LCSHD Paper Series

Department of Human Development

Colombian Higher Education in the Global Market

Isabel Cristina Jaramillo
Patricia García Zuñiga
Andreas Blom

July 2002

The World Bank
Latin America and the Caribbean Regional Office
Colombian Higher Education in the Global Market

Isabel Cristina Jaramillo
Patricia García Zuñiga
and
Andreas Blom

July 2002
Preface

The Government of Colombia is examining options for improving the higher education sector over the next decade. As part of that process, the World Bank, at the behest of the Government, undertook an assessment of the state of tertiary education and made recommendations on how its funding, governance, structure, and scope could be reformed to better meet the needs of the country and the challenges it will face in a global market economy. The Bank’s analysis will become available in a sector study later in 2002.

Five background studies focussed on issues identified as important for the growth and development of tertiary education in Colombia. The purpose was to move towards operationalizing the substantial knowledge base which has been created about Colombian tertiary education over the last decade. The paper, Colombian Tertiary Education in the Context of Reform in Latin America, by José-Joaquin Brunner, analyzes the underlying causes behind the underdevelopment of Colombia’s higher education system, the challenges it is currently facing and the transformations and policies that could be implemented to forge the necessary changes. The concern about quality in tertiary education and the mechanisms in place to ensure quality in Colombia are discussed in the fourth paper Quality Assurance in Colombia, by Robin DePietro-Jurand and Maria-José Lemaître. The challenges for Colombia’s national innovation system could not be underestimated. In Science and Technology: Status and Perspectives, Natalia Agapitova, Lauritz B. Holm-Nielsen and Goga Vukmirovic demonstrate that while all of the essential elements of an innovation system are present in the country, due to a lack of finance, a poor scientific base, and limited labor competencies, the national innovation system is substantially underdeveloped and incoherent. The marketplace for knowledge is global. How does Colombia fare in this market? Over the last decade, foreign institutions have begun to play an ever expanding role in the Colombian market for higher education, migration of Colombian graduates (brain drain) is on the rise, and globalization in general posing a challenge to Colombian higher education. These issues are discussed in the paper Colombian Higher Education in the Global Market, by Isabel Cristina Jaramillo, Patricia García and Andreas Blom. The economic opportunities are dealt with in Economic Perspectives of Higher Education by Andreas Blom and Thomas Hansen who investigate two central markets surrounding higher education in Colombia: the market for higher education itself and the labor market for workers with higher education. Finally, the seventh paper by Arthur Hauptman, Reforming Student Financial Aid in Colombia: Issues and Alternatives examines the student aid structure in Colombia and recommends principles to guide its reform.

We have decided to make these studies available as LCSHD discussion papers in order to stimulate thought and debate, which eventually will encourage improvement of Colombia’s tertiary education system.

Lauritz B. Holm-Nielsen
# Table of Contents

1. Introduction ..................................................................................................................1

2. Towards a Global Market for Higher Education .........................................................2

3. Brain Drain ..................................................................................................................2

4. Internationalization ....................................................................................................3

5. Political Commitment ...............................................................................................4

6. Student Exchange .......................................................................................................6

7. Curricula Activities .....................................................................................................9

8. International Networks and Research Collaboration .................................................10

9. Conclusions ................................................................................................................14

References .....................................................................................................................16

Annex I: The Knowledge Spiral .....................................................................................18

Annex II: Brain Drain ......................................................................................................19

Annex III: Indonesia: the University Research for Graduate Education Project ..........20

Annex IV: Patterns of Academic Collaboration .............................................................21

LCSHD Paper Series ......................................................................................................23
1. INTRODUCTION

Two concepts lie at the core of this paper, internationalization and globalization of higher education. Following the definitions of Knight (1999) these concepts differ from each other, but are, at the same time, intimately linked.

Globalization is understood as increasing flows of technology, investments, knowledge, people, values, ideas, etc. facilitated by new communication technologies. This paper demonstrates that the current globalization process has significant implications for the higher education sector in Colombia. Hence, higher education institutions in Colombia have come under pressure from foreign universities, who use the Internet as a tool to gain access to the Colombian market for higher education. Moreover, globalization has revitalized the issue of brain drain, which in the case of Colombia has translated into a significant loss of skilled labor.

Internationalization, on the other hand, can be seen as a strategic response to globalization. In the words of Knight, internationalization is defined as a process of “integrating an international/intercultural dimension into the teaching, research and service functions” of any given education institution (Knight, 1999: 16). Accordingly, one of the rationales behind internationalization is that higher education institutions will benefit from exposure to and collaborations with foreign institutions. Therefore, increasing internationalization is in the case of Colombia expected to improve the country’s access to international best practices and the global pool of knowledge.

Internationalization can happen through various channels. This paper pays particular attention to the importance of overall government support, student exchange programs and international networks designed to promote collaboration between academia across countries, cultures and religions.

Globalization is a broad concept involving changes at numerous levels. Still, not all of these processes have equally direct implications on the higher education sector, but two trends are believed to be of particular importance. First, the emergence of a global market for higher education poses significant challenges to the institutions that are part of this educational level Colombia. Second, globalization has fuelled a significant increase in the outflow of human capital from the country (brain drain).

---

1 The internalization process depends on the various economic, political, geographic and demographic factors. For instance, internationalization requires among other factors (i) economic resources to fund projects, (ii) the existence of communication infrastructure, (iii) political stability to allow bi-directional exchanges and (iv) language skills. These conditions lie predominantly outside of the tertiary education sector’s sphere and are therefore not treated in this paper.
2. TOWARDS A GLOBAL MARKET FOR HIGHER EDUCATION

The global market for higher education has been growing significantly in recent years partly facilitated by the advent of new communication and information technologies and the General Agreement on Trade in Services (GATS) adopted at the end of the Uruguay Round (1987-1994). Similar agreements have subsequently spread to several regional free trade agreements (CHERD, 2001). As a consequence, global trade in higher education amounted to around US$30 billion in 1999 (11% more than in 1995). Notwithstanding the GATS agreement, the market regulation remains flawed. Hence a recent seminar on the issue pointed out that questions of quality assurance and accreditation remained unsettled (CHERD, 2001).

