Intellectual Property and Sustainable Development Series





Intellectual Property Training and Education:

A Development Perspective

By **Jeremy de Beer,** University of Ottawa
Chidi Oguamanam, Dalhousie University

ICTSD
International Centre for Trade and Sustainable Development

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ICTSD welcomes feedback and comments to this document. These can be sent to Ahmed Abdel Latif (aabdellatif@ictsd.ch).

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LIST OF ABBREVIATIONS AND ACRONYMS

ACTA	Anti - Counterfeiting Trade Agreement
AIDIKI	Aya International Development and Indigenous Knowledge Institute
AIPPI	International Association for the Protection of Intellectual Property
ARIPO	African Regional Intellectual Property Organization
ATRIP	International Association for the Advancement of Teaching and Research in Intellectual Property
BMZ	German Federal Ministry for Economic Cooperation and Development
CDIP	Committee on Development and Intellectual Property
DA	WIPO Development Agenda
EPO	European Patent Office
GIPA	Global Intellectual Property Academy
GNIPA	Global Network on IP Academies
ICTs	Information and Communication Technologies
IFPI	International Federation of the Phonographic Industry
ILO	International Labour Organization
IP	Intellectual Property
IPLAN	Intellectual Property Lawyers Association of Nigeria
IPR	Intellectual property rights
JPO	Japanese Patent Office
LDCs	Least developed countries
NCC	Nigerian Copyright Commission
NCI	Nigerian Copyright Institute
NNMDA	Nigeria National Medicine Development Agency
OAPI	Organisation Africaine de la Propriété Intellectuelle
OECD	Organization for Economic Co-operation and Development
STRAP	Strategic Action against Piracy
TRIPS	Trade-Related Aspects of Intellectual Property Rights Agreement
UNCTAD	United Nations Conference on Trade and Development
UNESCO	United Nations Educational, Scientific and Cultural Organization
UNEP	United Nations Environment Programme
UNIDO	United Nations Industrial Development Organization
UNISA	University of South Africa
USPTO	United States Patent and Trademark Office
WIPO	World Intellectual Property Organization
WHO	World Health Organization

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FOREWORD

In the past decade, ICTSD's Programme on Intellectual Property Rights and Sustainable Development has taken an active part in efforts to achieve a more balanced and development-friendly global intellectual property (IP) system that promotes innovation and creativity while being supportive of public policy and development objectives. In this context, its policy oriented research has covered a wide range of issues providing governments and other stakeholders with innovative analysis, policy options and practical tools to address many challenges confronting them in this area.

During this period, the global IP landscape has also witnessed important changes, most notably the serious questioning of a 'one-size-fits-all' approach, which tended to prevail in the design of IP norms and the delivery of IP technical assistance. The WIPO Development Agenda (DA) recommendations, adopted in 2007, have been an important milestone in this evolution. Their implementation remains an ongoing process that requires the active contribution and participation of all stakeholders.

In this context, *Intellectual Property Training and Education: A Development Perspective* by Jeremy de Beer and Chidi Oguamanam is a new contribution by the ICTSD Programme on Intellectual Property Rights and Sustainable Development that addresses a critical area that has received relatively little attention from a development perspective.

Training and education are a crucial component of a well-functioning and balanced IP system. The adoption of the World Trade Organization (WTO) Agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPS) and its subsequent implementation gave rise to a growing demand for IP training and education, particularly in developing countries. A variety of international organizations, bilateral donors as well as IP offices became actively involved in addressing these needs.

At the multilateral level, the agreement between the WTO and the World Intellectual Property Organization (WIPO) on technical assistance (1996) gave WIPO a key role in this area. The WIPO Academy, established in 1998, marked a further expansion of WIPO's activities related to IP training and teaching particularly through its distance learning programmes, which were able to reach a wide audience using information and communication technologies (ICTs).

However, it seems that the significant and rapid expansion of IP training and teaching activities provided to developing countries was not in many cases accompanied by a broader reflection about their content, orientation and the extent to which they address development concerns. Should IP training and teaching activities be the same for audiences in developed countries and in developing countries? Should they be the same in all developing countries? How can they take into consideration differences in levels of development and in socio-economic circumstances? What is the best way to give effect to the letter, and more importantly the *spirit,* of the relevant DA recommendations dealing with IP training and education activities in the overall context of technical assistance?

These are some of the challenging and complex questions this paper seeks to address. To do so, the paper examines, for the first time, IP training and education activities, particularly those carried out by WIPO, the most important technical assistance provider at the multilateral level. It looks into the extent to which criticisms directed at those activities are justified and identifies some key issues and recommendations for effective design and delivery of IP training and education from a development respective. The paper uses Nigeria as a case study in its substantive analysis of these issues.

Key findings of the paper point to the fact that "few if any of the activities undertaken by IP training and education providers expressly or adequately integrate a development dimension, and in particular materials reflecting principles underpinning or recommendations comprising the Development Agenda."

To address this lacunae, the authors identify a number of key principles to guide development-oriented IP training and education. They also present a number of general recommendations, which include making curricular and organizational materials transparent, relying on open access learning materials whenever possible, reflecting a diverse range of views about challenging issues and empowering students to think critically and independently.

In terms of the ongoing process of improving training and education on IP and development, the paper suggests a number of concrete steps, such as building and using an accessible inventory of scholarly literature and teaching materials on IP and development, supporting new multidisciplinary research publications and curricular materials, thoroughly auditing, evaluating all activities of the WIPO Academy and other providers and establishing a task force to improve IP curricula and materials in accordance with emerging best practices.

Without integrating a development dimension in IP training and education activities, efforts to achieve a more balanced and development-oriented IP system at the international and national level are unlikely to be lasting or effective in the long term. In addition, and as the authors point out, this is not an issue for developing countries to tackle alone. Developed countries have also a stake in encouraging IP training activities that contribute to create balanced IP regimes that function effectively.

Ultimately, the example of IP training and education shows that the rebalancing of the IP system is a long-term process in which much remains to be done. The WIPO DA, if effectively implemented, can make a tangible contribution in this regard.

In a knowledge-based economy, a better understanding of intellectual property rights (IPRs) is imperative for informed policymaking in virtually all areas of development. This has been the central objective of the ICTSD Programme on Intellectual Property Rights and Sustainable Development. The project focuses on ensuring a proper balance between the different interests at stake in designing appropriate IP regimes that are supportive of development objectives and compliant with international commitments. An additional central objective has been to facilitate the emergence of a critical mass of well-informed stakeholders in developing countries – including decision-makers and negotiators as well as actors in the private sector and civil society - able to define their own sustainable human development objectives in the field of IP and effectively advance them at the national and global levels.

We sincerely hope you will find this paper a useful contribution to the debate on IPRs and sustainable development, particularly in relation to IP training and education. We also hope that it will be a valuable input for all countries and interested stakeholders in their efforts to advance the effective implementation of the WIPO DA recommendations..



Ricardo Meléndez-Ortiz
Chief Executive, ICTSD

EXECUTIVE SUMMARY

Despite its growing prevalence and importance worldwide, the topic of intellectual property (IP) training and education has received relatively little scholarly research and analysis. Following the TRIPS Agreement, IP training and education activities expanded significantly, and some attracted considerable criticism. Against this background, several recommendations comprising the World Intellectual Property Organization (WIPO) Development Agenda (DA), as well as global IP reform efforts more broadly, are related to IP training and education programmes. Such programmes, therefore, are one important area for implementation of the DA and its animating principles.

WIPO is the most active and influential organization delivering IP training and education in developing countries. The WIPO Academy, established just over 10 years ago, is responsible for many, but by no means all, such programmes. The Academy has successfully established different programmes targeted at policy leaders, practicing professionals, full- and part-time students, business executives and the general public. The relatively new Global Network on IP Academies connects national IP offices and other entities engaged in IP training and education in order to increase collaboration in this area.

The IP training and education activities of WIPO generally and the Academy specifically have been very influential in many developing countries. This is the case particularly in Nigeria, where the Nigerian Copyright Commission (NCC) and associated entities have effectively raised public awareness on IP issues. However, by focusing mainly on piracy and the enforcement concerns of rights holders, training and education activities have yet to facilitate more context-sensitive discourse about broader socio-economic and cultural implications of IP issues and human development.

In general, at this time, few if any of the activities undertaken by IP training and education providers expressly or adequately integrate a development dimension, in particular materials reflecting principles underpinning or recommendations comprising the DA. Significant discussion of critical issues and perspectives on IP specifically relevant to developing countries may not have been intentionally omitted. Nevertheless, in light of the adoption of the DA, this dimension is conspicuously absent from most curricula and materials.

In many developing countries, including Nigeria as an example, the DA presents a timely and valuable opportunity to re-evaluate the design and delivery of IP training and education. Some lessons might be gleaned by looking at emerging best practices in development-oriented IP courses, which include making curricular and organizational materials transparent, relying on open access learning materials whenever possible, reflecting a diverse range of views about challenging issues and empowering students to think critically and independently.

Next steps in the ongoing process of improving training and education on IP and development include: building and using an accessible inventory of scholarly literature and teaching materials on IP and development; supporting new multidisciplinary research publications and curricular materials; thoroughly auditing, monitoring and evaluating all activities of the WIPO Academy and other providers and improving IP curricula and materials in accordance with emerging best practices.

1. IP TRAINING AND EDUCATION IN A CHANGING GLOBAL IP LANDSCAPE

1.1 Study Objectives and Methodology

Intellectual property training and education has become an increasingly widespread and influential phenomenon during the past two decades. Although IP training and education programmes have become more prevalent and important, thus far they have not attracted much scholarly attention from researchers interested in global IP policy and practice. Irrespective of this lacuna, the activities of some organizations working in this field, especially WIPO, have attracted considerable criticism, warranted or not. Real or perceived biases and deficiencies in IP training and education programmes, alongside many other things, contributed to the impetus for reforms pursuant to the DA at WIPO.

The purposes of this paper are to begin to fill the gap in research on IP training and education by investigating various past and ongoing activities in developing countries, determine the extent to which criticism of such activities may or may not be justified and identify issues for further work toward improving IP training and education as a means of implementing the broad principles underpinning the DA. The focus is on WIPO because of its key role in human resources development and capacity building in international IP, although the work of other relevant organizations and institutions is not overlooked. The paper aims at shedding light on the issues and establishing a framework for strategic discussion and further action in pursuit of the DA's principles and recommendations.

The methodology for this research involved four interrelated steps. First, we collected and analyzed an array of publicly available documents, literature including books, articles and reports, curricular information regarding many different IP education programmes offered by various organizations and, where possible, the learning materials used in these activities. Second, we engaged in semi-structured communication, face to face or virtually, with several key officials from organizations delivering IP training and education. We also gathered data related to technical assistance with IP training and education in one specific country, Nigeria, to assess the practical impact of such activities. In the few instances where relevant office holders declined to respond or could not engage in communications, best efforts were made to obtain information through alternative means. Third, our research team completed and then evaluated the content of WIPO's most popular distance-education IP course. Fourth and finally, we surveyed IP curricula and courses offered by several academic institutions or other non-governmental organizations in order to begin the process of identifying ideas and possible best practices for development-oriented IP training and education activities. Notably, data for this paper were collected mostly in 2009 and early 2010; very recent changes in training and education programmes or materials may not, therefore, be fully reflected in the analysis.

The results of our research are presented in two major sections of this paper: a discussion of IP training and education programmes in developing countries and a presentation of some key issues to consider in formulating recommendations and strategies for effective design and delivery of IP training and education from the perspective of developing countries.

Throughout the paper, we make reference to the case of Nigeria, as a concrete example of the ways in which WIPO and other actors are connected to IP training and education in developing countries. Nigeria, introduced in more detail in Box 1, is an epicenter of cultural and creative activity as well as an emerging hub of scientific research and development in Africa. It thus represents many of the concerns, contradictions and challenges of developing countries' experience with the IP system and, more relevantly for this paper, IP-related training and education.

Box 1. Nigeria: A Brief Profile

With an official population of 150 million people, Nigeria is Africa's most populous country. It represents 50 percent of the West African population. After South Africa, Nigeria is the largest economy in sub-Saharan Africa. Comprised of an estimated 250 nationalities with a corresponding number of languages and cultural groupings, Nigeria represents the cultural hub of Africa and African diaspora by extension.

Nigeria is well known for its vast oil reserves and its rich cultural heritage, which traverses diverse art forms, including languages, literature, crafts, music, drama and other forms of creativity. Nigeria is also endowed with rich biological diversity, genetic resources, and associated traditional medicinal and agricultural knowledge. After over almost two decades of stagnation, arising from military dictatorships, Nigeria's information, communication and biological technologies industries are burgeoning. Nigeria's expansive creative activity is perhaps best symbolized in the recent phenomenal growth of its movie industry, which produces an estimated 1000 low-cost movies annually. The industry, known as "Nollywood," is propelled by creative adaptation of digital and video technologies to make low-budget Nigerian-theme movies. Nigeria ranks, after India (Bollywood) and the United States (Hollywood), as the third largest movie producing nation in the world.

1.2 Evolving Perceptions about IP and Development

General understanding of the relationship between IPRs and development has changed significantly in recent years. For decades, the international IP discourse has been influenced by the belief that development requires strong IP protection and IP protection invariably causes development. IP is, in the words of a former WIPO Director General, "a power tool for economic growth" (Idris 2003). The simplistic and false impression that more IP protection always drives development was one putative reason international standards were regularly ratcheted up throughout the 20th century. Developed countries, with the help of key private sector and international organizations, have in various ways pressed upon developing countries the idea that strong systems of IP protection are always good for development, and stronger systems are even better (Drahos and Braithwaite, 2003; May, 2000; Sell 2003; Sell and May 2006).

Following TRIPS, the WIPO Internet Treaties on copyrights, performances and phonograms (1996) and a host of other bilateral and multilateral agreements, international standards of IP protection have risen to unprecedented levels. These standards apply homogenously to countries at very different levels of development, regardless of their varying economic, social and cultural circumstances. A few concessions do exist in terms of the substance and timing of obligations for developing and least developed countries (LDCs), but the normative principles animating the last century's international IP laws are, for the most part, presumed to apply globally.

The TRIPS Agreement, in particular, and the legal changes it entailed, created a significant demand for IP education and training in developing countries. It became quickly apparent that much of the substantive work to harmonize higher standards of IP in domestic legislation throughout the world could not, alone, yield the results that advocates of stronger protection wanted. Research confirms that, especially in developing countries, there is often a wide gulf between IP laws on the books and day-to-day realities (Armstrong *et al*. 2010). Effective enforcement therefore requires education about the law.

In jurisdictions where the basic concepts of IP may be foreign and unintuitive, including many developing countries, IP education was advocated not just for technical training. It was

necessary to promote and instil in the local culture the value of IP's underlying principles. Government officials, private sector businesses and the general public in many developing countries needed to be convinced that enacting and enforcing strong IP laws would lead to development and particularly economic growth. The motives of IP trainers and educators were not necessarily nefarious. Programming initiatives were driven by the genuine belief that an IP regime modelled on the leading systems of Europe, North America and Japan was invariably beneficial for global economic development and should be emulated by developing countries (*e.g.* Arai 1999).

This perspective on IP education and training was reinforced after the adoption of the TRIPS Agreement. In 1996, the WTO and WIPO signed a technical cooperation agreement that gave WIPO a key role in providing technical assistance to developing countries in relation to TRIPS implementation, including IP training and capacity building (Okediji 2008). That reinforced WIPO's central role in international IP training and education, which actually flowed from its original mandate, established in 1967: "to promote the protection of intellectual property throughout the world."[1] Promoting IP protection meant, in part, educating others about the virtues and details of such protection.

