remaining IP assets are vague concepts to many. As such, very few companies have taken legal steps to protect their enterprise intellectual property and they attribute this to lack of awareness on IP. Companies do not have IP policies and they do not include IP protection provision in contracts and agreements with business partners and stakeholders. Companies also cite lack of professional service providers as a major problem and that the few who are there charge very high fees. The lack of IP awareness in the industries has obviously led to low trade on Intellectual Property Assets. Industries are major players in economic development of a country and the lack of awareness of an important economic tool such as IP is a clear justification for IP education.

(iii) Professional Services*Valuation of IP Assets*

13. The valuation of IP assets is currently a major problem. There are a few experts, even among accounting and audit firms, who are familiar with valuation of IP Assets. This is a bottleneck to commercialization of IPRs.

Availability of Professional services on IP

14. Currently there are very few patent drafters in the country. According to KIPI, although the number of registered patent drafters is 15, there are only three that are active. In most cases, the success rate of the locally drafted patents, utility models and to some extent industrial designs, is comparatively very low. There is strong need to build capacity in the area of patent drafting. Similarly whereas there are only 50 patent agents registered by KIPI, only five are active. Most of the professional service providers are lawyers. As such the IP is not their core activity but just one of the several services offered by their law firms.
15. Whereas industrialized countries now have law firms dealing with only IP, in Kenya there is currently none, perhaps because the current business volume may not sustain such offices. Most of these firms act as conveyance of documents to KIPI and do not have adequate technical know-how in specific field of IP. The patent agents are currently not undertaking drafting for patent specifications but concentration of issues related to trademarks and industrial designs.

Long Judicial Process

16. The long judicial process is a demotivating factor and a hindrance in promoting the generation, protection and utilization of IPRs industries. Industries feel that the process to be too slow such that by the time one gets a court ruling, the infringer will have established a reputation for the infringing products in the market. The slow judicial process is attributed to lack of adequate IP knowledge amongst the judiciary.

(iv). Recommendations on Capacity building for Professional Service Providers

17. The study recommended that there is need for a focused strategy to develop a critical mass of professionals in the following services.
- a) IP agents
 - b) Patent drafters
 - c) Technology IP Management
 - d) IP Court Prosecutors
 - e) IP Valuers
18. To equip the Judiciary with the necessary IP knowledge, the study recommended strengthening IP education particularly by integrating and increasing the IP components in normal law degree program as well as enhancing IP component in the training of senior police and customs officers.

19. Furthermore, the study recommended that IP should be given prominence in training institutions just like issues related to IT and the environment. As a policy, IP should be included at all levels of training, right from secondary schools.

III. CHALLENGES OF TEACHING IP

20. Except for few countries in Latin America and Asian Tigers, the IP situation in most developing countries may be more or less the same as in Kenya. The promotion of the generation, protection and commercial utilisation of intellectual property requires that concerted efforts and resources are directed towards awareness creation through teaching as well as carrying out research on IP and disseminating the results of the same for common good.
21. Whereas several developing countries want to address the issues of creating IP awareness and capacity building through teaching and research, there are several challenges which face developing countries. These include
- a) Limited number of law schools
 - b) Lack of national IP Strategies
 - c) Lack of adequate market for IP services
 - d) Lack of resources to fund IP Training
 - e) Lack of adequate Intellectual Property Faculty
 - f) Problem with teaching material
 - g) Problem with teaching facility
 - h) Problem with application of modern teaching methods
 - i) Multidisciplinary nature of IP
 - j) Problem with research on IP

Limited number of law schools

22. Traditionally teaching and research in intellectual property has been driven by law faculties and schools. Law schools would include one or several classes or even a complete program of classes, designed for students who intend to become intellectual property practitioners. Several universities in developing countries do not have law schools. In Kenya, for example, out of the five public universities and twelve private universities, law programs are offered only in two universities.

Lack of IP Strategies

23. Universities are expected to train manpower for national development. The manpower requirement must fit in national development strategies and plans. Consequently IP training and research must be carried out to meet specific national IP Strategies and Policies. Very few countries in developing world currently have national IP strategies and policies. Furthermore, to develop strategies and policies, a country must undertake a comprehensive IP audit. Resources are required for such exercise.

Lack of a market for IP services

24. In the recent past, there has been radical change towards financing university education in most countries of Africa. Universities have been challenged to reduce

over dependence on government funding by diversifying their sources of income. Consequently most institutions of higher education in developing countries have recognised the following three streams of income

- a. Government grant
- b. Fees paid directly by parents and sponsors
- c. Other sources of income generation

25. To attract direct fee paying students universities are now putting emphasis in coming up with demand driven programs and courses, which can sustain themselves financially. Only courses which are perceived to have high employment potential are considered marketable and can therefore attract students. Whereas law programs have remained marketable in many countries, new areas of specialization such as intellectual property are still less known and demand for such programs is still low. The low level of IP awareness and IP trade indicates that the market for IP graduates is not yet adequately developed.

Lack of resources to provide scholarships for IP teaching and Training

26. There are countries, which may have taken national IP Audit and came up with a plan to develop capacity in IP. But these countries may lack financial resources to fund the teaching and training and provide scholarships for selected government employees to build the required capacity.