Colombia has become an important market for international universities, due to limited coverage and low international exposure of domestic institutions, particularly at master and doctoral levels. In recent years, the country has seen a growing presence of international universities from Cuba, Spain, and lately Australia. However, there is growing concern about the quality of such programs since the accountability issues for such "multi-national" university programs have yet to be defined. Still, the Ministry of Education and ICFES have established similar criteria for the establishment of higher education institutions, national and international alike, which should level the "playing field".

3. BRAIN DRAIN

“Mobility of highly educated labour is perhaps the most obvious mechanism of knowledge transfer” (Graversen et al., 2002, see also Annex I where the rationale is further explained). However the flow of people has to go both ways if all countries are to benefit from labour mobility. Unfortunately, emigration of highly qualified individuals from developing countries has been a concern for several decades. This also applies to Colombia. As a consequence, the Departamento Nacional de Planeación (DNP, National Planning Department) estimated that from 1998 to 1999, 85,000 Colombians with college studies emigrated. This represented a calculated loss of US$2,365 millions, which more or less equals the amount invested in higher education over the last three years. The same study reported that additionally 5,200 persons who attended higher education institutions abroad did not return to Colombia in the previous three years, from 1999 to 2001. Colombian communities in the two typical countries of destination, USA and Spain, have swelled during the last decade where both push-factors for emigration (escalation of the violent conflict and severe economic recession) and pull-factors (economic prosperity in countries of destination and easing of immigration laws) have attracted a growing number

\[\text{2 This paper focuses on academic mobility. Nevertheless, productivity is also enhanced by mobility from research centers to firms and vice versa.}\]
\[\text{3 The newspapers sources, Tierramerica/Inter Press Service and Diario El Pais differ on the estimated amount of college emigrants that the DNP study presented, between 80,000 and 85,000.}\]
of highly educated Colombians. New Zealand, Australia and Costa Rica are also emerging as poles of attraction.

A recent study by Carrington and Detragiache (1999) estimated the extent of brain drain on the basis of 1990 US Census data. In almost all cases, individuals with tertiary education formed the highest percentage of immigrants. Only countries geographically close to the US (Mexico, Central America, and the Caribbean Countries) had higher percentages of immigrants with secondary education rather than tertiary. Immigrants with primary school education were a distant third (7% of total immigrant population) (see Annex II).

For Colombia, Carrington and Detragiache found that 8 percent of Colombians with higher education had opted to leave their home country to work elsewhere. However, the study draws upon data from 1990. More recent anecdotal evidence suggests that the Colombian economy has suffered an even stronger loss of highly skilled human capital over the last decade. However, no systematic data is so far available.

Still, emigration does not always represent an absolute loss to the country of origin. Many people maintain beneficial links to their countries of birth, becoming conduits for knowledge and technology transfer. Others may re-emigrate later in life, with vastly enhanced professional skills and experience. Nonetheless, the magnitude of the problems calls for the attention of policymakers.

Recent economic analysis shows that educated individuals become more productive (and therefore receive a higher wage) after they immigrate. It is not true, as some economic theories would hold, that as a scarce resource in the developing world, educated people command a higher wage premium than they would in the industrialised countries members of the OECD, where educated workers are already abundant. Instead, it seems that the presence of other educated individuals (the so-called “critical mass”) raises the productivity of all. An educated individual in isolation—as many find themselves in developing countries—is not able to capitalise on that education. Individuals with advanced training (advanced human capital) must be surrounded by their peers in order to become productive.

4. INTERNATIONALIZATION

Against this backdrop of increasing globalization, this section will review past internationalization initiatives in Colombia. The section will start by looking at the political commitment to internationalization of higher education. The subsequent parts

---

4 Some systematic undercounting of immigrants with less educational attainment is inevitable in these data.
5 New York Times (April 10, 2001) cites sources that approximately 1.1m Colombians –mostly highly educated- have left the country in the last ten years. The article estimates that the Colombian-American community counts more than 430,000 emigrants and is rapidly growing.
will review specific initiatives undertaken with a view to promote student exchange and joint research activities, respectively. Hence, the assumption is that a successful internationalization strategy will contribute significantly to counter some of the problems listed in the section above. However, it should be noted that internationalization does not per se provide the solutions for all of the challenges listed above. The problem of brain drain for example, must be countered through various policy initiatives. Policy-makers must not only increase the opportunities available to their brightest citizens, but wider issues such as political stability could also play a role. Moreover, policymakers could benefit greatly from access to more comprehensive data, which in turn would allow a more sophisticated understanding of the problem. These reservations notwithstanding, internationalization is continually believed to play a significant role in countering some of these problems. This, in turn is confirmed by recent experience from Indonesia, where the URGE initiative, which included a number of internationalization strategies, proved successful in retaining young graduates and strengthening the existing higher education system (see Annex 3).

5. POLITICAL COMMITMENT

Within a framework of economic openness and competition the Colombian Constitution from 1991 guarantees the autonomy for higher education institutions, in the sense that they have the freedom to determine their internal norms, but paying respect to the ideological pluralism. These new conditions served to expedite the Ley 30 de Educación Superior of 1992, becoming the legal framework that has supported the transformation processes that the Colombian system of higher education has gone through in the last 10 years. Ley 30 establishes internalization as one of the main challenges of higher education, and assigns the responsibility for this to ICFES. Of further importance for this study is Article 226 of the Constitution, which establishes the principle of promotion of the internalization of the political, economical, social, and ecological political relations on the foundation of equity, reciprocity, and national convenience.

The Social and Development Plans that have oriented the national politics since the beginning of the nineties have considered education as a central element in the

---

6 The Constitution of 1991 considers education as the right that a person has and a public service with a social function: through it, the citizens can have access to knowledge, to science, to technology and to the cultural goods and values, as it appears in Article 67 of the Magna Carta. Article 27 also defines the freedom of teaching, learning and research. In fact, the right to education is so important for the development of a country, that it has deserved a special recognition, not only in the Constitution, but in international agreements like the Universal Declaration of Human Rights (Article 26), the American Declaration of Rights and Duties of Men (Art. XII), only to mention a few. Article 69 is important because it guarantees the autonomy for higher education institutions in the sense that they have the freedom to determine their internal norms, but paying respect to the ideological pluralism. It is therefore the obligation of the State to guarantee and assure the necessary conditions that a student needs in order to access and remain in the system.
development of the country. The Governmental Plan of President César Gaviria, the "Pacific Revolution", tried to adjust the conditions of the country to those of the world. It was therefore necessary to undertake strategies that could improve the human capital and the strengthening of the technological and scientific capacity. It was acknowledged that the creation and consolidation of international networks, participation in groups of excellence, the development of collaborative international research projects, and the opening of scientific cooperation and its international exposure all were essential tasks for Colombia’s higher education sector to advance. Unfortunately, this ambitious Plan has been criticized by the way it was developed despite the need to start important reforms for the country.