When the organization became a specialized agency of the United Nations in 1974, it assumed responsibility "for promoting creative intellectual activity and for facilitating the transfer of technology related to industrial property to the developing countries in order to accelerate economic, social and cultural development."[2] Though WIPO's UN-related responsibilities are quite different than its former mandate, the organization, in general, continued to adopt the stance that promoting IP protection in itself promotes creative intellectual activity, facilitates technology transfer and accelerates development (Chon 2006).

Ironically, the successful push for a stronger international IP regime has helped raise awareness of its potentially adverse consequences. Boyle (2004) notes that the resulting one-size-fits-all, extra-large global IP paradigm has been widely criticized. A serious backlash has occurred, even within developed countries, with some economists suggesting that in certain contexts the IP system should be overhauled completely (Boldrin and Levine 2008).

In this polarized context, however, there is an emerging middle ground. Commissions of respected experts have objectively assessed IP's linkages to development (CIPR 2002). Economic data and analyses of the roles IP does and does not play in development are beginning to appear (Fink and Maskus 2005). There are a growing number of books and other scholarly materials investigating this topic, and especially recently, the promising opportunities for international institutions in reshaping a more development-friendly knowledge governance system (Wong and Dutfield 2010, de Beer 2009; Deere 2008; Netanel 2008; Gervais 2007; May 2007). This work builds upon previous pioneering work in the field (e.g. Gana 1995, Oddi 1987). Civil society and academics have begun to work more closely with policy think tanks, intergovernmental agencies and representatives of developing countries, nurturing the impetus for progressive change. A shared normative critique of IP, rejecting both maximalist and abolitionist extremes in favour of a more moderate and nuanced position, has begun to emerge under the umbrella of "access to knowledge" (Kapcynski 2008).

1.3 The WIPO Development Agenda

In 2007, WIPO officially adopted recommendations for reforms, after several years of discussion triggered by a proposal for a Development Agenda put forward to the organization by Argentina and Brazil (WIPO 2004). In a long series of meetings, many dozens of proposals were advanced, debated, consolidated and organized (de Beer 2009). Ultimately, WIPO's member states agreed to implement 45 recommendations, grouped into 6 clusters.

Debating the complex history and nature of the DA is beyond the scope of this paper. Resolving its implications for WIPO as an

organization as well as the broader global IP community is even less feasible in the present context. Suffice it to say here that the essence of the DA is a rejection of a context-neutral, one-dimensional and oversimplified perspective on IP's impact on development and its associated implications for IP policies globally and locally. IP protection *may* facilitate economic growth, but it may also impede some aspects of development. Typically, IP systems do both simultaneously. Much depends on what is protected (*e.g.* foreign or indigenous knowledge) and how nuanced systems are designed and exploited taking into consideration differences in levels of development between countries. Defined positively, then, the DA is an auspicious opportunity for malleable responses to some of the most serious and complicated IP policy challenges in recent history (de Beer 2009).

Why and how is this relevant to IP training and education programmes? Successful implementation of the DA depends on many things. Among these variables is the degree to which IP training and education influences not only norm-making processes and results, but also practical implementation of IP policy and enforcement of IP law in everyday situations. A robust understanding of not just IP principles and legal doctrine, but also of the fundamental linkages between IP, public policy challenges and levels of development is necessary to create balanced IP regimes that function effectively.

This is not an issue for developing countries to tackle alone. Developed countries have a stake in the outcomes and opportunities generated through IP training and education, domestically and abroad. Realizing the common concerns among countries at all stages of development about the importance of IP training and education may even help to sustain or reinvigorate progress implementing the DA. In other words, IP training and education is a focal point at which various normative and technical discussions related to the DA converge.

In more specific terms, there are several recommendations dealing with particular aspects of IP training and education, as highlighted in Box 2.

Box 2. Key WIPO Da Recommendations Directly Related to IP Training and Education

3. Increase human and financial allocation for technical assistance programs in WIPO for promoting a, *inter alia*, development-oriented intellectual property culture, with an emphasis on introducing intellectual property at different academic levels and on generating greater public awareness on intellectual property.

10. To assist Member States to develop and improve national intellectual property institutional capacity through further development of infrastructure and other facilities with a view to making national intellectual property institutions more efficient and promote fair balance between intellectual property protection and the public interest. This technical assistance should also be This technical assistance should also be extended to sub-regional and regional organizations dealing with intellectual property.

Source: WIPO 2007

Focusing only on a few recommendations, however, obscures a fuller picture of the ways in which all of WIPO's activities, and those of other actors playing a role in training and education, influence IP norms. Though the recommendations formally treat capacity building as distinct from norm setting, there is undoubtedly and almost inevitably a normative or ideological aspect to all training and educational activities. They reflect values and beliefs in relation to the issue addressed.

Training and education is not just technical assistance. Training and education is also related to assessment, evaluation and impact studies, particularly as advanced training and education

in post-secondary institutions, government agencies and other public policy making organizations is inextricable from IP research activities. Rethinking training and education can be an important part of the response to Recommendation 39, which is to study and recommend strategies to reduce "brain drain," especially in sub-Saharan Africa. Also, if Recommendation 45 "to approach intellectual property enforcement in the context of broader societal interests and especially development-oriented concerns" is to have practical effect, it must be in part through appropriately designed training and educational activities.

Training and education is also related to technical assistance, which is an important component of the DA. The original DA proposal by Brazil and Argentina was rather critical of WIPO's technical assistance for an alleged indifference to the development imperative, which is inconsistent with its status as a UN agency. Given that criticism, one of the adopted recommendations affirmed that:

> WIPO technical assistance shall be, *inter alia*, development-oriented, demand-driven and transparent, taking into account the priorities and the special needs of developing countries, especially LDCs, as well as the different levels of development of Member States, and activities should include time frames for completion. In this respect, design, delivery mechanisms and evaluation processes of technical assistance programmes should be country specific.

In 2009, WIPO and its member states agreed to pursue a project-based approach for implementing the DA recommendations. This has the advantage of operationalizing the recommendations through specific projects that encompass established activities reviewable by member states.

For example, an implementation project in the area of IP training and education (coded as DA_10_01) is already under way. The project is intended to test a new model for establishing IP training institutions in developing countries and LDCs. Following a pilot phase, new "academies" will eventually be started in four regions—Africa, Asia and Pacific, the Caribbean Latin America and the Middle East—with the goal of building capacity for human resources development in the field of IP.

More broadly, the current WIPO Director General's most recent report to the Committee on Development and Intellectual Property (CDIP), which has a mandate to discuss implementation of the DA, explained how that agenda is being mainstreamed into WIPO activities, including specifically the WIPO Academy. "[A] process has been initiated to better integrate the Development Agenda into the distance learning programmes of the WIPO Academy…. The issue and the modalities have already been discussed in detail at the WIPO Workshop for Distance Learning Tutors and Administrators and implementation will begin during the first half of this year" (WIPO 2010).

These activities could potentially contribute positively to the DA's overall implementation. However, it is worth noting that some current members of WIPO's existing global network of IP academies, such as leading industrial property offices, have been responsible for many of the activities and attitudes that the DA seeks to change. If the implementation project means merely more of the same sorts of activities that have been criticized in the past, the problems that led to the DA would be exacerbated, not alleviated. In other words, there is a risk that new or existing training and education programmes and activities will merely be labelled or rebranded as implementation projects, without any shift in organizational culture and stakeholder attitudes. Cosmetic changes alone would represent failure for the DA and its proponents, the organization and indeed the entire international IP community.

2. REVIEW OF IP TRAINING AND EDUCATION PROGRAMMES

IP training and education can occur in many settings, depending on the target audience and specific objectives for the particular programme. Because developing country participants exposed to international IP training and educational activities come from diverse backgrounds and have diverse goals, there are a wide variety of ways in which they may be exposed to the topic.

One is through initiatives established by international or regional organizations, including WIPO, the African Regional Intellectual Property Organization (ARIPO) and the Organisation Africaine de la Propriété Intellectuelle (OAPI). Another is through national or regional IP offices, such as the United States Patent and Trademark Office (USPTO), the European Patent Office (EPO), the Japanese Patent Office (JPO), the Korean Intellectual Property Office (KIPO) and so on, which often conduct activities outside of their own nations or regions, and professional societies such as bar associations, which typically operate domestically. Rights-holders, industry groups and, less frequently, non-governmental organizations may also organize formal training and education programmes for particular stakeholder groups or the public. Finally, substantial training and education takes place in post-secondary institutions, including universities and colleges.

Given the diversity of participants and objectives, it should not be surprising that training and education activities can also take many different forms. Events range from intensive training seminars structured over part of one day or several days to months-long courses or years-long programmes of formal study. They may be designed by national or international institutions, independent consultants or university professors and delivered by a wide variety of instructors or instructor teams.

In Nigeria, as an example reflecting practice in many other developing countries, none of the aforementioned modes of IP training and education predominate, but all are represented in varying degrees. One common thread that runs through most IP training and education in developing countries, including Nigeria, is the involvement of WIPO in one way or another. There are few if any places where WIPO does not play or has not played some role in developing IP training and education initiatives. Box 3 describes WIPO's IP training component of its development cooperation strategy using the organization's own words. It is apparent from this description that there are few if any aspects of IP training and education in which WIPO is not directly or indirectly involved.

Box 3. WIPO's Description of Its Development-Related IP Training Activities

> WIPO's training program consists of various regular general and specialized courses organized each year, in a number of developed and developing countries, for the collective training of government officials and others, and periodical seminars, workshops and other types of meeting at national, sub-regional and regional level in which government officials and other personnel from developing countries participate. In addition, government officials are attached to intellectual property offices and other institutions in developed or developing countries for practical training, and middle and senior level officials are sent on observation visits to such offices. WIPO also organizes on-the-job training in some countries by international experts. The level of training ranges from basic, introductory courses to refresher or specialization courses for officials in responsible positions in intellectual property administrations.
>
> Training programs have been extended to other categories of beneficiaries, in addition to the government officials working in the national intellectual property administrations. These

Box 3. *Continued*

> categories include private lawyers and practitioners, staff of research and development institutions, of enterprises and of collective management organizations, representatives of the judiciary, officials of enforcement agencies such as police and customs, of ministries of trade and foreign affairs and other persons dealing with questions related to intellectual property matters. It is also desirable that the teaching of intellectual property law should be developed in a number of universities in developing countries. The International Bureau has already awarded fellowships for this purpose to university teachers from developing countries to enable such personnel to examine the course and curriculum content in order to introduce or strengthen teaching at the university level. This means a more intensive involvement in the training of trainers.
>
> The aim of the training activities is to enable government officials and other personnel from developing countries to acquire knowledge and practice in the various aspects of intellectual property, so that they may effectively organize and administer the intellectual property system of their own countries. Training activities occupy a preeminent place within WIPO's development cooperation program because laws and institutions, however good they may be, are of little use without qualified staff to administer them."

Source: WIPO 2004, p.198

As the Nigerian experience demonstrates, WIPO administers a large number and wide variety of training and education activities not only via its different offices and departments, but also indirectly, through its collaborative engagements with national intellectual property administrative bodies. Many activities are focused thematically: copyrights, patents, trademarks or traditional knowledge are examples. Topics such as development or global issues might also be the subject of specific training and education activities. In these contexts, activities typically take the form of seminars rather than formal courses or programmes of studies.

These activities are exceptionally difficult to investigate, let alone assess, because they are offered by nearly every sector in the organization. Even WIPO itself has no clear mechanism to monitor or coordinate all of these various training and education initiatives. Apparently there is no single place from which one might obtain an organization-wide inventory of IP-related training and education.

The body within WIPO that comes closest to playing that role is the WIPO Academy, which operates many different kinds of programmes. But it is essential to note that the Academy's programmes, as extensive as they are, are only a subset of WIPO's overall IP training and education activities.

2.1 The WIPO Worldwide Academy

The "inspired idea" for the WIPO Worldwide Academy has been credited to Dr. Kamil Idris, WIPO's former Director General (WIPO 2008). Its establishment in 1998 as a central coordinating mechanism for WIPO's human resources development activities appears as one of Idris' major accomplishments during his tenure. The creation of the Academy was premised in part on the belief that ICTs could be leveraged to address the rising demand for IP education and training through distance learning.

Now, near the beginning of the Academy's second decade of existence, the Academy provides teaching, training and research services related to IP issues through activities grouped into five programme areas, summarized in Table 1. Reviewing this table's description of core programmes, their contents, target audiences and features is helpful to understand the more detailed discussion we present in this paper.

Table 1. Summary of WIPO Worldwide Academy Programmes

Programs	Content	Target	Features
Policy Development Program	Policy debate for a deeper understanding of various implications of IP on national and global economy and society (E,F,S)	High-level policy advisors and decision-makers	Intensive and interactive exchange of views assisted by resource persons
Professional Development Program	Basic or specialized training on the law, administration and IP rights enforcement, and IP information (E,F,S)	Government officials working at IP Offices	Standardized programs including on-site training at IP Offices
Education Degree/ Diploma Program	IP courses jointly organized by partner universities (E)	Students	Under-graduate and master courses
Research and Executive Program	IP research and practical programs for business (E)	Business executives	Intensive courses with an emphasis on case studies
Distance Learning Program	On-line education program especially designed by the Academy's platform and pedagogy in multiple languages (E,F,S,A,C,R and P and in some other languages; see Section 9 below)	All in need of general and advanced knowledge in a few months	An effective tool of 'Mass Education

Source: Takagi and Sinjela 2007

The Academy's programmes are designed to focus on different audiences, for different purposes. The ubiquitous and practical relevance of IP in virtually all facets of human endeavour around the world has triggered the need for an integrative approach to IP instruction at many levels. Each programme of the Academy aims at meeting four strategic goals. These include an international dimension that reflects WIPO's broad membership; an inclusive approach in accommodating the unique cultural, economic and linguistic needs of member countries; in-depth instruction that capitalizes on WIPO's extensive resources and experts and an interdisciplinary character that is enriched by perspectives from law, economics, environment, business, science and technology and more (Takagi and Sinjela 2007).

Since its creation, the Academy's tailor-made programmes have served tens of thousands of people. Precise statistics vary: WIPO's website puts the number at more than 87,000 participants,[3] while other WIPO sources indicate the number, up to the midway point of 2008, is 105,294 (WIPO 2008).

All of the Academy's programmes have been strategically designed. A major symposium on IP education and research was held at WIPO's offices in Geneva in 2005,[4] just as separate committee meetings on the DA were beginning to ramp up. The two-day discussion included a number of respected IP professors from developed and developing countries, representing a relatively diverse range of views on the topic of IP.[5] Some consensus apparently emerged that a holistic approach toward IP education was appropriate, with increased emphasis on, among other things, interdisciplinary initiatives. The organization was also encouraged to support work specifically addressing the teaching of IP. A book (discussed in Part 3 of this paper) was produced and published several years later (Takagi, Allman and Sinjela 2008). Another international conference was held in Geneva in 2008, which focused on IP management education and research.[6] A broader range of stakeholders—notably private sector industry representatives, IP administrators and business school professors—participated in that conference, the outcomes of which are thus far unclear.

Takagi and Sinjela (2007) have recently described the development of Academy programming and its strategic direction in detail. The following discussion builds on their description, combined with observations and insights gleaned from publicly available information and in programme brochures, and a review of curricular design and associated learning materials. We have also conducted – as discussed below - an in-depth, module-by-module analysis of materials provided in connection with the distance learning programme and the Academy programme with the most far-reaching impact, to investigate more specifically the content of WIPO's key training and education initiatives.

2.1.1 Policy Development Program

The Policy Development Program targets high-level policy advisors and decision-makers with activities focused on intensive and interactive exchanges of views about the impact of IP on national and global economic and societal issues (Takagi and Sinjela 2007). It is one of the programmes with the widest lens for looking at the role of IP in broad context. As noted previously, all training and education activities make or perpetuate normative perspectives on IP, to some degree, directly or indirectly. In the area of policy development, the inclusion of such perspectives is more necessary and obvious than, for instance, in professional training. Takagi and Sinjela (2007, p. 164) recognize this point when they describe the programme as dealing with issues such as "an interface between IP and other public policies with respect to science and technology, national innovation promotion, public health, preservation of genetic resources and the environment …"

Policy Development Program activities usually take the form of physical meetings and seminars, facilitated by internal and external resource persons. In less than three years between 2002 and 2006, almost 3000 participants engaged in training and education through the Policy Development Program. Though these numbers are somewhat outdated, they provide a sense of WIPO's reach through training and education.