Intellectual Property Faculty

27. The quality of an Intellectual Property educational program will depend in large part on the level of experience and interest of the faculty. In developing countries, there are very few full-time university faculty members who have made their speciality in the study of one or more aspects of intellectual property. Further more many universities do not have full –time IP specialists and the education of students in intellectual property depends on professors who take in side interests in the field of IP in addition to their main speciality. Whereas part-time faculty drawn from practising attorneys could provide a temporary solution to bridge the gap, in some developing countries, it is difficult because:

- (a) The low pay packages at the university make it difficult to attract part-time lecturers from law firms.
- (b) Most of the patent Attorneys come from law firms, which are not specialising on IP matters. These firms provide IP services in addition to various legal services possible. In this way, the level of experience on IP is not adequate for training and teaching IP.

Teaching Material for IP

28. Another important factor which affects the quality of teaching is the available teaching materials for a given program. There is lack of teaching materials especially suitable for use in the developing countries. First much work and efforts are required in compiling teaching materials and reference sources. The challenge here is that most libraries in developing countries may not have appropriate IP references. Where they

are available, more often than not, they would be old and outdated. This situation is completed further by the fact that IP is a new area of study and research world-wide. The limited access to internet for most universities makes it even more difficult to access latest literature. Yet a professor must compile own course materials given the relative lack of effective teaching materials available. Furthermore, given that the level of IP trade is comparatively low in developing countries, building relevant case studies is difficult and consequently the professor may be forced to use examples and practices which are remote to the environment and surrounding of the students.

Teaching and Learning facilities

29. Another problem facing most of developing countries is availability of teaching and learning facility. Access to internet is still a problem in many countries. Internet connectivity is still low and congestion has also made connectivity and access slow. Furthermore, even where there is connectivity the cost of access is high and the availability of PC terminals is limited. In some countries, there are still universities which do not have access to internet.

Teaching Methods

30. Most universities are still using the traditional face to fact teaching method. Very few have embraced distance and virtual learning technologies. The problem with traditional face to face method is that the access to teaching and learning is tremendously reduced. Only few people can be trained at a time due to constraints in space and other facility Furthermore face to face learning makes it difficult to avail IP education to the working group and those based in areas far away from cities and educational centres. Yet IP training could also benefit those who are working in government, industries, research institutions and law firms and who need IP to facilitate certain decisions and who could benefit from post graduate programs on IP. The challenge therefore is the promotion of and investment in resources which can enhance the provision of IP training through distance learning and virtual education.

Inter Disciplinary Nature of IP

31. One challenge which most countries must undertake is to demystify IP. There is a perception that IP is a legal subject and should therefore be left to lawyers. Contrary, the range of students that would benefit from intellectual property education is broad. It includes students from law, engineering, science, technology, medicine, performing art as well as social and cultural studies. The recent attention given to biotechnology and genetic resources as well as traditional knowledge has already expanded the scope of IP training to experts in these areas too. A part from patent attorneys, capacity must be built to prepare professionals in areas like IP Valuation, IP Audit and Technology Managers. To prepare these professionals require inputs of not only from law professors but also professors in areas such as business, marketing, finance and technology. Depending on the orientation and specialization, a centre of intellectual property may be desirable to tap on resources drawn from the various departments and units of a University. Such centre may not necessarily need to be housed in a law school.

Research in IP

32. The core business of any university is teaching and training, research and development as well as community and extension services. Teaching at a university level is considered not complete without research and development component. Research and publication of research findings are key outputs of university staff. In most universities promotion is based on the number of publications in referred journals. This is based on the accepted norm of “*Publish or Perish*”.
33. Research in highly specialized field like intellectual property required not only multi disciplinary approach but also international collaboration. In developing countries, particularly Africa, University professors do more teaching than research. This is mainly due to lack of resources to fund research. Furthermore, the collaborative nature of IP research has seen the movement in the recent years towards establishing of specialized centres of research on Intellectual Property or centres which combine research and teaching.
34. There are already centres for research on IP in industrialised countries e.g. Max – Planck in Munich, Franklin Pierce Law Centre in USA, The Canadian Intellectual Property Centre, Queen Mary Intellectual Property Research Institute as well as the Korean International Intellectual Property Institute.
35. Currently there is no such institute in Africa. The challenge is how to mobilize resources to create such centres in which a given region could tap expertise.

IV. CONCLUSIONS AND RECOMMENDATIONS

36. A typical IP Audit shows that the level of IP Education in developing countries is low and that there is need for capacity building to develop professional service providers in IP. Only this will enhance the promotion of generation, protection and commercial utilisation of intellectual Property. There is therefore a strong justification for training and research in IP.
37. The main challenges facing developing countries in carrying out teaching and research on IP are mainly attributed to lack of resources and low IP awareness. Resources are required to finance the development and implementation of IP capacity building strategies. The low level of IP awareness means that decision makers can not devote adequate resources to IP training, teaching and research.
38. Developing countries must strive to pool resources together to create Regional Centres of excellences in teaching and research on IP. Furthermore, strategies where Professors within a given region are encouraged to jointly prepare course materials on IP should be encouraged. To provide wider outreach, face to face training method should be complimented with distance and virtual learning. Resources should be pooled to realise this
39. Centres for research on IP in industrialised countries such as Max – Planck in Munich, Franklin Pierce Law Centre in USA, the Canadian Intellectual Property Centre, Queen Mary Intellectual Property Research Institute as well as the Korean International

Intellectual Property Institute should be encouraged to support the development of Centres for IP teaching and research in developing countries. An easy way of starting is to allow developing countries to use their teaching materials and to offer courses jointly.

END OF PAPER