From 1994 to 1998, President Ernesto Samper established his Plan called the "Salto Social". Employment and education were the focal points of this navigation map. Internationalization was obviously considered as crucial, in the sense that it could generate the bases for a more competitive and stable policy for science and technology. During this period the Colombian International Cooperation Agency was established to deal with the financing and the technical aspects of the international cooperation. Universities, as the plan proposed, needed to have excellent standards of quality if they wanted to compete and be part of the international academic community. Different circumstances that affected the national development made it impossible to fulfil what was set out in this ambitious Plan.

In the last four years, (from 1998 until 2002) under the presidency of Andrés Pastrana, education continues to be at the center of the Government's declared policy called "Cambio para Construir la Paz". There should be a fundamental compromise of society with education, culture and the preparation for work-life if "we want to have less poverty and a better human and social capital", as it is defined in his Governmental Plan. Although the international policy expressed in this Plan, as a way to convert the country into an active participant of the global process, has been very important, they have not impacted the international dimension of the Colombian higher education. They have had a more political and economic characteristic, than cultural and educative. It is evident that the last decade and the beginning of this century show the need to make important efforts in order to transform the Colombian higher education system. Globalization has clearly imposed significant challenges to the higher education sector, which in turn forces the sector to engage in progressive processes of innovation if they want to improve their relative competitiveness. However, the often-declared official policy of internationalization has not led to the development of a coherent action plan.

Even though a coherent policy framework is still to emerge, a number of positive measures have been taken after all. These in turn include the promotion of student

---

exchanges, initiatives aimed at internationalizing students’ curricula and efforts to set up international networks.

6. **STUDENT EXCHANGE**

The internationalization process in Colombia has paid considerable attention to student exchange programs. Financial support for these programs has been provided by the government and other institutions, and managed mainly through 3 domestic organizations: *Instituto Colombiano de Crédito Educativo y Estudios Técnicos en el Exterior, ICETEX; Instituto Colombiano para el Desarrollo de la Ciencia y la Tecnología, COLCIENCIAS;* and *COLFUTURO*. Moreover, various bilateral agreements provide scholarships funded by foreign sources.

- **ICETEX**

One of the most important governmental institution in charge of credit and scholarships is ICETEX created in 1957. The Institute selects the beneficiaries of international scholarships offered by other countries through international cooperation, exchange programs and other sources, and offered to Colombian students (Chapter I, of *Instituto Colombiano de Crédito Educativo y Estudios Técnicos en el Exterior, ICETEX*, Art. 115, *Ley* 30). Although the amounts of loans for studying abroad have increased since 1995, they have not met the demand for these types of programs. The number of students benefiting grew from 498 in 1995 to 1002 in 2001, leaving more than 300 applications unattended in that year alone. The amount of student aids more than tripled in the same period of time. Hence, in 1995 it totaled Col. pesos 2,173,402, which had increased to Col. pesos 9,124,000 in 2001. The United States and Europe, particularly Spain seems to be the most attractive destinations abroad. In the year 2000 approximately 92 students choose some program in the United States, which represents 16.7% of the total for that year, while Europe attracted more than 50% with Spain being the country with the highest percentage, 39.9%. Latin America accounts for approximately the same percentage as North America with a total of 20% (see table 1). The total number of students who obtained a loan to study abroad was 551. Most of them have been applied to Master programs, especially in the areas of Administration and Health.
Table 1: Students going abroad by Destination, ICETEX, 2000

<table>
<thead>
<tr>
<th>Destination</th>
<th>Number of students</th>
<th>% of total students going abroad</th>
</tr>
</thead>
<tbody>
<tr>
<td>Argentina</td>
<td>14</td>
<td>2.5%</td>
</tr>
<tr>
<td>Brazil</td>
<td>16</td>
<td>2.9%</td>
</tr>
<tr>
<td>Costa Rica</td>
<td>12</td>
<td>1.8%</td>
</tr>
<tr>
<td>Cuba</td>
<td>13</td>
<td>2.4%</td>
</tr>
<tr>
<td>Chile</td>
<td>10</td>
<td>1.8%</td>
</tr>
<tr>
<td>México</td>
<td>28</td>
<td>5.1%</td>
</tr>
<tr>
<td>Venezuela</td>
<td>9</td>
<td>1.6%</td>
</tr>
<tr>
<td>Other in LA</td>
<td>8</td>
<td>1.5%</td>
</tr>
<tr>
<td><strong>Total Latin America</strong></td>
<td><strong>110</strong></td>
<td><strong>20%</strong></td>
</tr>
<tr>
<td>Canada</td>
<td>20</td>
<td>3.6%</td>
</tr>
<tr>
<td>USA</td>
<td>92</td>
<td>16.7%</td>
</tr>
<tr>
<td><strong>Total North America</strong></td>
<td><strong>112</strong></td>
<td><strong>20.3%</strong></td>
</tr>
<tr>
<td>Spain</td>
<td>220</td>
<td>39.9%</td>
</tr>
<tr>
<td>France</td>
<td>34</td>
<td>6.2%</td>
</tr>
<tr>
<td>The Netherlands</td>
<td>10</td>
<td>1.8%</td>
</tr>
<tr>
<td>Great Britain</td>
<td>24</td>
<td>4.4%</td>
</tr>
<tr>
<td>Other Europe</td>
<td>24</td>
<td>4.4%</td>
</tr>
<tr>
<td><strong>Total Europe</strong></td>
<td><strong>312</strong></td>
<td><strong>56.6%</strong></td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>551</strong></td>
<td><strong>100%</strong></td>
</tr>
</tbody>
</table>

Source: ICETEX

**COLCIENCIAS**

Since its foundation COLCIENCIAS has been the lead organization in the promotion and the development of science and technology activities in the country. It is the only governmental organization not affiliated with the Ministry of Education, but to DNP which provides substantial resources to higher education. COLCIENCIAS offers scholarships to Colombian professionals who want to continue their masters or doctoral studies abroad. So far 1997 has been the year in which most students received support to continue their professional training: 151 students for doctoral programs and 42 for masters programs. These scholarships were part of a credit granted by the Interamerican Development Bank (BID). These numbers have subsequently dropped considerably. Hence, only six students received support for Ph.D. programs and two for Masters
programs in 2000. The cost of these programs was on average Col. pesos 145.6 million per student, which is significantly higher than the average cost of domestic post-graduate students at Col. pesos 9 million. This raises the question of whether there is a more efficient allocation of these resources without sacrificing the international exposure needed for the Colombian National Innovation System (NIS). The idea of introducing visiting periods and “sandwich” programs (a period abroad in between domestic studies) could be an option.