These participants included some of the most influential individuals able to help steer the course of national and international IP policies: ambassadors and diplomats, government policymakers, law enforcement authorities, judges, professors, and so on. The Director General of the NCC, for example, has participated in this programme. Given the profiles of such participants, it is likely that they are able to create a trickle-down effect, under which the knowledge and perspectives they acquire are passed through their respective organizations or manifested in the important policy decisions they influence.

The Policy Development Program seems to be an important way in which WIPO manages interactions with other agencies and organizations, nationally and internationally. May (2007, p. 84) has highlighted the risk that in the process of inter-institutional exchanges like this, normative perspectives can easily be transmitted from the organization with perceived subject-matter expertise to a potentially more progressive organization with fresh perspectives. One of the challenges of implementing the DA will be to ensure that the result of policy development training activities is a multi-directional flow of ideas and attitudes, rather than a one-way process of indoctrination.

2.1.2 Professional Development Program

The Professional Development Program targets government officials working at IP offices with standardized programmes including on-site training related to IP law, administration and enforcement (Takagi and Sinkela 2007). Compared with the Policy Development Program, the Professional Development Program may seem more technical and specialized, with little place for critical perspectives on IP. It must be acknowledged however, that even seemingly "technical" training has embedded in it ideological views about the role of IP in society. These views might be manifested in the tone of materials and interactions through which information is presented, or through curricular choices about the kinds of details to include or exclude

in the activity. Especially if trainees have no previous professional training with local context-sensitive curricula in the IP area, some may lack the critical awareness of IP concepts that enables them to engage with technical details being conveyed.

In Nigeria, through the efforts of the NCC, most of the beneficiaries of the programmes are NCC staff and others from the Trademark and Patent Registry. The selection of bureaucrats to participate in these training programmes is somewhat politicized within the public bureaucracy. Like many other developing countries, external training opportunities are often perceived as privileges associated with career advancement. Consequently, in most developing countries, including Nigeria, trainees could be more likely to occupy positions of greater influence following their training.

The main focus of professional development is, as expected, practical skills development. Topics, such as IP administration and enforcement, are featured prominently in these training courses. The WIPO Academy implements professional development training activities through collaboration with the IP offices of Member States. The 2009 catalogue explains the nature of professional development training seminars.[7] A three-day inter-regional intermediate seminar takes place in Geneva as a prerequisite for a two-week period of further practical training in a national IP office. The intermediate course establishes the conceptual and doctrinal groundwork for further skills training, including first on the list, an introduction to "WIPO and its role in promoting the use of intellectual property as a tool for economic and social development."[8]

One of the stated objectives of the programme is to facilitate "exchange of information among different groups, including right owners, administrators and law enforcement officers."[9] Participants in the courses, therefore, are not just bureaucrats, administrators or enforcement officers. National IP offices, WIPO recognizes, are a hub from which it is possible to reach people from legal practices, industry associations, universities and other research-intensive institutions. The programme even targets non-governmental organizations that are active in areas such as the environment, human rights and humanitarian assistance (Takagi and Sinjela 2007, p. 164).

In the same period referenced above, 2002 to 2006, over 885 participants were engaged in the Academy's Professional Development training. However, just like the Policy Development Program, for reasons discussed above, WIPO's Professional Development Program has substantial spin-off effects throughout developing countries.

2.1.3 Education Degree/Diploma Program

The Education Degree/Diploma Program is aimed at offering undergraduate and masters-level courses jointly organized with partner universities (Takagi and Sinkela 2007). Relatively short and focused training activities, such as seminars, provided under the Policy Development Program and Professional Development Program, are integral parts of the WIPO Academy. But there is also need for more comprehensive study opportunities, including extensive coursework and independent research activities in the field of IP. That is how the most in-depth probing of IP's major challenges takes place. These needs have begun to be met through the WIPO Academy's Education Degree/Diploma Program, which trained about 1100 students between 2002 and 2006.

There are really two different kinds of programmes included in this category: full or multi-year courses of study, usually at the graduate or post-graduate level, and sessional courses that can be completed over several weeks during the summer. So far, all are administered in partnership with universities or colleges throughout the world. Plans are apparently being made for the WIPO Academy to offer an independent masters-level programme, but details are not yet available. The matter of recognized accreditation is one obstacle to overcome (WIPO 2008, p. 11).

The first component of the Academy's Education Degree/Diploma Program is implemented

through partnerships with five universities and institutions active in the area of IP. Together, the Academy and its partners deliver a series of diploma and masters-level programmes at the host institutions. The current partner institutions are located in Australia, Italy, South Africa, Sweden, and Zimbabwe.

Among the longest standing of WIPO's university partnerships is a programme with Italy's University of Turin, where a specialized post-graduate course on IP was established in 2000.[10] It is administered with the cooperation of the Italian government and the International Training Centre of the International Labour Office (ILO). Several dozen students per year, who already have degrees in law, economics, business, engineering, medicine or the natural sciences and an excellent knowledge of English, are conferred the degree of master of laws (LL.M.) in IP following a three-term programme of study. Pedagogical techniques include a mix of coursework, case studies, drafting exercises, seminar presentations and research paper writing. Though it was observed that instructors come from WIPO, the private sector and academia, it was not possible within the methodological constrains of this study to obtain further information about instructors' nationalities or pedagogical approaches.[11]

More or less similar programmes are offered in partnership with other institutions around the world. Of these partnerships, however, one stands out as especially interesting in the context of the principles underlying the DA: Lund University and WIPO's joint master of IP and human rights law degree. It is described as exploring the "interconnection between intellectual property and human rights, as well as the tensions between them."[12] Without having been able to obtain and review the instructional materials in detail, let alone audit any of this particular programme's courses or other activities, it is impossible to say whether the programme lives up to its promise. WIPO's willingness to offer a programme in IP and human rights law at the graduate level captures the essence of one possible direction to move the WIPO DA, which is to further explore the multifaceted links between human rights and development.

Of course, the other university programmes are also interesting, in part because of the range of institutions and organizations co-partnering in programme delivery. In 2008, WIPO partnered with Africa University in Mutare, Zimbabwe, as well as ARIPO, to offer a masters degree in IP (MIP) following a 12-month programme of study.[13] The curriculum for this programme seems to closely resemble that offered at the University of Turin; it is not obvious that there is, for example, additional content specifically directed toward the topic of IP and development. Indeed, WIPO claims that all of these partnership programmes were "especially tailored to the needs of the participants from developing countries and countries in transition to a market economy" (WIPO 2008, p. 9). However, a curricular review reveals little or no indication of how developing country specific perspectives are incorporated into the courses.

The WIPO partnership with the University of South Africa (UNISA) is notable because it was the first university partnership with the Academy, established in May 1999, and because it incorporates innovative pedagogical techniques.[14] The entire programme is delivered via distance education, a specialty for which UNISA is renowned. This distance education programme is, however, slightly different from that offered by the WIPO Academy alone. As discussed below, WIPO's independent distance education initiative is delivered mostly online, while UNISA indicates that it uses traditional correspondence-based teaching methods, physically mailing course materials and assignments to students. There are relative advantages and disadvantages to both online and traditional approaches, dependent on Internet connectivity among other things, in parts of Africa, so with this partnership students are able to choose the method of study most suitable in their circumstances.

The newest partnership, launching in 2010, between Queensland University of Technology (QUT) and WIPO also draws support from the Intellectual Property Office of Australia.[15] It seems from a general curriculum review that students

in Brisbane are exposed to similar content as students in Turin or Mutare. It should be noted, however, that QUT has significant strengths in areas relevant to the underpinnings of the DA, such as open access to knowledge or protecting the rights of indigenous communities.[16]

The five partnerships that seem to be active currently are not the only collaborative relationships with universities mentioned in various WIPO materials. A number of universities in developed and developing countries are acknowledged as playing a key role in training the initial cadre of IP trainers used by the WIPO Academy and other institutions (WIPO 2008, p. 9).

Takagi and Singela (2007) also allude to WIPO-related training opportunities at the Indira Gandhi National Open University in India, the University of Bucharest in Romania, the National Technical University in Ukraine and Federal University of Rio Grande Do Sul in Brazil. The nature and content of these opportunities, however, are unclear. The WIPO Academy website had referenced sample IP curricula from programmes offered by, for example, the Franklin Perce Law Center in the United States, the Centre for Intellectual Property Policy & Management at Bournemouth Law School and the Queen Mary Intellectual Property Research Institute, both in the United Kingdom.

Reference to these particular programmes on WIPO's website, as well as links to an undated (and perhaps out-of-date) list of several dozen universities worldwide with "IP faculties" was seemingly random. Appropriately, these links are in the process of being updated.[17] Better organizing and rationalizing the criteria for inclusion on this list would be beneficial for further study of the ways in which WIPO's engagement with post-secondary institutions might facilitate or hinder implementation of the DA.

In addition to the masters-level partnership programmes, the other broad component of the Academy's Education and Degree program is the Summer School in IP. The Summer School is described as directed at "younger generations" (WIPO 2008, p. 10). This is a decentralized programme offered in a number of locations around the world. In 2009, for example, sessions were held in Croatia, Korea, Mexico, the Russian Federation, South Africa, Switzerland, Thailand and Ukraine. Each session lasts approximately two weeks, and leads to a certificate of participation.

The WIPO Academy Summer School incorporates a mix of lectures, case studies, simulation exercises and group discussions in its pedagogy. Students cover a roughly 175-page package of reading materials addressing all of the basic topics one would expect to find in an introduction to the subject of IP. There is no specific section dealing with development, except for an opening chapter on "The Role of Intellectual Property for Development and Prosperity."[18] As the title might suggest, the chapter includes familiar refrains, for example in statements such as the following: "Now, more than ever, our development depends on whether and how our intellect will be expressed and respected in property rights …"[19] Despite the ample platitudes for IP, there is at least some recognition of diverging views about its relationship to development, as demonstrated by the passage in Box 4.

Box 4. Excerpt From WIPO Academy Summer School Reading Materials Regarding IP and Development

Better Understanding of IP in Political Context

There are certain misperceptions about IP in some quarters, which seem to discourage its use as a tool for development. IP protection is seen as:

- something only for wealthy countries and not for those of low income; thus, weak IP is somehow better for the national industries of such low income nations;
- an obstacle to access to information and essential drugs; and
- an obstacle to competition.

Box 4. *Continued*

On the other hand, much as we seek to set out the great benefits that a carefully crafted and managed IP system can bring, we do not pretend that it can solve all of a country's problems or allow it to meet all of its challenges. For example, the following statements do not reflect the true nature of IP:

- the stronger the IP protection, the better the well-being of the society;
- the IP system alone, once set up in accordance with international rules and obligations, will bring benefits through foreign direct investment and transfers of advanced technology; and
- a one-size-fits-all IP system can cater for the different needs of different nations.

IP to be Integrated into National Strategy for Development

As the impact of IP has become multi-dimensional and more widely observable, its integration into national policies and strategies needs to strike an appropriate balance between the various interested parties and public policy objectives. Such a balance may well require not only an efficient IP system, but also interaction between the IP system and other public policies. Given that the optimum balance needs dynamic and delicate fine-tuning in response to economic, social and technological change, the IP system also needs to be constantly reviewed and readjusted, so that it functions optimally to achieve national goals.

Source: WIPO Academy 2008, p.7

The summer school reading materials go on to cite, as recommended further reading, the work of the CIPR (2002). As would be expected, ultimately, any ideologies embedded in the summer school training programme are likely to vary depending on the particular instructor and other contextual factors. Given the plurality of course offerings, generalizations beyond the materials are difficult to make.

2.1.4 Research and Executive Program

The Research and Executive Program includes research and practical programmes designed for business executives as an intensive course emphasizing case studies (Takagi and Sinkela 2007). It is the Academy's newest programme, and not mentioned in the most recent (2004) edition of the WIPO Handbook. It was developed to provide business-oriented training and, therefore, incorporates pedagogical strategies from business schools, such as teaching through case studies, examination of best practices and real life experiences and situations. The format for training initiatives seems to mirror the format of activities delivered through the Policy Training Program, which is a multi-day, consultant-facilitated seminar.[20]

Unlike public policy related training, however, the emphasis with executive training is on the value of IP to *private* organizations. A "key benefit" is put to prospective trainees as follows: "Examine how your company can extract maximum value from intellectual property rights." Teaching private companies to extract maximum value from their IP assets is clearly in the interest of those companies, but perhaps less appropriate when other public policy goals related to the DA are considered.

The Research and Executive Program, as its title would suggest, involves a research component as well as an executive training component. Details about the research training aspects of the programme are, however,

unavailable. One of its "prime objectives" is: "to demonstrate, through research that the strategic use of the IP system adds value, thus illustrating that intellectual property is a tool for economic growth and national development." (Takagi and Sinjela 2007, p. 165) If supporting neutral and objective research into the positive and negative impacts of IP on development is an integral aspect of the DA, then attempting to investigate whether, rather than "demonstrate" that, IP is a tool for economic growth would be a more appropriate activity for the Research and Executive Program to promote.

In this respect programme designers and managers might consider the more objective approach toward empirical research being conducted by WIPO's newly appointed Chief Economist. More generally, it is worth questioning whether a research programme belongs alongside an executive programme at all, or whether it is better placed elsewhere within the Academy or even WIPO broader structures.

2.1.5 Distance Learning Program

The Academy's Distance Learning Program is a tool of "mass education," accessible online and in multiple languages to anyone desiring general or advanced knowledge of IP-related issues (Takagi and Sinjela 2007). It reflects the objectives of the Academy's several other programmes (indeed it was established in 1999, before any of the other programmes), but accomplishes them using pedagogical strategies designed to significantly broaden the Academy's reach while also reducing the costs of programme delivery. Students can participate in Distance Learning Program courses at times convenient for them, in places they choose and at a much lower cost than other kinds of training and education. The Program is also accessible to a much larger number of participants because courses are offered in multiple languages. There are 11 courses in English, and a slightly smaller number of courses in Arabic, Chinese, French, Portuguese, Russian and Spanish. Box 5 lists the Academy's English-language courses.

Box 5. List of WIPO Academy English-Language Distance Education Program Courses

DL-001:	Primer on Intellectual Property 3 hours – No Exam – No Certificate
101PCT:	General Primers - Introduction to the Patent Cooperation Treaty 4 hours - No Exam – No Certificate
DL-101:	General Course on Intellectual Property 50 hours over 6 weeks – Exam (multiple choice) and Certificate offered
DL-201E:	Advanced Course on Copyright and Related Rights 100 hours over 10 weeks – Exam – Long and short answer questions.
DL-202E:	Electronic Commerce and Intellectual Property 50 hours over 6 weeks – Exam (multiple choice) and Certificate offered.
DL-204E:	Biotechnology and Intellectual Property 100 hours over 10 weeks – Exam – Long and short answer questions.
DL-301E:	Advanced Course on Patents 100 hours over 10 weeks – Exam – Long and short answer questions.
DL-302E:	Advanced Course on Trademarks, Industrial Designs and Geographical

The following analysis of aspects of the Distance Learning Program is based on a documentary review of relevant materials, and auditing of four of these courses between 2007 and 2009. The most detailed analysis pertains to the general course on IP.

