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**TRENDS AND INNOVATIONS IN HIGHER EDUCATION REFORM:  
Worldwide, Latin America and in the Caribbean**

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**ABSTRACT**

Universities in Latin America and in the Caribbean (LAC), and throughout the world, are facing one of the most challenging eras in their history. Globalization presents many important opportunities for higher education, but also poses serious problems and raises questions about how best to serve the common good. The traditional values of universities are still valid (autonomy, academic freedom, research, students' work, assessment), but they should be viewed within the context of new global norms. Until the decade of the 80s, public HE with institutional and academic autonomy, had predominance in the region over the private education. At the end of the 80s and beginnings of the 90s, globalization meant neoliberal strategies. This implied replacing the typical policies of the "Welfare State", for others of reducing funds to public services and privatization of them. These market strategies had an impact in the increasing privatization of HE and in the deterioration of public universities, due to the lack of appropriate financing among other factors. In spite of this, during the 90s HE grew a great deal. HE reforms in LAC in the last two decades, have been oriented towards the satisfaction of an increasing demand according to World Bank policies and in much lesser degree to the policies recommended by UNESCO in the WCHE (1998). Because of it, these transformations are mainly counter-reforms and not the needed reform of the national public university. This essay provides an outline of the major challenges facing universities throughout the world. This then give context to a discussion on current policy reforms and the future of higher education in Latin and Caribbean nations where enrollment and program growth is robust. This includes: cooperation in networks as an alternative to competition; open content and open knowledge versus privatization and marketing visions of new providers of for-profit higher education; new participative instruments of management, evaluation and accreditation; research aimed at global and local needs simultaneously; a sustainable development vision in order to achieve the millennium goals should be incorporated to curriculum as well as studies on multiculturalism and diversity.

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Universities in Latin America and in the Caribbean (LAC), and throughout the world, are facing one of the most challenging eras in their history. Globalization presents many important opportunities for higher education, but also serious problems and questions about how best to serve the common good. The traditional values of universities are still valid (autonomy, academic freedom, research, students' work, assessment), but they should be viewed within the context of new global norms.

Globalization is an irreversible phenomenon. What should concern us is the type of globalization that will prevail. Should we simply accept some of the most negative and more visible aspects of globalization, or should we seriously devote ourselves to the construction of a global society that broadly and equitably services human and social development?

Peter Drucker said a decade ago that in 20 years the university would emerge as a very different institution, and even talked about its possible disappearance. Nevertheless, in spite of great changes in higher education, there is continuity in the history of universities worldwide. According to an analysis by Philip Altbach, the University of 2050 will essentially resemble the university of today—but with significant change.

The objective of this analyses is to promote through innovation the necessary transformations of the main trends in higher education (HE),<sup>1</sup> including its quantitative expansion in enrollment and programs; increasing privatization; a significant institutional diversification; growing restrictions on public funding; and issues related to brain drain. Particularly in developing countries, there are pressing problems.<sup>2</sup>

The following essay provides an outline of what I view as the major challenges facing universities throughout the world, and with a particular focus on the future of higher education in Latin and Caribbean nations where enrollment and program growth is robust.

### **A. HIGHER EDUCATION AND GLOBALIZATION**

In "Creating Innovative Universities. Organizational strategies for transformation" (2000), Burton R. Clark defined innovative universities through a series of cases studies in Europe, including the University of Warwick, England; Strathclyde, Scotland; Twente, the Netherlands; Chalmers, Sweden; Joensuu, Finland. Each began as traditional institutions that have become modern institutions with significant scientific and technological research and an innovative attitude and practice. The essence of transformation techniques, according to Clark, is given by five common elements: a strengthened central direction; an extended development periphery, which goes beyond university limits to join external groups and organizations; the diversification of the sources of financing; making the faculty and the departments dynamic innovative units and building an innovative working culture that adopts and promotes change.

But from my view, for-profit institutions are, in many ways, the most avid followers of Clark's entrepreneurial vision, often seeking markets and programs that are narrow in focus and that will not lead to important societal advances or creates such sustainable economic development.