**COLFUTURO**

COLFUTURO, a non-profit institution, also offers financial aid for students who want to pursue either a graduate degree abroad or Colombians wanting to improve their English skills. It is a joint effort of private firms, public firms and some higher education institutions, which has also established bilateral arrangements with the Institute for Housing and Urban Development (Netherlands), the British Council, University of Alberta (Canada), and the University of Amsterdam. Depending on the credit-scholarship program, COLFUTURO cancels a percentage of the outstanding debt if the graduate returns to Colombia, and the percentage also depends on the type of study undertaken abroad (COLFUTURO organization, 2002). From 1992 to 2001, it has financed 873 students, 80.7% studied masters programs, 13.5% doctorate programs and 5.8% specialization programs (IELSALC-UNESCO, 2002).

**Bilateral programs**

The Fullbright Commission of the United States has supported a significant number of Colombians (2,800) with total or partial scholarships to pursue postgraduate study programs in the United States. A much smaller number of Americans (approximately 800) have come to the country, as visiting professors or students. During its 45 years of existence, the Commission has received some US$42 million from the US Government, and US$5 million from the Colombian government. The specific demand for studies abroad has changed academic profile over time. Traditionally it was Social Sciences and Humanities. During the nineties, Engineering and Environmental Sciences have been the most solicited followed by Financing, Political Science, Humanities and Basic Sciences. Bilateral programs financed by the British Council, Alliance Française, DAAD (Germany) and the Spanish Agency for International Cooperation have also provided opportunities for young Colombians to study abroad. In the year 2000 these three

---

8 Figure in 1999 constant pesos, calculated by authors.
10 See Reforming Student Financial Aid in Colombia: Issues and Alternatives by Arthur Hauptman
11 More recently, the European Union has also undertaken other initiatives to support student exchange programs in Colombia.
organizations financed 185 students to go abroad, which represents an international exposure of less than 1% of the students who graduated in 1999.12

7. CURRICULA ACTIVITIES

In response to the Strategic Export Plan of 1999-2009, several initiatives have been launched to internationalize the curricula of higher education programs in Colombia. In this respect, the "Cátedra de Negocios Internacionales" has been made available, with support of the Ministry of Education, to students in professional, technological and technical programs. The program draws extensively on international elements and experiences, with a view to strengthen the export culture in the country.

Since the establishment of Colombian higher education in international markets has become so central to the current Government, the Chamber of Commerce of Bogotá has, in collaboration with the universities in Bogotá, developed an Export Plan for higher education services. The plan enjoys strong support from the Major’s office and Proexport, the Colombian trade promotion department. The Chamber expects to consolidate this plan during the year 2002.

In the same direction the government (ICFES through its program Diplomacia Educativa) shows the general interest on the internationalization process that higher education institutions have started with the idea of strengthening the academic international cooperation with institutions of higher education of neighbouring countries like Venezuela, Panama, Ecuador in the Andean Region; Guatemala, Honduras and Nicaragua in Central America and some others in the Caribbean region. The participant higher educations institutions come from all the regions of the country which have been present in international events and academic missions in order to exchange experiences and promote the Colombian higher education institution’s services and programs. Its main objective is "to positioned Colombian higher education within the Diplomatic and Academic Community, national and internationally, in order to facilitate the international process. This process should improve not only the student exchange intended to improve the quality of education, but also to strengthen the international relations of our country and to generate more financial resources for the country through the academic cooperation."13.

12 0.17% if we considered 185 students over the class of tertiary education for 1999, 106,755 graduates. Source: ICFES Estadísticas de la Educación Superior 1999.
13 participating programs have been certified by the National Council of Accreditation, CNA
8. INTERNATIONAL NETWORKS AND RESEARCH COLLABORATION

The rationale behind the establishment of international networks is to foster the exchange of ideas between higher education systems through visiting scholar programs and, related to that, promote joint research activities. The recently established European Research Area (ERA) provides a good example of regional cooperation (Box 1). Therefore, the ERA experience draws attention to the fact that the pooling of collaborative funds in areas of common interest greatly increases the perspectives for carrying out excellent research. Drawing a parallel to Latin America, the European example makes a case for strengthening research collaboration in the Latin American region. Still, it should be noted that the ERA has benefited from a highly developed European policy, something that does not yet exist in Latin America.

The Colombian Network for International Cooperation (RCI) is the most comprehensive effort undertaken in Colombia. In addition, other network programs have been initiated with the support of foreign countries, notably the COLUMBUS and ALFA launched by the European Union.

**Box 1: European Research Area (ERA)**

The European Union (EU) has long recognized the critical role that research, innovation, knowledge and human capital. Hence, the desire to improve R&D efforts led the European Council to formally launch the European Research Area (ERA) at the Lisbon Summit in June, 2000.

The ERA is based on principles of cooperation across countries, to work in a cohesive manner within the union countries. At the same time, it recognizes country identities, national priorities and launches complementary projects. Priority is given to research projects assumed to be beneficial to all countries. Moreover, the target projects are large-scale projects, above and beyond the possibilities of a single country.