The Distance Learning Program courses, as opposed to other WIPO Academy courses, were chosen for detailed review and audit for two methodological reasons: feasibility and reach. It was not feasible, given practical time and resource constraints, to audit other courses. Moreover, the WIPO Distance Learning Program courses have broader reach than other courses, at least in terms of numbers of participants. Also, it would help to understand more about, for example, whether the courses were developed internally or externally, which individuals designed them, how applicable terms of reference were set and what if any peer review processes were in place. However, little or no public information could be obtained on these matters. The analysis and conclusions presented below should be viewed in light of the constraints in acquiring relevant data.

With the exceptions of a few hyperbolic quotes, the nature of the material does not betray a strongly proactive intent to push a pro-protection agenda but rather reflects the historically dominant developed-world vision of IP. Certain issues are conspicuous by their absence, such as much debate about the links among patents and access to medicines, a topic of pressing importance during the time when WIPO's course materials were being developed. But this is the challenge: making a link between the criticisms of ideology and the extent to which ideology is deliberately or inadvertently infused into the course material, either through inclusion or omission of particular topics and perspectives.

There is a very modest amount of information or discussion about issues central to the DA. However, the sparse coverage does not appear to be a result of undue influence on the views of the Academy, its course designers or instructors. It seems to reflect the general culture prevailing at WIPO for many years. It is also a symptom common to most educational programmes offered at or by any institution. Alternative critical lenses for viewing societal issues (e.g. critical race theory, feminist analysis or developing country perspectives) are often treated as niche perspectives that are rarely integrated into mainstream educational programmes. Outside of a specific course offered by professors keen on a particular perspective, many students' experiences with IP education in general might be equally deficient. The WIPO course modules are inconsistent with the DA in the same way. Their weakness is in what they inadvertently exclude, rather than what they deliberately include. Much of their coverage is descriptive of the historical and current state of intellectual property rather than prescriptive or ideological.

A student could complete the entire course without turning her or his mind to the challenging issues arising at the intersection of IP and development, let alone critically reflecting on the positive and negative implications of IP for development. This is the central problem. A mind that is not directed to an otherwise thought-provoking set of questions cannot direct itself to addressing the problems arising from the undiscovered knowledge. For introductory courses, this often does not happen since the "what is" basics often need to be delivered before critically evaluative critiques can be built upon them.

It then becomes imperative to integrate the development dimension and various other critical perspectives on IP into the core of education and training programmes on IP. To do that, the WIPO's educational and training programmes could be better aligned with the DA. Put simply, one of the most important starting points for practical translation of the DA is the WIPO educational and training programmes. Here, projects being implemented pursuant to the DA can play a critical role: (i) extending the discourse beyond description, and (ii) incorporating a critical perspective.

2.1.6 The Global Network on IP Academies

The WIPO Academy recognized that it cannot fulfill worldwide demand for IP training and education alone. Given that, a network of academies was established with national nodal points for IP education.[21] A symposium held in 2007 led to the creation of the Global Network on IP Academies (GNIPA). The purpose, according to the Academy's website, is to further facilitate international cooperation and exchange of experience in IP education. Members of the GNIPA have agreed to certain organizational principles and the creation of infrastructure, such as a secretariat and presence online, to facilitate collaboration, though to what more specific ends is unclear.

Interestingly, none of the academies in the network is based in Africa. However, in Nigeria, the NCC has established the Nigerian Copyright Institute (NCI), which it hopes to nurture into a regional IP research hub. Given NCC's and NCI's capacity and relationships, it could be an institutional candidate for the GNIPA. The WIPO Academy's website names 17 current members of the GNIPA, presented in Table 2.

Table 2. Current Members of the Global Network on IP Academies

COUNTRY	INSTITUTION	URL
Australia	Intellectual Property Research Institute of Australia (IPRIA)	www.ipria.org
Brazil	National Institute of Industrial Property of Brazil (INPI)	www.inpi.gov.br
Bulgaria	Centre for Intellectual Property of the University of National and World Economy	www.unwe.acad.bg
China	State Intellectual Property Office of China (SIPO)	www.sipo.gov.cn
Croatia	State Intellectual Property Office of Croatia (SIPO)	www.dziv.hr
Cuba	Industrial Property Office of Cuba (OCPI)	www.ocpi.cu
Japan	National Center for Industrial Property Information and Training	www.inpit.go.jp
Mexico	Mexican Institute of Industrial Property (IMPI)	www.impi.gob.mx
Philippines	Intellectual Property Research Training Institute of the Philippines (IPRTI)	www.ipophil.gov.ph
Portugal	National Institute of Industrial Property of Portugal (INPI)	www.inpi.pt
Republic of Korea	International Intellectual Property Training Institute of the Republic of Korea (IIPTI)	iipti.org
Republic of Macedonia	Center for Intellectual Property Education of the Republic of Macedonia (CIPE)	www.cipe.ukim.edu.mk
Russian Federation	Russian State Institute of Intellectual Property (RGIIS)	www.rgiis.ru
Singapore	IP Academy (Singapore)	http://www.ipacademy.com.sg
Switzerland	Swiss Federal Institute of Intellectual Property (IPI)	www.ipi.ch
Ukraine	State Institute of Intellectual Property of Ukraine	www.iipl.ukrpatent.org
United States of America	United States Patent and Trademark Office Global Intellectual Property Academy	http://www.uspto.gov/web/offices/dcom/olia/training_history.htm

Source: http://www.wipo.int/academy/en/ipacademies/#present_members

GNIPA meetings have been held in Rio de Janeiro (2007), Beijing (2008) and Munich (2009), leading to the Rio de Janeiro Declaration[22] and a "Plan of Action" from each of Beijing[23] and Munich.[24] A fourth meeting was reported to have taken place in Korea in 2010.

Generally, the GNIPA is still a young network. Though many of the members are pre-existing institutes of research, national IP authorities, universities or some hybrid of the three, it will take time for the network to develop its potential. Indeed, because many members of the GNIPA have a long history of activity, changing attitudes and activities to better align with the principles of the DA could be difficult. That is to say, not only does WIPO need to change, but also the organization needs to facilitate behavioral changes in others.

An analysis of the training and education activities of all of the GNIPA members is beyond the scope of this paper. There is tremendous variation in the volume and nature of information available about GNIPA members and their programmes. The websites that provided the most comprehensive and useful information were those of the Philippines, Portugal, South Korea and the United States. But some general observations are possible.

First, the DA is not explicitly mentioned, and its animating principles are not reflected on the websites of each of the GNIPA members. Second, educational initiatives vary significantly in depth, quality and apparent organization. Third, most members of the GNIPA do offer some form of courses to the public, though in some cases they appear to not be of a recurring nature. Those courses that are recurring appear to be geared more toward "continuing education" purposes than credentials.

The first initiative for enhancing and coordinating IP education across the GNIPA appears to be two data collection efforts via surveys.[25] When the surveys will be completed and whether the results will be publically available is not clear from the website.

2.1.7 The WIPO Journal

One early outcome of the GNIPA may be a new journal featuring peer-reviewed articles on IP issues: *The WIPO Journal: Analysis and Debate of Intellectual Property* Issues.[26] Contributing to fully fledged research work was a stated goal for the Academy's second decade (WIPO 2008, p. 11). The idea for a journal of this nature was raised at GNIPA meetings, and a feasibility study was apparently conducted. It is unclear, however, whether this particular journal is the result of those discussions or parallel discussions elsewhere at WIPO. The GNIPA's website links to the announcement for this journal; information obtained from relevant officials confirmed a relationship between the GNIPA and the journal.

The new journal has the potential to address some shortcomings of the Academy's research agenda, previously highlighted, as part of the Research and Executive Program. The journal, appropriately, is administered independently from WIPO, under the editorship of an objective, academic scholar and a board comprised of other leading experts. Despite the fact that the inaugural issue featured no authors from developing countries (other than China), there seems initially to be a willingness on the editors' part to include articles with a critical perspective. That entire issue is worth reading if only to appreciate the diversity of views therein, and in general, the shift in overall tone for a publication released under the WIPO banner. This new journal could be, if its potential is realized, a promising model for future modes of collaboration in implementing aspects of the DA (Gold and Morin 2009), specifically those related to the research aspects of training and education programmes.

2.1.8 The WIPO/WTO Colloquium for IP Teachers

Since 2003, the WIPO and the WTO have organized in Geneva a two-week colloquium for teachers of IP from developing countries

and economies in transition. The colloquium appears to be a multidisciplinary event and is open to lawyers, economists, and other university teachers working in the field of.

According to the WTO website, the main objective of the colloquium is to:[27]

> Update university teachers of intellectual property in developing countries and countries with economies in transition on the activities and instruments of the WIPO and the WTO and to provide a forum for an exchange of information and ideas between them and the two secretariats on these matters. The emphasis is on recent developments and policy issues under debate in the two organizations. The colloquium will also be an opportunity to exchange views and experiences on teaching methodologies.

The invitation to apply adds that "the colloquium is aimed at enhancing the capacity of universities in developing countries and in countries with economies in transition to develop national expertise in intellectual property and provide policy advice to governments on matters dealt with by the WIPO and WTO."

The programme typically addresses a wide arrange of issues raised in the context of TRIPS and WIPO deliberations, such as geographical indications, public health, enforcement, copyright, traditional knowledge and biodiversity. More recently, new issues that have topped the global IP agenda have been added, such as IP and climate change. After the experiences of the first years, interactivity has been emphasized, including simulation exercises of WTO dispute settlement procedures (Saez 2008).

The objectives of the colloquium are commendable. The large number of applications received each year from IP teachers from developing countries may be a reflection of their interest in participating in the colloquium. The use of greater interactivity also makes a positive contribution to the overall pedagogy.

However, as the programmes and materials of the colloquiums are not publicly available, it is difficult to assess the extent to which they specifically address the IP and development nexus and the extent to which they encourage critical thinking among participants. The provisional programme of the 2010 colloquium - which was available to prospective applicants - does not devote a specific session to the DA.

2.1.9 Analytical summary of WIPO Academy programmes

The Academy has identified some significant challenges it faces in meeting the persistent demand for IP education and training. Solutions to some of the stated challenges would seem to run counter to the principles behind the DA. For example, according to Takagi and Sinjela (2007, p. 162), the centrality of IP protection to national development and wealth creation is obvious and undeniable, so the main challenge is to determine how best to adapt and integrate into a diversified economic, cultural and social framework.

Other challenges identified by the same authors are more in line with the DA's recommendations and strategic direction. This includes the need to enhance service quality while diversifying educational content to make it more interdisciplinary in nature. Significant challenges faced by WIPO and its Academy also include the pressure of responding to calls for greater international cooperation among academic institutions providing IP instruction, and the fulfillment of high expectations on the part of WIPO Member States seeking greater assistance.

Perhaps most significant, the Academy recognizes the importance of "dynamically evolving dimensions of the IP system and diversified views thereon" (Takagi and Sinjela 2007, p. 162). Precisely how this happens is closely connected to the success or failure of the organization and its stakeholders in implementing the DA.

While there are several indications of pro-rights protection ideology in the WIPO course

materials, the overwhelming focus is on the fundamentals of IP. Viewed through the lens of the DA the strongest criticism would be on what is not covered, more than the ideological inclination of what is covered. For example, there is little critical discussion of the fundamental presumption belying the decisions to protect certain types of IP and to what extent. There is some coverage of general concerns, like public policy in the patent regime. However, beyond a few general statements, little of the material is critical in nature. There is no attempt to evaluate the potential positive and negative implications of, for instance, adopting TRIPS-plus standards of IP protection. Bibliographic references seldom include critically oriented materials produced by leading IP and development scholars or by organizations working on IP and development, such as the United Nations Conference on Trade and Development (UNCTAD), South Centre, ICTSD and Quaker United Nations Office (QUNO).

Proposed solutions to this problem, consistent with the objectives of the DA, may involve the introduction of critical perspectives, materials or even new topics that are currently not included in the WIPO courses. At a minimum, it would be appropriate to include course content dedicated specifically to the issue of IP and development. Crucially, however, such content would need to objectively present multiple critical perspectives. If WIPO's educational programme can be reformed to more explicitly take account of the DA and norms consistent with the DA can be promoted through training programmes, it will be one important part of successful implementation.

2.2 IP Training and Education Activities by other Providers

WIPO is not, nor can it be, the only organization engaged in IP training and education in developing countries. Initiatives have also been designed and delivered by national IP offices and regional associations.

2.2.1 National/regional intellectual property offices

One notable example of a general IP education programme, though not specifically targeted at developing countries, is an initiative of the European Patent Office called the European Patent Academy.[28] It offers programming areas in units somewhat similar to the WIPO Academy, including:

- The Institutional Strengthening unit, which focuses specifically on the staff training needs of national patent offices and other public-sector employees.
- The Professional Representatives unit, which coordinates and supports training for professional representatives.
- The Innovation Support unit, which informs industry and policy-makers about how to make the most of the intellectual property system and develop good patent strategies.
- The Judicial Training unit, which supports and develops training initiatives for judges and other legal professionals.
- The Academia unit, which mainly focuses on students, professors, teachers and staff of technology transfer offices.

European Patent Academy activities seem also to be similar to those undertaken by WIPO, involving various training seminars as well as the production of materials. An example is the ready-to-use "Patent teaching kit" including slides, instructor notes, background reading and case studies.[29]

Within the parameters of this particular research paper, it has not been possible to assess the degree to which the perspectives embedded in WIPO and EPO curricula, materials, instructors and other aspects of programming are similar in substance. But, like the WIPO Academy, the European Patent Academy delivers programming in partnership with various organizations and institutions.

Not surprisingly, WIPO is listed first among these partners.

WIPO has also partnered with the USPTO, for example in the context of a summer course on IP. Interestingly, a review of the 2010 provisional programme reveals coverage of several important issues related directly or indirectly to the principles of the DA.[30] Among these are sessions devoted to "Access to Copyright Works for Visually Impaired Persons," "Selected Cases on Copyright and the Public Domain," "Promotion of Innovation: The Use of Patent Information," "Intellectual Property and Human Rights: How to Strike a Balance," and several other topics.

That summer course, however, is just one of many training and education initiatives involving the USPTO. Its broader activities are coordinated by the Global Intellectual Property Academy (GIPA),[31] not to be conflated with the network on IP Academies—the GNIPA—described above. The significant influence of the USPTO is demonstrated by the fact, publicized on its website, that in 2008 alone it trained more than 4,100 officials from 127 countries. The busy schedule of future activities, many targeted at participants such as judges and senior bureaucrats, confirms the USPTO's influence in this area.[32] This is not only through face-to-face seminars and classroom activities, but also through a sophisticated e-learning initiative offered in five languages.[33]

The American GIPA emerged from a "Visiting Scholar Program" that dates back to 1985. In 2006 the GIPA moved to a permanent, state-of-the-art campus in Alexandria, Virginia. There, a number of different courses are offered on patents, trademarks, copyrights and enforcement. A brief review of these course and associated materials demonstrates an overwhelming emphasis on protection and enforcement. The UPSTO describes its Academy as "instrumental in achieving the objectives of halting intellectual property theft and advancing IPR policies." Its mandate stems from the American Inventors Protection Act of 1999,[34] which empowers the USPTO to advise the President and all federal agencies on policy matters, including IP protection in other countries, and authorizes the USPTO to "offer guidance, conduct programs and studies, and to coordinate with foreign IP offices and international organizations on issues concerning IP protection."

When it comes to activities of training and education providers other than the EPO, USPTO and several other members of the GNIPA, many programmes have been supported through collaboration with WIPO. Especially in developing countries, many if not most of the instructors for these courses are alumni of the WIPO Academy. An anecdotal comment from the Dean of the WIPO Academy indicated that almost all of the participants at a 2005 symposium for IP teachers, held in Zimbabwe in association with ARIPO, were Academy alumni (WIPO 2008, p. 10).

2.2.2 IP training and education in developing countries: the case of Nigeria

In this context, it is enlightening to discuss in more detail the experience of the NCC in Nigeria, in terms of its interaction with foreign and domestic actors helping to facilitate its training and education activities. Some important background information about the Nigerian legal and institutional context is contained in Box 6.