ERA also considers building networks of excellence, through the adoption of joint programs and staff exchanging. It also encloses activities aimed at applying innovation by providing funding and connections between financing entities and universities for the development of incubators for technology companies. Infrastructure and human resources continuous improvement is considered key. Society involvement is another important element, realized through the public dissemination of findings and initiatives to promote public’s knowledge of science and technology. Moreover, the relationship between society and science is represented in the creation of an European scientific reference system that provides principles for sustainable development. ERA, even when based on previous experience of building “clusters” and networking, is more that an extrapolation of previous programs. It can be understood as the European joint effort to build centers of world class research, linking them trough a network of excellence, and most importantly, sharing an integrated research program based on their individual national programs.

Source: European Commission, 2000
Colombian Network for International Cooperation, RCI

In 1994 a forum convened by ICETEX proposed to create an institutional network for the Colombian international relations offices. The network was designed to consolidate, not substitute, the ongoing internationalization activities of the individual universities. This network, with more than 100 members representing all the regions of the country, is a non-governmental, non-profit organization, which includes most of the International Relations Offices of higher education institutions in the nation. RCI which is coordinated by the Association of Colombian Universities, ASCUN was created in order to stimulate, promote and strengthen the culture of international cooperation within Colombian universities. It equally serves as the focal point for cooperation with other similar international networks worldwide. Furthermore, RCI is supported by ICFES and ICETEX. It is open network and program activities are funded through grants from its parent organizations like ASCUN, ICFES or ICETEX.

Four main lines of work characterize RCI:

i. **Formation and training in international management**
In relation to formation and training in international management, RCI has maintained a continuous educational program since its creation through workshops, general meetings, congresses, and seminars to assist institutions in their internationalization efforts. In the year 2000 with the support of ICFES, it conducted an itinerary program, with the participation of most of the Directors of International Offices of higher education institutions. Unfortunately, financial provisions for this type of programs are not available for the time being.

ii. **Information and publication of cooperation opportunities**
The Network has published several manuals, which have been the only reference in Colombia for information about student opportunities abroad, scholarships, credits etc. Likewise, members of the Network have published "The Guide for International Students". This is the product of a thorough investigation of the most relevant aspects relevant to any international student who wishes to come to Colombia to study in any of the higher education institutions located in the capital, Bogotá. The publication in English has received the support of the Chamber of Commerce of Bogotá and will be delivered to the most important national and international organizations involved with higher education.

The information activities are also supported by a web-page designed to keep all its members informed of the latest information related to internationalization and international cooperation.

iii. **Academic Mobility**
The program *Intercambio Académico, Técnico y Científico* – RCI has been designed to offer opportunities of international exchange to the academic community in general. It
was conceived for pre- and postgraduate students, teachers, researchers and administrative staff and provides for different modalities: Short stays (minimum 8 weeks), semesters abroad and postgraduate programs. The program, which was created by the Asociación de Universidades de América Latina y el Caribe para la Integración, AUALCPI, transferred the coordination of the program to the Colombian International Network which has made a great effort to implement it in several countries. Still the sustainability of the program is threatened due to lack of financial resources. During the year 2000, Colombian higher education institutions received around 30 Brazilian students, professors and researchers. In the year 2001, by contrast, only 3 students from Mexico and Brazil participated in this program.

iv. Promotion and Exportation of Colombian Higher Education

Along with the initiatives generated by the Government, RCI has worked permanently on how to work closely and in cooperation with other institutions and organizations of the region, particularly with Central America, the Caribbean and the Andean Region. This work has had the support and the cooperation of different Governmental organizations along with the Chamber of Commerce, which has identified Bogotá as the pilot project in order to gain some experience and then extend it to the rest of the country.

Although the network has gained nationwide recognition, significant barriers exist. The difficult situation that the country is going through does not permit a sustained exchange program. The image of Colombia abroad and the economic recession have a dramatic impact on international collaboration and consequently on higher education institutions. Other barriers to international collaboration include the existence of restrictive emigration politics, inflexible legal norms, rigid curricula and lack of financial support.

- Foreign Networks: COLUMBUS and ALFA

Some institutions have build links with international programs, such as COLUMBUS, an initiative supported by the European Commission. The program is designed to establish links between European and Latin American higher education institutions. The stated objective of the program is to promote “the clustering of universities around specific themes with the aim of promoting institutional development and multilateral cooperation” (COLUMBUS, 2002). It has 10 Colombian member institutions: Universidad del Norte, Colegio Mayor de Nuestra Señora del Rosario, Escuela de Ingeniería de Antioquia, Universidad de Antioquia, Universidad Católica de Colombia, Universidad de la Salle, Universidad Externado de Colombia, Universidad Nacional de Colombia, Universidad Pedagógica Nacional, Pontificia Universidad Javeriana. So far the program has facilitated evaluation projects and seminars in Colombia, yet there are none currently in process.

ALFA is a European Commission initiative, which includes two sub-programmes, one on joint projects in institutional management and a second seeking to support scientific and

14 AUALCPI is a collaborative network with 27 universities from Argentina, Brazil, Chile, Colombia, El Salvador, Guatemala, México, Nicaragua, Paraguay, Perú, Uruguay and Venezuela.
technical training. The objectives include the strengthening of links between the academic communities of Europe and Latin America, and the creation of sustainable mechanisms of cooperation and mobility between the two continents. ALFA tries to maintain a geographic balance of participation, allowing for less developed institutions to be eligible. Colombia is currently participating with 5 institutions.

It is difficult to assess the degree to which networking schemes have been successful. Yet, the level of co-authored articles as seen in Figure 1: can be used as a proxy for the level of international integration in the higher education sector.\(^\text{[15]}\)

In the period 1986-1988, Colombia shared 55.7% of its joint publications with the United States, a figure that has subsequently been reduced to 44% in 1995-1997 in spite of recent internationalization efforts. At the same time, its collaboration with Spain rose from 1.1% to 11.2%, with France from 6% to 9.4%. It should be better stated.\(^\text{[16]}\)

**Figure 1: Colombia Co-authorship Patterns**


\(^{15}\) Still, the level of collaboration is influenced by numerous factors. Accordingly, a recent RAND study (2000) stressed the following issues: geographic proximity, historical relationships, common language, common scientific problems (as a natural disasters) and economic factors, that may provide more funding to certain scientific fields.