Box 6. Nigeria's Intellectual Property Institutions

The legal framework for IP governance in Nigeria has remained modest but bureaucratically robust. Some of Nigeria's IP laws, including those governing patents, designs and trademarks have their roots in Nigeria's British colonial era. They have not undergone any major normative adjustments. Nigerian copyright law and policy has, however, followed a different path of active legislative and administrative interventions and ongoing transition.

Patents, designs and trademarks registries are overseen by the Ministry of Commerce and Industry. Copyright is administered by the NCC which is overseen by the Ministry of Justice. The patent and design registrars and the trademarks registrar oversee the routine filing, registration and documentation of patents, designs and trademarks. Except for the power to perform adjudicatory roles, or make regulations for the essential work of the registries, the enabling legislation for these agencies does not assign them any role in the issues of IP education and policy. Training and education in copyright matters is dominated by the NCC and, to a negligible degree, the universities.

Despite a preponderance of bureaucracies tangentially involved in IP issues, in Nigeria, IP is administered mostly between the patent, trademark and design registries and the NCC in a cross-departmental arrangement that spans a number of Ministries including notably commerce, industry, trade, information and communications, external affairs, science and technology, culture and justice.

Nigeria is a member and signatory to key treaties, including the WIPO Convention and WIPO-administered treaties, including the Paris and Berne Conventions, the Patent Cooperation Treaty, the Patent Law Treaty and others, as well as the TRIPS Agreement via Nigeria's membership in the WTO. Nigeria has observer status in ARIPO. Along with South Africa, Nigeria's non-membership in ARIPO remains a substantial gap in regional coordination of IP in Africa. Paradoxically, given its huge market, Nigeria's non-membership puts it in position to attract special attention from external interests committed to advancing in Africa normative views of an ideal global IP system.

The Nigerian Copyright Commission (NCC)

The NCC was established more than two decades ago by a military decree.[35] It is funded primarily by the Nigerian government, and has positioned itself to respond to the "increasing national and international responsibilities within the copyright system."[36] The NCC is headed by a chief executive officer, with the status of Director General, who unofficially doubles as Nigeria's copyright czar. The current Director General is a former lecturer in IP at the Lagos State University's Faculty of Law. In alliance with its supervisory department, the NCC currently is at the forefront of a legislative initiative for coordinating Nigeria's entire IP system under a proposed single entity—the Nigerian Intellectual Property Commission (Ebhuomhan 2009).[37] Two decades after its inception, the NCC is the most authoritative champion of IP education and policy in Nigeria.

It is relevant that the Nigerian Copyright Act, which the NCC administers, is "remarkably pro-author," as the NCC describes it.[38] The Act makes elaborate provision for criminal sanctions for copyright infringement. The NCC, as a creature and administrator of this Act, has implemented that approach to IP in its enabling instrument.

The NCC has strategically positioned itself as the credible contact point with Nigeria for external stakeholders in IP matters. Because Nigeria is not officially a member of ARIPO,

which is a strategic beneficiary of WIPO and USPTO technical assistance, and given its economic and market status in the African region, specific and systemic engagement with Nigeria makes sense. Also because the NCC is independent and professional, and better organized and resourced than the patent, design and trademark registrars, it is attractive to WIPO and other international agencies as a gateway to Nigeria, as well as West and Central Africa.

Consequently, Nigeria, via the NCC, has continued to benefit from extensive collaboration, including research, funding and technical support from international organizations, notably WIPO, EPO, USPTO, US Department of Justice, the International Federation of the Phonographic Industry (IFPI), private companies such as Microsoft and agencies like the Ford Foundation among others. Expectedly, WIPO tops the list of NCC external partners.

Few examples would better illustrate the nature of the WIPO's relationship and influence on Nigeria's *de facto* IP office (the NCC) than the remark by the Director General of WIPO in his 2009 visit to Nigeria at the celebratory event of the NCC's 20th anniversary:

> I am told that … [the NCC Director General's] first public assignment in 2004 was adorned by the high profile destruction of counterfeit books at the National Theatre complex in Lagos. The NCC then embarked on a "new dawn" in copyright administration, with a determination to create an environment that is conducive to making the nascent copyright system a key player in Nigeria's economic development process.[39]

While endorsing the NCC's enforcement initiatives, the WIPO Director General reaffirmed the organization's technical and capacity building support, which is essentially enforcement-oriented. Though underscoring Nigeria's status as an epicenter of cultural and creativity activity, the WIPO Director General reduced Nigeria's IP needs to the perceived urgency of sustaining the enforcement work of the NCC. In this respect, WIPO counsels the NCC that "complacency is the antithesis of progress and so it would be foolish to believe that our work is done."[40]

WIPO provides various technical supports, including local and international training programmes in virtually all of its programme areas for NCC staff, funding of workshops and research collaboration. Presently, WIPO is involved with NCC in a research programme that would, among other things, determine the value and contributions of "copyright based industries" to Nigeria's GDP and overall economy, using the widely promoted WIPO methodology for doing so (WIPO 2003).

The USPTO also regularly funds research, workshop and training programmes, especially on the subject of IP enforcement for NCC staff and other stakeholders in Nigeria and elsewhere. The same is true of the US Department of Justice. In 2008, the Ford Foundation funded a collaborative initiative with the NCC titled *The Survey of Copyright Piracy in Nigeria*. The study concluded that the level of piracy of copyrighted works in Nigeria is at 58 percent (Castonguay 2008). The Microsoft Corporation also funds software piracy detection and enforcement programs for NCC staff.

Anti-piracy and enforcement dominate the IP awareness agenda

Nollywood provides a platform and opportunity for various external interests to perpetuate their protectionist IP orientation in Nigeria. While the NCC's characteristically high profile destruction of movies and books targets the Nigerian domestic market, that effort diverts attention from a real threat to Nollywood. Most piracy targeting Nollywood movies happens through unauthorized commercial replication of those movies outside of Nigeria using sophisticated technologies in remote locations, especially in industrialized countries, where Nigerians and African diasporas constitute the bulk of Nollywood patrons. In other words, developed countries, not Nigeria, are home to the illicit mass copying of Nigerian films.

While a compact disc of a Nollywood movie sells for an average of USD 1.25 in the domestic market, outside of Nigeria's shores, pirated copies (which sometimes turn out better than the original) sell for an average of USD 7.00. The NCC has as yet to point to a pact with any developed country where Nollywood movies are being illegally manufactured and marketed that is willing to commit as much gusto as the NCC does in domestic enforcement efforts.

Within the foregoing milieu, IP is rapidly creeping into the consciousness of the Nigerian public, courtesy of the NCC's campaigns and educational initiatives. However, the emerging understanding of IP by the Nigerian public does not extend to the entire interdisciplinary sphere of IP, especially in areas such as biotechnology, food security, human rights, health and so on. Rather, the focus is on copyright.

Overall, the NCC's views appear consistent with a normative outlook that focuses on copyright and IP in general as a tool of economic rent seeking; concerns for equity and other developmental and contextual imperatives seem to be marginalized. The approach that the NCC champions in Nigeria issues from the conventional claim that stronger IP protection inevitably promotes innovation and economic growth in developing countries. This uncritical and context-neutral attitude toward IP connects with the one-size-fits-all approach too often promoted in developing countries. The NCC's approach gives little consideration to the contextual profile of Nigeria as a developing country, which ought to have a more reflective interest in critical issues of equity and balance in IP.

Copyright awareness and enforcement campaigns focus almost exclusively on the interests of copyright owners, rather than on the importance of copyright principles and concerns throughout all segments of society. The concepts of legitimate use, and the user as stakeholder in IP systems, are missing from the NCC's public relations programs. The Nigerian electronic and print media are awash, on a regular basis, with reports of the NCC's raids of "copyright pirates" in the open market and business places or hideouts. These public relations campaigns take the form of carefully orchestrated military style raids and culminate in the confiscation or outright destruction of suspect devices and products, including compact disks and books.[41] In adopting this aggressive posture, the NCC aims to shore up the confidence of its perceived prime constituencies in the music, recording, movie and other copyright-based industries, locally and abroad.

In 2005, the NCC launched its flagship programme known as Strategic Action against Piracy (STRAP). Backed by vocal Nollywood interest groups, including the Association of Movie Producers, the Musical Copyright Society of Nigeria and the Performing and Mechanical Rights Society of Nigeria, STRAP easily gained traction in Nigeria. Without much regard to context and balance in IP philosophy, as evidenced in the *Copyright Act*, though perhaps no fault of the NCC, STRAP has radically reduced the intellectual and policy space for critically reflective IP discourses in Nigeria. Among other strategies, STRAP has been able to accomplish this through the deployment of slogans and rhetoric that reduce and conflate IP policy and enforcement to anti-piracy raids. With divisive and unhelpful hyperbole, piracy is described prominently on the NCC's homepage as, *inter alia*, "a crime against humanity," a "gross human rights violation," a crime that "threatens (sic) right to life and livelihood, that kills the economy and kills creativity."[42]

It is interesting to note that despite such rhetoric in the enthusiasm for enforcement, piracy rates remain high in Nigeria. But even if the NCC has not succeeded in solving the problem of IP infringement, the organization has created an unprecedented public awareness of the issue through its campaigns.

Partners in Nigerian training and education activities

A causal relationship between the training and education programmes delivered by WIPO or

other organizations and the campaigns and attitudes that dominate copyright enforcement in Nigeria is, of course, impossible to establish. There are a variety of contextual and institutional factors that may have explanatory potential (Deere 2008). Nonetheless, it is clear that these phenomena are not occurring in isolation from one another. During 20 years of the NCC's existence, the NCC and WIPO have maintained a consistent tradition of mutual courtship. This relationship has deepened even further since the establishment of the WIPO Worldwide Academy in 1998, a timeframe that coincided with the emergence of Nollywood. Dating back to 1999, Nigeria was one of the first countries to provide a platform for the African regional training programme initiative,[43] pursuant to a partnership between the NCC, WIPO and the then newly established Academy. That regional workshop marked an important foundation for WIPO's continued and ongoing engagements with Nigeria, which is mediated through its partnership with the NCC. In the recent past, WIPO leaders have had direct contact with Nigeria's highest seats of power, often facilitated by the NCC.[44]

WIPO's engagement with the NCC and the IP administrators has not been without consequence. A number of Nigerian IP bureaucrats at the NCC and the patent, trademark and designs registries continue to benefit from WIPO training programmes via the Academy and other local collaborative opportunities with WIPO. Also a handful of Nigerian IP academics have received WIPO fellowships. Perhaps more important, WIPO collaborated with the NCC in the establishment of the NCI. The NCI is described as "a research training facility for the development of copyright law and administration in the African Sub-region."[45] Since its inception, the NCI continues to participate and partner with a number of external IP bodies, such as WIPO and the EPO in matters of IP training as a recognized IP training academy. At any given opportunity, the NCC canvases for financial support from external agencies for its activities and, in specific cases, for the NCI.[46]

In addition to ongoing NCC-driven IP education and public enlightenment initiatives that target both the Nigerian IP policy elite and the general public, IP education in Nigeria happens in other formal or institutional sectors. Perhaps the places in developing countries that one might be most likely to encounter independent training and education are universities.

Even in this sphere technically beyond the NCC's and NCI's formal mandates, the organizations have played a role through a curriculum development initiative. In 2008, the NCC through the NCI developed a document, "Intellectual Property Law Syllabus for Nigerian Universities,"[47] which it recommends for adoption by Nigerian universities. Presently a few Nigerian universities that teach IP have adopted the curriculum, while the NCC strives to convince others to do the same. The NCC's expansive IP education also extends to the judiciary (judges) and law enforcement personnel (police and customs). It even includes an outreach programme targeted at high school students.

Moreover, the presence of at least some WIPO-trained professors is almost inescapable. One of the NCC (and the WIPO Academy's) key objectives, in fact, has been to reach university professors and students with its messages about IP.

IP is now taught in a growing number of post-secondary institutions, including not only law schools, but also business, engineering and other schools. The subject first emerged in the curriculum of Nigerian law faculties in the late 1980s, when a handful of them taught IP on a very modest curriculum either as a stand-alone course or an aspect of commercial law or jurisprudence. At the legal professional level, IP remained a part of the curriculum for commercial law at the Council of Legal Education's Bar programme through the Nigerian Law School, where it has traditionally been limited to a few hours of lecture devoted to the registration of trademarks and designs, the clerical aspects of the filing of convention patents, and the operations of the relevant registries.

Since 2000, there has been an increase in the number of Nigeria's roughly 32 law faculties that teach IP in one form or another. Essentially, most of the curricula used by the universities, which vary from one faculty to another, place emphasis on the conventional regimes of IP, copyright, trademark, patents and designs, mainly from a statutory and case-method standpoint. There is little policy or development content. There has occasionally been some symbolic attempt to include "emerging issues."

For instance, outside of statutory exploration of copyright, a model curriculum developed by the NCC includes two additional heads of issues under the title of "International Dimensions" and "Emerging Issues." Listed under the latter are: copyright in the digital environment, copyright and the Internet, and computer software and new developments. Similarly, after exploration of textual provision of the Patent Act, it lists some treaties under the head of International Dimensions. It also provides for "emerging issues" under which are listed: traditional knowledge, traditional medicine and biodiversity in Nigeria, biotechnology inventions and protection of plant varieties. But generally, the desire to achieve uniformity of content and the provision of some pedagogical or curricular clarity for a number of universities that have adopted it, the NCC-promoted IP curriculum only affirms the doctrinal framework for the teaching of IP in Nigerian universities. Perhaps with the exception of mass communication programmes, there is, as at this time, no real evidence of the penetration or extension of IP to other relevant disciplines, including technology, management, social sciences and more.

However, high-profile professional, executive and stakeholder workshops on IP are regular occurrences in Nigeria's legal and business circles. The Nigerian legal, entertainment and related communities are regular hosts to various seminars and workshops on IP for practitioners. The NCC is a collaborator in many of these workshops and seminars. One of the hallmarks of these initiatives is their focus on the promotion of interests of rights owners, limiting public space for exploring IP in a development-oriented context.

Occasionally, however, there are well-resourced workshops and learning sessions that provide opportunities for critical and balanced exploration of the promises of IP for Nigeria's development. For example, in 2005, the Nigeria National Medicine Development Agency (NNMDA) organized a very successful workshop on traditional medicinal practice and IPRs, which provided impetus for draft legislation on "Protection of Traditional Knowledge, Regulation of Access to Biological Resources and Related Matters." In 2009, two Nigerian-Canadian IP scholars, including one of the co-authors of this report, in partnership with the University of Ibadan, Aya International Development and Indigenous Knowledge Institute (AIDIKI), Canada's International Development Research Centre (IDRC), the NCC, and others sponsored a successful workshop and learning session on Indigenous Knowledge and Intellectual property: Implications for Nigeria's Development, at the University of Ibadan.

The results of NCC partnerships with organizations such as the IDRC are extremely promising, and provide a model template for moving forward with similar initiatives in the future, if Nigerian IP training and education is to become truly oriented toward IP and development, as opposed to merely promoting IP protection for its own sake.

The point must be made, however, that formal or informal educational or training programmes, whether fashioned after a critical development-oriented perspective on IP in accordance with the DA or more conservative approaches, do not exhaust opportunities for education in the area. Rather, they provoke or facilitate opportunities for less passive intervention by peoples to engage with and challenge imposed normative preferences that are out of sync with their own socio-economic and cultural space. Inherently, education whether directly focusing on IP or its other traditional manifestations as a cultural process

enables people not only to nurture their creative talent, but also to engage in wider and more socially responsive views of the various issues that affect them. The extent to which that happens would be a good indicator (though admittedly challenging to measure) of true success in IP training and education, especially in the policymaking sphere.