\(^{16}\) While sharing its internationally coauthored articles with around 30 countries (1995-1997) this figure is still small considering that the highest, the United States, shares more than 1% of its coauthored papers with at least 160 countries, and China (the 75 percentile) shares it with around 70 countries. (RAND 2000).
A great potential for Latin American cooperation exists due to shared language, common historical background and geographical proximity. Accordingly, patterns of collaboration have been strengthened over the last decades (see Annex IV). Yet, compared to the European Union, the level of Colombia-Latin American joint publications continuously lag behind. Still, the increase in regional co-publications is a promising sign, which suggests that past networking efforts may have had some impact. This in turn makes a case for strengthening regional networks even further and possibly aim at establishing a regional research area along the lines of ERA (see above).

9. CONCLUSIONS

Globalization has posed serious challenges to the higher education sector in Colombia. Hence, internationalization efforts, which go beyond the current scope of activities, are warranted.

First of all, the government needs to move beyond the level of declarations, and translate its commitment into a coherent and targeted policy program. The commitment should stem not only from the government, but also from higher education institutions and the academia itself. The current Governments participation, related to legislation, regulations and funding, could be transformed into an integrating and facilitating role, based on close consultation with higher education institutions.

The Governments must establish adequate foreign policy, immigration, and labor movement regulations in order to respond to the new challenges imposed on Colombian higher education institutions. It should eliminate the barriers that obstruct the internationalization process, if it is committed to offer a modern education. The term internationalization should be adopted in the agenda of higher education for future years given the implications it has for Colombia’s ability to compete in an open global market.

Further, it is necessary to regularly collect and analyze data about internalization, in order to monitor this activity and provide information to strengthen this process. Governmental organisms like ICFES, along with private associations like ASCUN, should keep track of the advancements and trends and collectively provide strategic directions for the higher education system.

Higher education institutions should define an international policy and subsequently international strategies to direct its development and its implementation. For example the

---

17 When referring to Latin America, this section just considers Brazil, Argentina, Mexico, Chile and Venezuela due data availability.
18 This averages includes the co-authorship percentages of 14 out of the 15 countries. The percentages widely differ, when United Kingdom, France, and Germany present a two digit number, countries as Portugal have a less than 1 percentage number.
international dimension could be added to all existing programs allowing the institution to graduate professionals with global competencies, with language and information skills and with a better understanding of the cultural differences.

With regard to the specific policy instruments at hand, a special case is made for strengthening current networking efforts. Hence, the setting up of networks has proven to be a less costly alternative than student exchange programs, which have proven extremely costly. Thus, inspired by a recent surge in the level of joint publications and the experience of other regions, EU is a case in point, it is suggested to continue along these lines. Even though the Latin American region does not benefit from a institutional set up similar to that of the European Union, a common historical background and a similar economic situation, where no country can develop multiple world class research centers in isolation makes a strong case for integration. In consequence, it is hoped that a successful integration scheme could lift the quality of higher education throughout the region, which in turn would make it more attractive for Colombians to study and work in Colombia, rather than in Europe or the US.

Student exchange programs, on the other hand are not only costly, but it should also be pointed out that these programs fuel the current level of brain drain to some extent. Thus, a review of the program design is recommended, keeping in mind that the objective is to develop human capital for the country’s teaching, research and innovation activities. This comprehensive effort requires financial support to guarantee sustainability over time. Nevertheless it is of fundamental importance to provide sustained political and financial support to academic mobility programs which continues to be at the core of the internationalization process. Efforts should be made from the public and the private sector to provide grants per participant. This would reduce the financial burden that higher education institutions, students and families have to bear, reducing the opportunities of those who wish to be part of these kinds of programs.

Finally, further support should be channeled towards programs designed to internationalize curriculum. The results of Cátedra de Negocios Internacionales project have yet to emerge, but it remains without doubt that such efforts give students both the cognitive skills and the intercultural understanding necessary to perform in the current economy.
References

Aponte, Claudia, Bernal, Dora, Cruz de Medina, Victoria, Hoyos, Oscar Alberto, Rodriguez, Carlos Eduardo, Rodríguez, Martha Lucía. "Guía para la Internacionalización de las Instituciones de Educación Superior de Colombia". ICFES. 2002


COLFUTURO organization, 2002 [April 18, 2002]
Available on Internet: http://www.COLFUTURO.com

COLUMBUS organization, 2002 [April 18, 2002]


CORDIS News. “Explaining that FP6 is different to FP5 is not easy, says director in DG Research”. Interview with Peter Kind. 2002.

Available on internet:
http://www.elpais.es/temas/inmigracion/menub/b100/a3.html

Diario Tierramerica / Inter Press Service. “Colombia: Viajeros sin retorno”. Por María Isabel García, 01/14/2001.


Knight, Jane. “Internationalization of Higher Education”. OECD.1999

Knight, Jane, de Wit, Hans. "Internationalization of Higher Education in Asia Pacific Countries. EAIE. 1997.


Pacheco, Iván. "Nuevo Compendio de Normas sobre la Educación Superior". ICFES. 2001


Annex I: The Knowledge Spiral

Nonaka et al. (1998) offer a view on how the transfer of knowledge is done based on human interaction. They divide knowledge in two categories: tacit and explicit. These are mutually complementary, but only the later can be formally measured. Tacit knowledge is thought of as individual specific knowledge that can be shared through interaction. Nonaka et al, presents four modes of knowledge transmission:

- Socialization: from individual tacit knowledge to group tacit knowledge.
- Externalisation: From tacit knowledge to explicit knowledge.
- Combination: from separate explicit knowledge to systematic explicit knowledge.
- Internalisation: from explicit knowledge to tacit knowledge.

These nodes serve as background for the knowledge spiral, that often starts with socialization where dialogue makes the knowledge be externalised, then, by linking explicit knowledge, one gets into combination. Learning by doing then converts combination into internalisation, where field building converts into socialization. When the process integrates outsiders (e.g. researchers, foreign employees, etc.), it is assumed that the organization (e.g. research centre, university, firm, etc.), can integrate their external knowledge in combination and thus, get a enrich spiral.