In contrast to IP positioning domestically, Nigerian foreign relations officials send mixed signals and have yet to flex the country's potentially strong muscle on development-related issues in international IP negotiations. In view of the above, and as a result of NCC positioning, Nigerian foreign relations officials tend to take, in international fora such as WIPO, views and positions that espouse the traditional orthodox view of IP. Nigeria was not part of the group of countries that launched the DA. Also, it is not a member of the current group of developing countries—the Development Agenda Group—recently formed to boost the implementation process of the DA. This stands in contrast with the more development-oriented stance taken by Nigeria in UN debates on development, for example, regarding the Millennium Development Goals.

The articulation between international stances and domestic legislative and policy orientation is illustrative of the challenges inherent in coordinating implementation of the DA while working with international diplomats and national technocrats simultaneously.

2.2.3 Other IP training and education providers

In 1979, long before the founding of the WIPO Academy, a meeting was held in Geneva that led to the establishment, in 1981, of the International Association for the Advancement of Teaching and Research in Intellectual Property (ATRIP).[48] The association considers applications for membership from teachers and researchers in the field, and holds annual congresses to feature members' scholarship and discuss their activities. There are currently more than 300 members; many are from developing countries. Although many members of ATRIP are also among the instructors who deliver IP training and education independently from and in collaboration with WIPO, the ATRIP organization operates no formal training and education activities.

Because WIPO has so heavily influenced IP training and education in developing countries, some saw a danger that too narrow a range of viewpoints on IP and development was being taught. There is no doubt that IP training and education should be seen as a priority area for anyone else interested in promoting a more robust understanding and application of IP law, policy and practices in developing countries. The DA, in part, elevates reform of IP training and education from a strategic programming option to an implementation imperative. While, the DA isn't binding beyond WIPO, organizations such as the EPO, USPTO or others involved in similar activities, should draw lessons from its deliberations in this area to reflect on the design and delivery of their own educational activities.

In part to address the development deficit in IP training and education, in 2008, a group of scholars announced the launch of the "A2K Global Academy" (Rens *et al* 2008). The new initiative was established to link a network of academic centres dedicated to research, education and policy advice promoting access to knowledge. While it is not explicitly stated, the intent to balance the network of IP academies created around the WIPO Academy is apparent. Network members apparently included academic institutions in Brazil, China, Egypt, India, South Africa and the United States. It seems that these institutions include Brazil's Fundação Getulio Vargas law schools, the American University in Cairo (where an Access to Knowledge for Development centre was established in 2009) and Yale Law School in the United States. However, no further details are publicly available. Indeed, any details at all about the fate of the A2K Global Academy since its launch are difficult to come by. A number of country studies have been produced (*e.g.* Shaver 2008, Rizk and Shaver 2009), and more are apparently under way, but there seem to be no concrete developments in the areas of IP training and education.

There are, however, a number of individual courses and training programmes being developed by various organizations for particular audiences. For instance, in March 2010, the Berkman Center for Internet and Society at Harvard University announced the launch of a new online, open access curriculum, "Copyright for Librarians."[49] The course was developed in conjunction with eIFL.net and aims to inform librarians about copyright law in general, as well as the aspects of copyright law that most affect libraries, especially those in developing countries and countries in transition. Similarly, the international capacity-building arm of the German Federal Ministry for Economic Cooperation and Development (BMZ) has a course curriculum targeted at entrepreneurs seeking to exploit open IP licenses in their business activities. It is likely that more of these kinds of opportunities will be created as the need for nuanced or development-oriented IP courses becomes even clearer.

2.3 Project(s) Implementing the WIPO Development Agenda

Recommendation 10 of the DA is grouped in Cluster A dealing with technical assistance. Its thrust is that WIPO should build better IP institutional capacity at national and sub-regional levels, but importantly, in such a way that promotes a fair balance between IP protection and the public interest. The language of this recommendation reflects the constructive ambiguities inevitably included in agreements reached by consensus-seeking institutions (Watal 2001, p. 7; G. Yu 2007, p. 1452). One could take the position that promoting IP protection is in the public interest. Others would argue, however, that a more balanced and sophisticated understanding is needed to appreciate that IP protection and the public interest are neither synonymous nor in opposition with one another. For better or worse, this ambiguity will have to be resolved or at least clarified if the recommendation is to be meaningfully implemented in practice.

Implementation of the recommendation is currently under way through the Pilot Project for the Establishment of "Start-Up" National IP Academies, DA_10_01. The project was initially proposed to and approved at the third session of the CDIP in the spring of 2009, with details included in an annex to one of about a dozen meeting documents (WIPO 2009). The WIPO Academy will help to establish four new "start-up" national IP academies to be training institutions in developing countries and LDCs. For a cost of CHF 600,000 over 36 months, the Academy will begin with the addition of one new academy to pilot the project and gain experience.

According to the project background document, the WIPO Academy acknowledges that "a gap" still exists in its existing training and education programmes, which the start-up academies project is intended to address. As soon as they are established, the new national academies will be included in the GNIPA. However, special attention would be given to the need "to integrate the development and public interest dimension into their training courses. Training of IP professionals, both in the public and private sector, should not lose sight of the broader social needs and development goals of the countries concerned, and IP practitioners should be well aware of the importance of safeguarding the public interest while protecting IP" (WIPO 2009, Annex V, p. 2).

The target beneficiaries of this training are diverse, including, it seems, basically everyone. The WIPO Academy will help to tailor the training programme to the needs of the specific country, and in doing so will play an active role by providing a curriculum, training materials, IP literature and WIPO experts. The project will unfold in several phases: preparation, feasibility, development, implementation and exit.

An exit strategy is planned for 2011, with the national government taking over financial responsibility from WIPO at that time. WIPO acknowledges that a lack of funding may jeopardize long-term sustainability and has

indentified possible donor sponsorship as a solution. An analysis of the implications of such sponsorship is premature, but the risk of reliance and corresponding influence is one issue to be aware of from the outset.

A progress report was delivered at a recent session of the CDIP (WIPO 2009b). It notes that this project had at that time been assigned to the Academy's Executive Director in charge of strategic planning and policy development, Mr. Takagi, who led other key initiatives of the WIPO Academy since its inception. A country has already been chosen for the pilot academy, and it seems an individual may already have been identified to serve as its head. However, despite efforts to obtain further information, these are the only details publicly available. That is unfortunate, because project DA_10_01 could be a tremendously important opportunity to begin addressing some of the issues highlighted in this paper. Without more information, proper independent analysis, or even meaningful input from representatives of member states, is impossible.

One of the DA's recommendations most obviously related to IP training and education is Recommendation 3. This recommendation suggests that WIPO increase financial and human resource allocations for technical assistance that promotes among other things a "development-oriented intellectual property culture." It is specifically related to IP training and education because it emphasizes IP awareness building at different academic levels and among the public at large. One way of interpreting and implementing this recommendation would be to systematically re-evaluate existing WIPO Academy programmes to determine how, if at all, they do or should promote a development-oriented IP culture (assuming an understanding can be reached about what precisely that means) among these target groups. Far less ambitiously, WIPO might implement the recommendation by assigning a staff member with a modest budget the task of reporting on the Academy's various activities. So far, no information about implementation of Recommendation 3 is available, beyond a general indication that this being treated as a matter for the Academy to deal with.

3. IP CURRICULUM DESIGN AND DELIVERY FOR DEVELOPING COUNTRIES

3.1 Current Pedagogy

The WIPO Worldwide Academy has had success in accomplishing its objectives. In just over a decade of existence, it has provided specialized subject-matter training to a high number and diverse range of people. A review of the Academy's programmes confirms that the training these participants have received is also purposive in the context of WIPO's aims to promote IP awareness. WIPO is not simply trying to churn out graduates. Rather, it is successfully advancing its broader strategic objectives. One thing the Academy has understood is the importance of an interdisciplinary approach toward IP training and education, which is a prerequisite to a holistic understanding of how IP actually functions in society. Clearly, much consultation and reflection has gone into curricular development and pedagogical strategies.

WIPO's collaborative work on the design and delivery of IP curricula is, however, far from complete. It was only in 2008 that WIPO produced its first book dedicated to the topic of IP teaching: *Teaching of Intellectual Property: Principles and Methods* (Takagi, Allman and Sinjela 2008). There is further information about teaching method and pedagogy on the Academy's website, in a document entitled "Intellectual Property Teaching Methods and Pedagogy at the University Level."[50] But, WIPO acknowledges that many challenges still lie ahead (Takagi and Sinjela 2006; WIPO 2008).

A key issue that has neither been independently analyzed nor, it seems, adequately explored by WIPO is the extent to which its IP curricular design, teaching materials and course delivery are appropriate for training and education in developing countries specifically. Should IP training and education be the same in developed and developing countries? Are there topics or perspectives that might be more heavily or even just differently emphasized depending on the target beneficiaries?

There are some indications that the main difference in teaching people in or from developing countries is a belief that developing-country participants need more convincing that the topic is relevant to them, so as to "demystify" IP and overcome their "prejudices" about its impact on things like health and education (WIPO 2008, p. 8). To change this perspective, materials include considerable hyperbole about the positive impact of IP protection on economic development. Yet little time is actually spent evaluating the issues that cause some developing countries' concerns about IP's intersections with broader public policies and human development.

The Academy's literature does not differentiate pedagogical principles better suited for IP education in developed countries. The teaching methods and pedagogical strategies, sample curricula[51] and resource materials for IP teaching (Idris 2003; WIPO 2008; Takagi, Allman and Sinjela 2008) suggested by WIPO acknowledge in passing that a one-size model of IP education is inappropriate, but contain little substantive content tailored for developing-country participants. The *WIPO Intellectual Property Handbook*, devotes one of its seven chapters to "Administration and Teaching of Intellectual Property" (WIPO 2004). In that chapter, there are four short paragraphs under the subheading, "The Teaching of Intellectual Property in Developing Countries" (WIPO 2004, p. 424). Other than pointing out the obvious, such as scarcity of resources being an issue, these paragraphs contain almost no meaningful insights or even information.

In discussing the question "how should IP be taught?"[52] in other publications, WIPO differentiates mainly between the face-to-face classroom and tutorial method and the distance education method of course delivery. This is an interesting and important dichotomy, but it doesn't scratch the surface of deeper discussions about student-teacher roles, learning styles, choices of materials and other

pedagogical issues. Other documents touch on the differences between the case method and problem method of teaching, which is also a useful pedagogical discussion. But more detail and richer discussion of these topics is key to delivering the most effective IP training and education possible.

The WIPO Academy provides particular guidance on setting up an IP curriculum in universities.[53] University programmes involving IP may take at least three forms, according to the Academy: overview courses for non-legal disciplines, such as business, engineering or science; introductory or advanced courses on IP law; and specialized, in-depth programmes for post-graduates. Topics covered depend on the nature of the programme, but might include the scope of rights, procedures for obtaining protection and enforcement mechanisms. Courses covering these topics might be survey courses, specialized courses, advanced seminars or practice courses. Full-time faculty members or adjunct lecturers might teach them. Again, course offerings and instructors will vary by programme.

Academy documents on pedagogy devote only a few short paragraphs to the topic of teaching IP in developing countries. A lack of topical awareness and scarce resources are identified as obstacles to effective programme delivery. University professors and administrators, as well as policy makers who have realized that IP "is an indispensible instrument in achieving desired economic and cultural objectives" can, according to the Academy, help overcome these challenges to delivering IP training and education in developing countries, though how is not specified. Beyond that point, nothing more substantive is said about this issue.

The rest of WIPO's guidance on IP pedagogy is relatively generic. New teachers are advised to rely on well-established textbooks by recognized experts in the field. A less cautious approach is appropriate only for more experienced professors and practitioners. The Academy has compiled links to research and resources that can be used for IP training and education. Most of these are actually WIPO meeting documents and commissioned reports, though some independent materials are also referenced.

The resource list is, however, several years out of date. Moreover, the topical lists and materials therein fail to adequately cover the range of critical analysis and perspectives that currently exist on important intersections between IP, development and related public policies. A typical example is a resource on "emerging issues" that purports to present a Nigerian perspective on IP (Owoseni 2001). Like many of the other recommended materials, it contains IP protection and promotion focused analysis, with references to development sprinkled throughout but not substantively addressed.

The WIPO Academy's most comprehensive output regarding teaching IP is the recently published book on the topic. Contributors to the edited collection include a renowned group of IP experts, representing at least some different perspectives on IP issues. Individual chapters cover the staple subjects: patents, copyrights and trademarks, as well as specialty topics like industrial designs, IP and competition, economics and IP, IP in business schools and IP for non-lawyers, IP practice, distance learning of IP and current trends.

In the book, there is no specific discussion of IP and development, IP in developing countries or developing country perspectives on IP. The concluding chapter on current trends and future developments comes closest to representing a critical perspective.

There are statements sprinkled throughout the book that ostensibly reflect different perspectives. In general, however, the book's contents conservatively reflect the orthodox IP ideologies that fueled criticism and led to adoption of recommendations for the DA.

The chapter on patents, for example, omits much discussion about contemporary public policy issues, including the intersection between pharmaceutical patents and public health—a topic that is sure to be of interest to many students, especially students from

developing countries. That the topic is controversial and generates a wide array of differing perspectives should be a reason to engage it, not to shy away from it.

The chapter on copyrights and related rights expressly advises professors to emphasize to students that the WIPO Internet Treaties (including protection for technological protection measures) do not fundamentally change international norms; are "well-balanced, flexible, and duly take into account legitimate interests of all the countries with different levels of development and of all major stakeholders;" are not economically or legislatively burdensome; and do not extend the scope of copyright protection (Ficsor 2008, p. 39-40). Such advice is understandable from someone who played a key role in the formation and promotion of the treaties (Ficsor 2002). But it does not objectively reflect the diversity of perspectives on the controversial topics of digital copyright generally or anti-circumvention legislation specifically. In fact, the advice probably contradicts the views of many experts who might counsel IP teachers to deliver a more objective and nuanced instruction on this important issue (e.g. CIPR 2002; Okediji 2009).

Though the book's editors affirm that it "is not intended to harmonize and standardize the way in which IP should be taught" (p.12), the former Director General Idris' introduction clearly suggests the book's purpose is to set out "best practices" (p.xvi). As an important reference work—indeed one of the only reference works with respect to teaching IP—it is likely to have at least some influence on IP curriculum design in developing countries.

WIPO-produced or sponsored materials are, however, not the only influence on developing country curricula. Recall that in Nigeria, for example, using the NCI as its platform, the NCC began promoting teaching and research in IP law in Nigerian universities through its model IP course syllabus. That the NCC undertook to develop an IP curriculum initiative is commendable; the NCC seems to be perhaps the most visible and credible institution to take that initiative at the moment. But the curriculum project presented a missed opportunity for the NCC to broaden the policy space for a healthy debate on strategic IP and development policy for Nigeria. Such a debate could have been a precursor to a more robust curricular initiative. So far, it is not clear the extent to which the NCC did or does engage in stakeholder consultation in the curriculum project.

In a way, the NCC appears to have capitalized on the lack of interest in IP education in tertiary institutions in Nigeria, as well the legislative and regulatory freeze in key IP regimes, especially patents, trademark and designs, not to mention the nonexistence of policies on emerging regimes. The importance of broad-based stakeholder consultation cannot be overstressed, especially given that the curriculum encompasses all IP regimes beyond NCC's statutory mandate, which is directly limited to copyright. The extent to which the NCC, as a copyright body, should dominate the overall space for IP policy and education in Nigeria is questionable in light of the country's progress and prospects in the realm of biotechnology, and ongoing strides in indigenous bio-cultural knowledge, especially in the phytomedicinal, agricultural and other contexts outside the competence and expertise of NCC.

Despite a long-standing interest, the fledgling Nigerian IP Bar has yet to assert itself in any concrete terms in the curriculum initiative. The Intellectual Property Lawyers Association of Nigeria (IPLAN) is the leading IP interest group of the Nigerian Bar. Also, Nigeria has a local chapter of the International Association for the Protection of Intellectual Property (AIPPI) and several other pro-IP pressure groups outside the Bar. IPLAN and various other pressure groups are committed to IP reforms and are supportive of the establishment of the Nigerian Intellectual Property Commission. However, IPLAN and the Nigerian Bar Association are not known to have played any role in the curriculum initiative.

The NCC is apparently pursuing opportunities related to a potential roundtable initiative for Promoting Intellectual Property Law Teaching

and Research in Nigerian Universities under the aegis of the NCI, suggesting that the curricular development initiative leading to the 2008 IP Law Syllabus for Nigerian Universities is ongoing. There is, therefore, still much potential for creating space for balanced IP education opportunities and enriching IP-related discourses in Nigeria. Given the current democratic dispensation in Nigeria, the NCC could seize momentum to open up conversation within Nigeria's democratic and policy structures on the shape of a credible development-oriented IP policy, as well as the kind of legal framework and curriculum required to service it.

So far, the narrow framework under which the curriculum programme is being implemented is evident in its lack of provision for the teaching of IP outside the conventional statute-driven black letter regimes of copyrights, trademarks and patents. Despite the disproportionate privileging of copyright in relation to other regimes, overall, the curriculum is akin to a doctrinal survey course on IP without any provision for a contextual, critical or advanced student/practitioner experience. In its *de facto* elaboration of Nigeria's IP policy, the NCC has failed to engage, in any dedicated way, with the IP ramifications of Nigeria's emerging policy initiatives on ICT, biotechnology and other sectors from a development orientation. Neither has it grappled with Nigeria's wider development objectives in relation to access to knowledge in critical areas such as medicine, agriculture, information and communication technology, biotechnology, etc. Essentially those fall outside the NCC's expertise and mandate and could require the participation of various other stakeholders not presently involved in the curriculum initiative.

As the NCC continues to lend its support for the establishment of a cohesive platform for IP policymaking and administration under a proposed new IP commission, it is hoped that such an initiative will occur through extensive consultation. In the context of Nigeria's bloated bureaucracy, a balanced and sustainable curriculum initiative ought to be preceded by an audit of IP stakeholders and extensive consultations that could incorporate a range of platforms, organizations and institutions relevant for the development, integration and delivery of IP teaching and overall IP education and awareness throughout Nigeria. Nigeria and, certainly, the NCC and other stakeholders now have a historic opportunity to more critically re-engage, in practical ways, with the challenge of translating the concept of development in the elaboration of its IP policy.

3.2 Toward a Critically Engaging IP Curriculum

Given the diversity of the purposes for and participants in IP training programmes, it would be naïve to believe that this paper can prescribe the key to better pedagogical methods with respect to IP and development. It is, however, feasible and appropriate to offer some possible suggestions on strategies to better integrate IP training and education with the DA. This can take place via the creation of new programmes and activities by the Academy, the evaluation and adjustment of existing Academy programmes and/or the engagement of external stakeholders.

The simplest, and most modest, tactic for teaching a more development-oriented perspective on IP would be to integrate relevant, critical content into existing activities. Corresponding pedagogical strategies could be adopted to provoke an open-minded investigation into the complex linkages between IP and development. A more ambitious endeavour (short of a complete curricular overhaul) would be the creation of new courses specifically concentrating on IP, development and the global public policy challenges that countries around the world, especially developing countries, face.

Research uncovered a number of universities throughout the world that have begun to develop aspects of a critically engaging IP curriculum. Because our research focused mostly on English-language courses, it is unclear whether there are many similar

programmes available in other languages, and if so, in which languages and at what institutions.

The Institute for Information Law at the University of Amsterdam has for several years operated a summer programme offering high-level training in international copyright and other IP laws.[54] According to its description:

> At the conclusion of the course, participants will have gained valuable insight in the most crucial current issues of copyright law, examined from a comparative law perspective and in the light of recent international and regional agreements. Participants in the course will also have access to comprehensive course materials, consisting of the most relevant international, European and American legislative documents, case law, and other background materials. The lectures are given by internationally renowned scholars and practitioners who all share years of academic and practical experience in the field of international copyright law.

A review of the course programme demonstrates that the topics covered go far beyond banal issues covered in an orthodox introduction to international IP. It covers issues such as limitations to copyright, open licensing practices, digital copyright challenges and current case studies on, for instance, the Google Book Search.

The Washington College of Law at American University in the United States has very recently begun to offer a series of summer courses dealing with various IP and development-related issues.[55] Courses address technology transfer and IP licensing agreements, IP and trade, access to medicines and sustainable development. The latter of these courses, "IP and Sustainable Development," is taught by one of the co-authors of this paper.

A new seminar on "Global IP Policy and Social Justice" is offered annually at the University of Ottawa's Faculty of Law.[56] This course provides one possible template for similar courses, or modules of courses, that could be offered elsewhere in the world. Box 7 outlines the course objectives and its basic content.

Box 7. Course Description: Global IP Policy and Social Justice

Global Intellectual Property Policies and Social Justice

How does global patent policy impact the HIV/AIDS crisis in Africa, and why is that relevant to the real threat of other worldwide pandemics? What is the link between IP law, environmental biodiversity and climate change? Is copyright affecting access to learning materials and education, and if so, who is affected, where, how and why? Are Western-style copyrights, patents and trademarks appropriate to protect the traditional knowledge and cultures of indigenous peoples throughout the world? How is international IP policy affecting the use of the Internet and mobile communication networks as mediums for cultural transformation and more participatory systems of democracy? Does the increasing concentration of patents over plants' genetic resources impact the livelihoods of subsistence farmers, or even global food security more generally? This course on Global Intellectual Property Policy tackles all of those questions, and more, through the lens of social justice: "access to knowledge," or A2K as some say.

Knowledge is the world's most precious resource. It profoundly affects commerce, culture, education, health, nutrition and other core economic, social and humanitarian issues. So access to and exchanges of knowledge are integral to the development of human potential and realization of freedom for all humankind.

Currently a global regime of institutions and agreements on trade, IP and related topics governs access to knowledge. The last decades of the 20th century were marked by an unprecedented convergence between IP lawmaking and global trade policy. Systems of

Box 7. *Continued*

global governance over knowledge policy were dictated by the trade agendas of a few developed countries. The social and economic interests of developing countries were largely ignored.

The dynamic geopolitical and global economic landscape of the 21st century requires rethinking international IP and other knowledge governance policies. New norms are challenging the substance of existing rules. The procedures for creating international laws are changing. The forums for debating policies and making laws are proliferating.

Topics covered include the following, as described for students enrolled in the course.

Global Governance Structures

Before we can understand how IP policies impact people's lives worldwide, we need to appreciate the global governance structures through which these laws and policies are formulated. So, the course starts with an introduction to some basic principles of international law and an overview of some of the key international organizations playing in this field. That is going to segue into an overview of the most important treaties and agreements on matters ranging from IP and trade to development and human rights. Finally, recent events in the realm of global IP policymaking are linked to the concepts of development, social justice and access to knowledge.

Patents and Population Health

Probably the most publicly discussed example of how IP may have adverse social impacts is the possibility of patents to restrict access to pharmaceuticals, especially medicines used to treat HIV/AIDS. Indeed, when it became apparent that patents might be making drugs more expensive and less accessible, widespread public outcry led to political action and reformation of parts of the global IP system. The success or failure of those reforms will be the focus of lessons on patents and public health. Social justice is discussed by critically evaluating Canada's response to the global health crises—the Canadian Access to Medicines Regime—and the recent shipment of generic antiretroviral pills to Rwanda.

IP and the Environment

A healthy, sustainable environment is a prerequisite to any kind of human flourishing, though we don't always behave like that is the case. In this lesson, we look at how environmental issues like the preservation of biodiversity or the prevention of climate change are influenced by global IP policies. The links between IP and the environment may not seem immediately obvious, but they exist. We talk, for example, about how patents can facilitate or restrict the transfer of ecologically friendly technologies to developing countries. We also evaluate strategies to deal with environmental damages caused by living modified organisms (LMOs). Toward the end of the lesson, we explore the issue of biopiracy of genetic resources, and examine access and benefit-sharing mechanisms to ensure equitable treatment of the communities from which those resources come.

Agbiotech and Food Security

Agricultural biotechnologies have the potential to make people's lives better. Crops can be genetically modified to enhance yield or drought-resistance or even nutritional value. But, there is enormous controversy over the economic, environmental, ethical, legal and

Box 7. *Continued*

social issues triggered by these technologies. How, if at all, should they be regulated? The focus in this lesson will be on agbiotech patents. What rights do transgenic plant patent owners have, and what is the impact of plant patents on farmers' rights and the future of subsistence agriculture? These are important questions of social justice that we will explore.

Protecting Traditional Knowledge

Not all knowledge worth protecting is "new." Many of the world's indigenous peoples have passed on traditional practices, folklore and other forms of knowledge from generation to generation since time immemorial. Almost everyone agrees that this knowledge deserves some form of protection, but it is proving difficult to reach consensus on the details, let alone implement a workable system worldwide. This lesson will review some of the international initiatives seeking to achieve social justice for indigenous communities.

Education and the Enforcement Agenda

One of the Millennium Development Goals is to achieve universal primary education by 2015. Universal education requires, of course, universal access to learning materials. While copyright protection can be an incentive to create and disseminate learning materials, like educational textbooks or online resources, it can also lead to a lock-down of such materials, especially by promoting the use of so-called technological protection measures. Currently in many countries, access to learning materials is obtained through widespread, systemic copyright infringement. Rights holders realize this, so they have put IP enforcement squarely on the international policymaking agenda, including most notably in the context of ACTA. In this lesson, we study the impact that enforcing copyright laws, policies and practices can have on access to learning materials. We look at the African Copyright and Access to Knowledge Project, which is promoting a just society through action-oriented research on this issue in eight different countries throughout Africa.

Copyright, Culture and Expression

Cultural participation is an internationally recognized human right. But there is ambiguity in its meaning and scope. One of the most challenging dilemmas is to reconcile the rights to cultural participation and copyright protection, which can often be at odds. This part of the course explains how such conflicts arise, and what might be done to resolve them. We discuss sampling and the remix culture as a concrete example of this problem, kicking things off by watching (and heavily critiquing) a documentary film: RiP: A Remix Manifesto.

One of the key decisions in designing this course was not to create commercial materials for purchase by students. Rather, only openly accessible online materials were identified, compiled and required for reading in preparation for course lessons. It was neither difficult nor compromising to prefer open-access materials over relatively more costly, proprietary resources.

Another key decision was to create the course for students with no previous background in either IP or international law. Some instructors might worry that this approach puts the proverbial cart before the horse. The ordinary practice would be to offer a seminar such as this to advanced undergraduate, graduate or even post-graduate students. But repeated experience has proven this inverted approach

to be pedagogically sound. Students who have been exposed to the broad contextual role of IP in economic, social and cultural policy are far better able to critically evaluate rather than unquestionably accept the basic technical information ordinarily presented to them in basic introductory courses. The eventual result is a cadre of trainees who are well positioned to facilitate positive changes in IP systems designed to promote development, rather than IP protection for its own sake.

Unfortunately, at this stage, courses such as this seem to be offered only in developed countries, not developing countries where they are even more needed. That is beginning to change, however. With the support of development research and capacity building organizations such as Canada's IDRC and Germany's InWent, programmes are being established for development-oriented IP training and education. Though much work lies ahead, initial planning has at least begun.

To guide work on IP curricula and materials to reflect different levels of development and the diversity of views on IP issues that are captured by the DA, the key principles listed in Box 8 might become best practices.

Box 8. Key Principles for Development-oriented IP Training and Education

- **Principle 1:** The design of IP curricula and materials should fully take into consideration the level of development of the country they are intended for, its development objectives and its socio-economic circumstances.
- **Principle 2:** Information about programme curricula, course instructors and pedagogical materials should be transparent, meaning well organized and readily available.
- **Principle 3:** All curricula and materials should, insofar as possible, be openly accessible online pursuant to fair and flexible licensing terms.
- **Principle 4:** Courses, seminars and other activities should reflect an appropriately diverse range of viewpoints on IP and public policy issues, including critical perspectives on both the benefits and costs of IP protection and its implications for society at large
- **Principle 5:** Participants in IP training and education activities should be actively engaged, and encouraged to think and act critically and independently.

4. SUMMARY OF ISSUES AND RECOMMENDATIONS FOR THE FUTURE

It is appropriate to begin a summary of the findings presented in this paper with discussion of the most specific observations, which concern our Nigerian case study. To its credit, the NCC has integrated itself with WIPO and other external actors, the key drivers of the global IP order. However, the capacity-building programmes to which Nigeria is being initiated under these schemes do not seem to adequately take Nigeria's specific circumstances into account.

The worn out mantra is that Nigeria, like many other developing countries, is in need of strong IP protection, and if Nigeria plays by that tune, then its economic prosperity is guaranteed. IP is too often presented as a tool in the hand of creators and rights owners for against users, who are presented as bereft of any role in the processes of creativity and innovation. The public interest and developmental objectives, including alternative narratives of IP are hardly mentioned. Programmes have yet to explore how specifically the pursuit of strong IP protection in Nigeria advances the development deficit of the global IP order. The NCC's STRAP is a toast to rights holders in industrialized countries who are quick to recommend the burning or confiscation of books and other materials sought out by education-hungry youths in developing countries.

Not surprisingly, the NCC is able to entertain these critical gaps in its mission in part because there is no robust stakeholder debate that articulates Nigeria's aspirations and expectations from the IP system. The current approach continues to receive accolades from familiar quarters, including private transnational IP rights holders, such as major proprietary software companies, with the WIPO playing a crucial supporting role. Nigerian IP critics operating outside of conventional channels are confronted by increasingly active industry stakeholders, especially from the movie and music sectors, and resistance from the top echelon of IP policy elites.

The normative regulatory capture of IP policy and administration is a factor in drowning Nigeria's voice in the global policy deliberations on IP from a development perspective. With incredible human resources at home and abroad, Nigeria has almost 100 accredited universities and many other specialist colleges that conduct training and research in various fields of innovation. Nigeria is, or ought to be, a frontline developing country in a natural position to articulate African regional perspectives in the IP policymaking arena. Nigeria, however, has failed to play in the leagues of Brazil, India, Egypt, South Africa and other leading countries whose persistent efforts in interrogating the orthodox normative approach to IP has resulted in the new IP and development imperative, epitomized in the DA.

Given the vibrant nature of the local creative and copyright based industries in Nigeria, it is hardly surprising that the NCC's initiatives at curbing domestic copyright piracy are very popular among rights holders. But that is only one side of the coin. When other stakeholders, especially in the information, communication and biotechnologies, traditional medicinal and agricultural knowledge and various domains of innovation are fully integrated into Nigeria's IP equation, the development imperative may find traction in the Nigerian context. As the example of India has shown, it is possible to balance the need to protect the interests of Nigerian movie makers and its vibrant creative industry while being conscious of the external dynamics of the global IP order, especially as it impacts other areas, such as access to knowledge and related opportunities for empowerment.

It is expected as WIPO continues to implement the DA, Nigeria could build on the framework already established by the NCC to recalibrate its IP training, education and awareness campaigns. This would require an attitudinal shift. After all, one objective of the DA was precisely to have WIPO, as a UN agency,

encourage this rebalancing act. For the NCC, WIPO and various related stakeholders, this opportunity beckons for the reappraisal of their relationships to translate the DA into practice.

Looking beyond Nigeria at IP training and education in or for developing countries more broadly, the diversity of views that has permeated the IP debate over the last decade does not seem to have been fully reflected in IP teaching and training programmes delivered in developing countries by major technical assistance providers, such as WIPO and IP offices from leading industrialized countries. This situation should be addressed in order for developing countries to be able to pursue IP policies that are supportive of their broader development objectives. Implementation of the DA offers a window of opportunity to achieve this goal.