Source: Langberg and Ebbe K. Graversen. Mobility among researchers. Analyseinstitut for Forskning. Figure 1. Nonaka et al’s knowledge spiral [Citing Nonaka et al (1998) own drawing].
## Annex II: Brain Drain

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>México</td>
<td>2,700,000</td>
<td>351,000</td>
<td>13%</td>
<td>Jamaica</td>
<td>77%</td>
</tr>
<tr>
<td>Philippines</td>
<td>730,000</td>
<td>+50%</td>
<td>Guyana</td>
<td>70%</td>
<td></td>
</tr>
<tr>
<td>China</td>
<td>400,000</td>
<td>200,000</td>
<td>50%</td>
<td>Ghana</td>
<td>26%</td>
</tr>
<tr>
<td>India</td>
<td>300,000+</td>
<td>225,000+</td>
<td>75%</td>
<td>Iran</td>
<td>25%*</td>
</tr>
<tr>
<td>Korea</td>
<td>300,000+</td>
<td>159,000+</td>
<td>53%</td>
<td>Philippines</td>
<td>10%*</td>
</tr>
<tr>
<td>Africa</td>
<td>128,000</td>
<td>95,000</td>
<td>75%</td>
<td>Korea</td>
<td>15%*</td>
</tr>
<tr>
<td>Jamaica</td>
<td>42%</td>
<td>Pakistan</td>
<td>7%*</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Trinidad/Tobago</td>
<td>46%</td>
<td>Egypt</td>
<td>7%*</td>
<td></td>
<td></td>
</tr>
<tr>
<td>South America</td>
<td>Roughly 50%</td>
<td>India</td>
<td>2.7%*</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

(*Includes only immigrants to OECD countries; actual total are likely higher)  
Source: Carrington and Detragiache (1999)
Annex III: Indonesia: the University Research for Graduate Education Project

In 1994 the Indonesian government initiated the University Research for Graduate Education Project (URGE), to give greater financial autonomy to public institutions, while making the allocation of resources more efficient and improving the quality of graduate education in the system. The URGE project, assisted by the World Bank from 1994 to 2001, addressed the issue in a comprehensive manner. It aimed at raising the higher education system to world participation standards. The particular objectives established were to (a) increase competitive funding for domestic graduate education and university research activities, (b) to strengthen the procedures for selecting grant and fellowship proposals, (c) to integrate university research with graduate training, (d) to strengthen research capacity and dissemination of research findings in universities and (e) attract highly qualified candidates for domestic graduate education.

URGE contemplated increasing the institutional capacity of the University Research Council (URC) and assisting it in the implementation of new procedures for allocation of grants and fellowships. The URC adopted a new paradigm that stressed the objectives of equity, relevance and quality of projects founded, while promoting the autonomy of institutions.

A second component was making resources available through grants and fellowships in a competitive manner, addressing different needs of the system, from the formation of graduates to the growth of the national research network. Competition was used to raise research levels.

Grants were awarded to research centers on the basis of accomplishments. Funds were also awarded to Research Teams that integrated both students and faculty in research activities and young academics. Among the merits of the program, it should be highlighted that the share of female participation in research activities increased significantly.

In order to increase the pool of graduates, researchers and academics, two additional grant programs were designed: (i) The Merit Fellowship program designed to attract highly qualified and capable students into domestic graduate programs; (ii) the pre-graduate program to give individuals the opportunity to participate in top-level universities graduate programs. After completion they returned to their home institutions to disseminate their acquired knowledge. One of the grant requirements that helped retain researchers was that the topic had to be relevant to Indonesia. Accordingly, the best available resources were to be found within Indonesia, in terms of fellow researchers working on the same issue or libraries and information.

The domestic collaborative research grant helped to establish links between senior researchers with wide expertise and grantees. The grantee would visit a Research Center or University benefiting from the equipment and the interaction with a large and active team.

Finally, URGE exposed scholars to international environments through the provision of means to travel abroad, international seminars and conferences.

This program proved successful not just in retaining and motivating researchers, but it also helped to establish a new paradigm in competitive research allocation and provided more autonomy to institutions. Furthermore, the connections and collaborative pattern introduced through the URGE program have consolidated and continue to be in practice in the Indonesian research system.

Annex IV: Patterns of Academic Collaboration

Figure 1: Patterns of Co-authorship, USA, Latin America and Europa

ARG=Argentina, AUS=Australia, BRA=Brazil, CAN=Canada, CHL=Chile, COL=Colombia, CUB=Cuba, FRA=France, GER=Germany, ITA=Italy, JPN=Japan, MEX=Mexico, ESP=Spain, GBR=United Kingdom, USA=United States, VEN=Venezuela.

Figure 2: Patterns of Co-authorship between Proficient, Developing, and Lagging Countries.

(ARG=Argentina, BRA=Brazil, CHL=Chile, COL=Colombia, CUB=Cuba, Mex=Mexico, ESP=Spain, PRT=Portugal, VEN=Venezuela.
Source: NSF Science & Engineering Indicators 2000.)
LCSHD Paper Series