So, to conclude, what are the key points that this issues paper has identified, in terms of challenges or recommendations for future IP training and education activities?

Recommendation No. 1: Build and utilize an accessible inventory of existing scholarly literature and teaching materials on IP and development.

One immediate task is to better contextualize IP within the development literature, rather than sprinkling materials and courses with banal statements or hyperbole about the links between IP and development. There is a rich and ever-growing body of scholarship on this topic. Moreover, there are new courses and related teaching materials being developed in this field on a regular basis. However, a kind of clearinghouse for such resources is badly needed. A literature review of the scholarship and teaching materials and construction of an openly accessible resource bibliography, would be an appropriate place to begin work toward integrating these perspectives into development-related IP training and education. A recent literature review commissioned in the United Kingdom shows the potential for such work (Hassan, Yaqub and Diepeveen 2010). With additional time and resources invested into a comprehensive inventory and analysis of IP and development literature and materials, course designers and instructors might have available to them a broader and deeper array of resources from which to choose in preparing for and delivering IP training and educational activities.

Though this body of scholarship is growing independently, WIPO can do much to encourage this. This requires continued expansion of the current interdisciplinary approach to include not just law, business, economics, engineering and sciences, but also anthropologists, sociologists and especially political scientists. The newly established WIPO Journal is certainly a step in the right direction. It should be nurtured, and care should be taken by its editors to ensure that more contributions from and about developing countries are published. It might perhaps be made less law-focused and more multi-disciplinary. Efforts might also be made to add academics from developing countries, instead of just practitioners, to the editorial board. Moreover, WIPO might consider the possibility of establishing essay writing prizes to induce more submissions from developing country researchers. In combination these steps might encourage more robust evidence-based debate about IP and public policy, and actively facilitate critical engagement with different perspectives on IP and development.

Recommendation No. 2: Support new multi-disciplinary, empirical research publications and curricular materials related to IP and development.

The specific suggestions laid out in the preceding paragraph are related to a broader and more fundamental point about the relationship of robust, empirical research to IP training and education. Put simply, research and education are integrally related. WIPO can and should exploit the considerable potential to leverage the research undertaken by the new office of the Chief Economist to create value and opportunities for the organization as a whole. Cross-fertilizing research activities with

not only norm-making but also training and education might move WIPO subtly in the direction of other international organizations, such as the OECD and World Bank, which mobilize significant knowledge resources as an integral part of carrying out their activities. The experience of the World Bank in particular shows how a rich and credible research agenda can be useful in helping to reposition an organization in response to changes in its activities or operating environment.

Recommendation No. 3: Establish an independent task force to audit and evaluate all IP training and education activities of WIPO's Academy, and potentially other providers.

In terms of training, WIPO might consider establishing an independent task force to thoroughly audit all Academy programmes and materials for consistency with the principles underlying the DA. This initiative could be similar to a recently mandated review of WIPO's technical assistance, which is a related but distinct topic. Importantly, we are not recommending that the review of technical assistance be broadened, and thus potentially diluted, to include training and education programmes. Rather, IP education itself deserves rich and detailed consideration. Ensuring diversity among perspectives, setting a clear and authoritative mandate and providing sufficient human and financial resources would be keys to the successful operationalization of such an initiative. Ideally, there would be a significant role for development-oriented funding agencies, working in collaboration with an array of experts, to play alongside WIPO itself.

Recommendation No. 4: Improve IP curricula and materials in accordance with best practices identified in this paper.

At present, detailed information about IP-related training and education is very difficult to obtain. There is no centralized place, even within single organizations, such as WIPO, where an up-to-date inventory of training and education activities, including instructor biographies and qualifications as well as curricula and course materials, is maintained. A comprehensive review or audit—which this issues paper has certainly not attempted—cannot be conducted effectively without open access to this kind of information.

It is difficult to predict, and inappropriate to prejudge, at this stage what the conclusions of a training and education task force might be. One might imagine, however, possible recommendations related to sensitivity training on developing country perspectives for Academy staff and instructors, or integration of the DA into activities of the GNIP Members. With respect to Nigeria, given the robust rapport between WIPO and the NCC and the latter's positioning of the NCI, the establishment of an African-based institutional membership of the GNIP may be a matter of time. In that respect, it is desirable that any such institution from the outset be fully orientated around IP and development.

The most logical body within WIPO to follow up on recommendations like the foregoing is the WIPO Academy. The WIPO Academy, like the NCC in Nigeria, fully deserves credit for implementing initiatives on training and education within a fairly short time. The Academy, NCC and related agencies at national and international levels should be provided with the mandate and resources to reorient their education and training activities in line with the principles underpinning the DA. Special care could be taken to insulate new, objective and impartial Academy programmes from the political pressures affecting other parts of WIPO, especially committees expressly charged with norm-setting responsibilities. The challenge will be to balance this autonomy with an ability of the Academy to infuse the entire organization's activities with the evidence-based outcomes resulting from reformed research, training and education initiatives.

But the task of reforming IP training and education as one part of implementing the DA cannot be left to the WIPO Academy alone, or even WIPO alone. Collaboration with other organizations is crucial. Toward that end, Brazil, supported by some other developing countries, put forward an initial proposal to the WTO TRIPS Council aimed at integrating

technical assistance principles related to the DA into joint and independent activities.[57] This could eventually lead to one valuable part of a cooperation plan, not necessarily because the WTO would bring fresh perspective, but because better integrating the two organizations might enhance the possibility of normative transfusion in a more structured environment. Increasing coordination and coherence in inter-organizational training activities is likely to be a major challenge persisting throughout the foreseeable future (Abdel Latif 2008).

The case study presented in this issues paper demonstrates that, as the WIPO Academy and other training and education providers engage or co-opt national agencies such as the NCC, there is a need to integrate the imperative for a context-sensitive curriculum that responds to national contingencies in the area of IP and development. As the NCC's experience shows, developing countries, LDCs and countries in transition should be more critical in regard to institutional interactions with the WIPO, especially in regard to IP education and training.

Recommendation No. 5: Conduct training and education activities in cooperation with a broader range of stakeholders.

Traditionally, WIPO has conducted many of its teaching and education seminars on its own or with the active participation of right holder's and private sector organizations and IP offices. In line with the DA recommendations, WIPO should conduct more teaching and training activities in cooperation with a wider range of stakeholders to include non-traditional providers, as well as relevant UN agencies, such as UNCTAD, the World Health Organization (WHO) and the United Nations Educational, Scientific and Cultural Organization (UNESCO).

This would also contribute to implementation of recommendation 40 of the DA which requests WIPO to "intensify its cooperation on IP-related issues with United Nations agencies, according to Member States' orientation, in particular UNCTAD, UNEP, WHO, UNIDO, UNESCO and other relevant international organizations, especially the WTO in order to strengthen the coordination for maximum efficiency in undertaking development programs." The rationale of this recommendation to conduct more teaching and training activities in cooperation with a wider range of stakeholders is of course to address IP issues within their wider public policy implications in the areas of health, environment and other key areas for human development.

5. CONCLUSION

At this moment, post-adoption of the DA presents an opportunity for critical and introspective elaboration of domestic IP policy in a direction that reflects various national or regional contexts in order to resist normative preferences that seem less relevant to their own socio-economic and cultural space. From the outset, countries inclined to establish national agencies for IP development and administration should not allow the policy space to be dominated by only one regime of IP, but should strive toward a structure that incorporates all stakeholders toward the optimization of wider and more socially responsive evolution of IP rights and policies in their various dimensions. This approach enables an articulation of a robust national IP vision, which provides a framework for interaction at the global level with the aim of contributing to the WIPO Academy's curriculum.

The IP and development imperative should accommodate a multidirectional democratic exchange between WIPO and national agencies on the subject of IP education and training. Developing countries must have the opportunity to contribute and shape the education and training programmes of not only of the WIPO Academy, but also other external or national agencies, such as the USPTO, EPO and others that seek to influence policies and practices outside of their primary jurisdictions.

ENDNOTES

1 Convention Establishing the World Intellectual Property Organization, 14 July 1967, in *Treaties and International Agreements Registered or Filed or Reported with the Secretariat of the United Nations*, 828, no. 11846 at 11.

2 Agreement between the United Nations and the World Intellectual Property Organization, 27 September 1974, in *Treaties and International Agreements Registered or Filed or Reported with the Secretariat of the United Nations*, 956, no. 729 at 406–7.

3 WIPO Worldwide Academy http://www.wipo.int/academy/en/

4 http://www.wipo.int/academy/en/meetings/iped_sym_05/index.html

5 The program, including hyperlinks to speakers' presentations, is available at http://www.wipo.int/academy/en/meetings/iped_sym_05/program_detailed.html

6 http://www.wipo.int/export/sites/www/academy/en/execed/conf/pdf/program_final.pdf

7 http://www.wipo.int/export/sites/www/academy/en/courses/professional_training/pdf/catalogue_e.pdf

8 http://www.wipo.int/export/sites/www/academy/en/courses/professional_training/pdf/catalogue_e.pdf at page 6.

9 http://www.wipo.int/academy/en/courses/professional_training/index.html.

10 http://www.wipo.int/academy/en/teaching/teaching_research/turin.html. A program brochure is available at: http://www.wipo.int/export/sites/www/academy/en/teaching/teaching_research/pdf/turin_wwa_brochure.pdf, and a detailed syllabus can be obtained at: http://www.wipo.int/export/sites/www/academy/en/teaching/teaching_research/pdf/turin_curriculum.pdf.

11 The list of lecturers for 2009-10 included experts such as Thomas Cottier, Toshiko Takenaka and Paul Torremans, to name only a few.

12 http://www.wipo.int/academy/en/teaching/teaching_research/lund.html. More details, including an overview of the course of study, are online at: http://qp.jur.lu.se/QuickPlace/mp/PageLibraryC12572260066A2F7.nsf/h_Toc/c6e63e320998f52cc1257233004a28f7/?OpenDocument.

13 http://www.wipo.int/academy/en/teaching/teaching_research/africau_aripo.html. Further details are available from Africa University at: http://www.africau.edu/academic/faculties/iplg/wipo/mip_advert.html and in the detailed curriculum at: http://www.wipo.int/export/sites/www/academy/en/teaching/teaching_research/pdf/mip_curriculum.pdf.

14 http://www.wipo.int/academy/en/teaching/teaching_research/unisa.html.

15 http://www.wipo.int/academy/en/teaching/teaching_research/qut.html. See a program brochure at: http://www.wipo.int/academy/en/teaching/teaching_research/pdf/wipo-qut-brochure.pdf and the detailed curriculum at: http://www.law.qut.edu.au/study/courses/pgrad/mipl.jsp.

16 Kamal Puri, an expert on indigenous people and traditional knowledge, directs the program, and instructors include, as an example, Brian Fitzgerald, a worldwide authority on models of open access to knowledge.

17 http://www.wipo.int/academy/en/links.html.

18 http://www.wipo.int/export/sites/www/academy/en/courses/summer_school/summer_school_textbook.pdf at page 5.

19 http://www.wipo.int/export/sites/www/academy/en/courses/summer_school/summer_school_textbook.pdf at page 7.

20 The program for the first Strategic IP Management program targeted at business executives, held in 2006, is available at: http://www.wipo.int/academy/en/execed/sipm/sipm.html

21 General information can be found at: http://www.wipo.int/academy/en/ipacademies/.

22 http://www.wipo.int/export/sites/www/academy/en/ipacademies/rio_symposium/rio_declaration.pdf.

23 http://www.wipo.int/academy/en/ipacademies/beijing_sym_08/index.html.

24 http://www.wipo.int/academy/en/ipacademies/munich_09/index.html.

25 Through the QUESTIONNAIRE ON STATUS OF IP EDUCATION AND TRAINING (2009), http://www.wipo.int/export/sites/www/academy/en/ipacademies/pdf/questionnaire_training.pdf and the GLOBAL NETWORK of IP ACADEMIES - SURVEY/2008 QUESTIONNAIRE http://www.wipo.int/export/sites/www/academy/en/ipacademies/pdf/questionnaire_academies.pdf.

26 http://www.sweetandmaxwell.co.uk/wipojournal/.

27 http://www.wto.org/english/tratop_e/trips_e/wipo_wto_colloquium_june10_e.htm.

28 http://www.epo.org/about-us/office/academy.html.

29 http://www.epo.org/patents/learning/teaching.html.

30 http://www.wipo.int/export/sites/www/academy/en/courses/summer_school/pdf/program.pdf.

31 http://www.uspto.gov/ip/training/index.jsp.

32 http://www.uspto.gov/ip/training/schedule.jsp.

33 http://www.uspto.gov/ip/training/elearn.jsp.

34 Pub. L. 106-113.

35 Originally, the Copyright Decree of 1988 established the Copyright Council, which was later upgraded to a Copyright Commission (as the main outfit for the administration of copyright and neighbouring rights) via a 1996 amendment.

36 See NCC, "The Commission: Origin", online: http://www.nigcopyright.org/commission.htm (accessed November 28, 2009).

37 See "Nigeria to Have One Commission on IP?", online: http://afro-ip.blogspot.com/2009/03/nigeria-to-have-one-commission-for-ip.html (accessed December 14, 2009).

38 http://www.nigcopyright.org/commission.htm.

39 From the text of Anniversary Lecture on the theme of Intellectual Property and Development delivered at the event of 20 Anniversary of the Nigerian Copyright Commission, Abuja, Nigeria September 1, 2009 (on file with the authors).

40 WIPO D-G Address, *supra* note 39 (emphasis added).

41 See "STRAP AND CLAMP: Nigerian Copyright Commission in Action", WIPO Magazine September 2008 p. 21, online: http://www.wipo.int/wipo_magazine/en/pdf/2008/wipo_pub_121_2008_05.pdf (in which WIPO lends its public relations apparatus to celebrate NCC burning of CD, DVCs, etc.) (accessed December 10, 2009).

42 See NCC Website official website, *supra* note 36 (last accessed April 12, 2010).

43 WIPO Regional Workshop on Intellectual Property Teaching organized by WIPO in cooperation with the Government of the Federal Republic of Nigeria, Abuja (Nigeria) September 9-10, 1999. See WIPO/IPLT/abv/99/INF/1

44 All the three Directors-General of WIPO (Arpad Bogsch, Kamil Idris and the incumbent, Francis Gurry) have had direct contact with the heads of state of Nigeria during their tenure.

45 See NCC official website, *supra* note 36 (accessed April 6, 2010).

46 In its website the NCC identifies the NCI as one of its numerous projects but laments that "[l]ack of accommodation and other infrastructure has frustrated the physical take – off of the project. The Commission requires external funding to facilitate the physical take-off of this project" See NCC official website, *supra* note 36. (accessed April 6, 2010).

47 See Nigerian Copyright Institute, *Intellectual Property Law Syllabus for Nigerian Universities* (Abuja: NCC, 2008) (document on file with the authors).

48 http://www.atrip.org/default.htm.

49 http://www.eifl.net/cps/sections/news/press-area/2010-03-24; http://cyber.law.harvard.edu/copyrightforlibrarians/.

50 www.wipo.int/academy/en/teaching/pedagogy/index.html

51 www.wipo.int/academy/en/teaching/sample_curricula/index.html.

52 http://www.wipo.int/academy/en/teaching/teaching_research/index.html#how

53 http://www.wipo.int/academy/en/teaching/pedagogy/index.html

54 http://www.ivir.nl/courses/icl/icl.html.

55 http://www.wcl.american.edu/pijip/go/s2010-calendar.

56 http://www.jeremydebeer.ca/teaching/global-ip-policy.html.

57 "Technical cooperation and capacity building: "Cluster A of the Development Agenda," Communication from Brazil to the WTO TRIPs Council (20 June 2008), http://docsonline.wto.org/imrd/directdoc.asp?DDFDocuments/t/IP/C/W513.doc.

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