No. 1  Van der Gaag & Winkler, Children of the Poor in Latin America and the Caribbean
No. 2  Schneidman, Targeting At-Risk Youth: Rationales, Approaches to Service Delivery and Monitoring and Evaluation Issues
No. 3  Harrell, Evaluación de los Programas para Niños y Jovenes Vulnerables
No. 4  Potashnik, Computers in the Schools: Chile’s Learning Network
No. 5  Barker & Fontes, Review and Analysis of International Experience with Programs Targeted on At-Risk Youth
No. 6  Lewis, Measuring Public Hospital Costs: Empirical Evidence from the Dominican Republic
No. 7  Edwards, Bruce, & Parandekar, Primary Education Efficiency in Honduras: What Remains to be Done?
No. 8  Winkler, Descentralización de la Educación: Participación en el Manejo de las Escuelas al Nivel Local
No. 9  Meza, Descentralización Educativa, Organización y Manejo de las Escuelas al Nivel Local: El Caso de El Salvador
No. 10 Espinola, Descentralización Educativa, Organización y Manejo de las Escuelas al Nivel Local: El Caso de Chile
No. 11 Guedes, Lobo, Walker, & Amaral, Gestión Descentralizada de la Educación en el Estado de Minas Gerais, Brasil
No. 13 Bedi & Edwards, The Impact of School Quality on the Level and Distribution of Earnings: Evidence from Honduras
No. 14 Duthilleul, Do Parents Matter? The Role of Parental Practices on Fourth Graders’ Reading Comprehension Achievement in Montevideo Public Schools
No. 15 Villegas-Reimers, The Preparation of Teachers in Latin America: Challenges and Trends
No. 16 Edwards & Liang, Mexico’s Preschools: Coverage, Equity and Impact
No. 17 Soares, The Financing of Education in Brazil: With Special Reference to the North, Northeast and Center-West Regions
No. 18 Salmi, Equity and Quality in Private Education: The Haitian Paradox
No. 19 Waiser, Early Childhood Care and Development Programs in Latin America: How much do they cost?
No. 20 Tulic, Algunas Factores del Rendimiento: Las Expectativas y el Género
No. 21 Delannoy, Reformas en Gestión Educacional en los 90s
No. 22 Barro, The Prospects for Developing Internationally Comparable Education Finance Statistics for Latin American Countries: A Preliminary Assessment
No. 23 El-Khawas, DePietro-Jurand, & Holm-Nielsen, Quality Assurance in Higher Education: Recent Progress; Challenges Ahead
No. 25 Rojas & Esquivel, Los Sistemas de Medición del Logro Académico en Latinoamérica
No. 26 Martinic, Tiempo y Aprendizaje
No. 27  Crawford & Holm-Nielsen, Brazilian Higher Education: Characteristic and Challenges
No. 28  Schwartzman, Higher Education in Brazil: The Stakeholders
No. 29  Johnstone, Institutional Differentiation and the Accommodation of Enrollment Expansion in Brazil
No. 30  Hauptman, Accommodating the Growing Demand for Higher Education in Brazil: A Role for the Federal Universities?
No. 31  El-Khawas, Developing Internal Support for Quality and Relevance
No. 32  Thélot, The Organization of Studies in the French University System
No. 33  Thompson, Trends in Governance and Management of Higher Education
No. 34  Wagner, From Higher to Tertiary Education: Evolving Responses in OECD Countries to Large Volume Participation
No. 35  Salmi & Alcalá, Opciones para Reformar el Financiamiento de la Enseñanza Superior
No. 36  Piñeros & Rodríguez, School Inputs in Secondary Education and their Effects on Academic Achievement: A Study in Colombia
No. 37  Meresman, The Ten Who Go To School
No. 38  Vegas, Pritchett, & Experton, Attracting and Retaining Qualified Teachers in Argentina: Impact of the Level and Structure of Compensation
No. 39  Myers & de San Jorge, Childcare and Early Education Services in Low-Income Communities of Mexico City: Patterns of Use, Availability and Choice
No. 40  Arcia & Belli, Rebuilding the Social Contract: School Autonomy in Nicaragua
No. 41  Plomp & Brummelhuis, Technology in Teacher Education: The Case of the Netherlands
No. 42  Winter, Secondary Education in El Salvador: Education Reform in Progress
No. 43  Wu, Maiguashca, and Maiguashca, The Financing of Higher Education in Ecuador
No. 44  Salmi, Student Loans in an International Perspective: The World Bank Experience
No. 45  Ravela & Cardoso, Factores de Eficacia de la Escuela Primaria en Contextos Sociales Desfavorecidos: La experiencia de Uruguay
No. 46  Experton, Desafíos para la Nueva Etapa de la Reforma Educativa en Argentina
No. 47  Fiszbein, Institutions, Service Delivery and Social Exclusion: A Case Study of the Education Sector in Buenos Aires
No. 48  Gasperini, The Cuban Education System: Lessons and Dilemmas
No. 49  Liang, Teacher Pay in 12 Latin American Countries
No. 50  Brunner & Martínez, Evaluación Preliminar y Metodología para la Evaluación de Impacto del FOMEC en Argentina
No. 51  Koshimura & Tsang, Financing Strategies for Equalization in Basic Education
No. 52  Koshimura, High Standards for All Students: Excellence or Equity?
No. 53  Goldschmidt & Wu, Determinants of Achievement in Peru
No. 54  Cohen, Public Policies in the Pharmaceutical Sector: A Case Study of Brazil
No. 55  Vakis & Lindert, Poverty in Indigenous Populations in Panama: A Study Using LSMS Data
No. 56  Salmi, Violence, Democracy and Education: An Analytical Framework
No. 57  Cotlear, Peru: Reforming Health Care for the Poor
No. 58  Newmann, Chile: Rol del Estado: Políticas e Instrumentos de Acción Pública en Educación Superior
No. 59  Winkler & Gershberg, Education Decentralization in Latin America: The Effects on the Quality of Schooling
No. 60  Eichler, Financing Health Care for the Elderly in Competitive Health Plan Markets: Experiences from the United States and the Netherlands and Proposals for Reform
No. 61  Mintz, Managing Acute, Chronic, and Catastrophic Health Care Costs: Experience and Policy Issues in the Context of US Managed Care and Comparative Analysis of the Chilean Regulatory Framework
No. 62  Salmi, Tertiary Education in the Twenty-First Century: Challenges and Opportunities
No. 63  Lopez-Acevedo & Salinas, Teacher Salaries and Professional Profile in Mexico
No. 64  Lopez-Acevedo, Professional Development and Incentives for Teacher Performance in Schools in Mexico
No. 65  Londoño, Jaramillo, Uribe, Descentralización y reforma en los servicios de salud: El caso colombiano
No. 66  Bovbjerg, Covering Catastrophic Health Care and Containing Costs: Preliminary Lessons for Policy from the U.S. Experience
No. 67  Alvarez & Majmudar, Teachers in Latin America: Who is preparing our children for the knowledge century?
No. 68  Reyes, Colombia: Decentralized Education Management
No. 69  Maria Jose Lemaitre & Daniela Torre, Chile: Manual para el Desarrollo de Procesos de Autoevaluación
No. 70  Juan Carlos del Bello, Desafíos De La Política De Educación Superior En América Latina. Reflexiones A Partir Del Caso Argentino Con Énfasis Sobre La Evaluación Para El Mejoramiento De La Calidad
No. 71  Jose Joaquin Brunner, Colombian Higher Education in the Context of Reform in Latin America
No. 72  Robin DePietro-Jurand & Maria Jose Lemaitre, Quality Assurance in Colombia
No. 73  Natalia Agapitova, Goga Vukmirovic, and Lauritz B. Holm-Nielsen, Science and Technology in Colombia: Status and Perspectives
No. 74  Isabel Cristina Jaramillo, Patricia García Zañiga & Andreas Blom, Colombian Higher Education in the Global Market