Universities need to lead a reform movement that is premised on a broad social mandate, that provides more relevant and innovative curriculums, and that creates teaching-learning communities. The university community is the one who must lead change and innovation from within our institutions, because we are the only ones who know them in depth.<sup>3</sup> For this, broad world information on the university is required, knowledge of the best experiences of university transformation, a solid institutional project, flexible normative provisions and a determined political will for change. With these prerequisites, reforms would not be spasmodic and unfinished episodes, for the university would permanently reform itself.

In the last decade there have been positive and negative innovations. Among the positive innovations we can point out: the strengthening and creation of international cooperation networks; the increase in programs of academic mobility of faculty and students; new methods for management, assessment, accreditation and financing, including the quest for efficiency and profitability -- always subordinate to the essential missions of the university and its social commitment; decentralization in mega-universities; the diversification of courses, programs and graduate studies; the emphasis on interdisciplinary projects; the link to society and the world of labor; a greatest commitment of university towards society; or the growing prospective capacity and the capacity for reform and innovation.

Among negative innovations: considering education as something to be bought at the market and not as a right of citizens; the emergence of counter-reforms aiming at broad changes, at imposing the idea that the university must be, first of all, a profitable enterprise, with the state abdicating its social commitment and with some universities changing from a social institution to an organization or enterprise; the progressive elimination of gratuity in HE and the gradual imposition of levies on public universities, and, in some cases, the mercantile trans-nationalization of higher education.

The goal of innovation is positive change, to make higher education better from an ethical perspective based in equity in access and sustainable development. In this sense innovation means: cooperation in networks as an alternative to competition; open content and open knowledge versus privatization and marketing visions of new providers of for-profit higher education; new participative instruments of management, evaluation and accreditation; research aimed at global and local needs simultaneously; a sustainable development vision in order to achieve the millennium goals should be incorporated to curriculum as well as studies on multiculturalism and diversity.

All the innovative trends that we will describe below should be analyzed in the context of the current global economic and financial crisis, which is also a food, energy and sustainable development crisis.

Nobody knows when the crisis will end and experts are pessimistic considering a possible fast recovery and end of the crisis. This period of crisis -unprecedented since World War II- will affect in a negative way higher education and universities, mainly in less developed countries, reducing sources of financing and generating setbacks in its development. This will force us to be innovative in order to fulfill the mission of Latin American universities and keep research and teaching in the state of the art in order to foster innovation.

Possible negative implications for higher education of this crisis could be the following:

- National as well as research universities will see important constraints on their budgets that will reduce access and

quality.

- Student loan programs may have severe constraints, mainly in less developed countries
- The cost of tuition will increase in public and private universities, restricting access and leading to student protest movements.
- There will be “freezes” on hiring full time professors and even part-time, in construction of new facilities, development of information technology, purchasing books and journals, and in other sensitive areas.

The Organization for Economic Cooperation and Development (OECD) has just published a monograph studying the demography of education. Under the title “Higher Education to 2030”, summarizes the following trends (OECD, 2008, pp. 13-14).

In regards to students:

- Student participation will continue to expand. Contraction will affect only a small number of countries;
- Women will be in the majority in the student population;
- The mix of the student population will be more varied, with greater numbers of international students, older students and those studying part-time, etc;
- The social base in higher education will probably continue to broaden, along with uncertainty about how this will affect inequalities of educational opportunity between social groups.
- Novel students and assumptions regarding access to higher education will emerge and be more concerned with real student attainment, reflecting trends in access policies for students with disabilities;
- Changes will occur in issues and policies relating to access and the fight to reduce inequality.

As regards to teachers:

- The academic profession will be more internationally oriented and mobile, but still structured in accordance with national circumstances;
- The activities of the profession will be more diversified and specialized, and subject to varied employment contracts;
- The profession will be more gradually away from the traditional conception of a self-regulated community of professionals, and towards a model of consensus to be based on fresh principles.

## **B. GLOBAL TRENDS, CONTRIBUTIONS AND CHALLENGES**

**The following briefly outlines a number of major global trends useful in understanding the future of higher education in LAC's.**

1. Massification: enrolment at world level jumped from 13<sup>th</sup> millions in 1960 to 137 millions in 2005 and to 144 millions in 2006 according to last available Statistics. In developing countries, the total number of tertiary students rose from 47 millions in 1999 to 85 million in 2006. (UNESCO, 2007, p. 132, UNESCO, 2008, p. 106, UNESCO, 2009, pp. 89-90)
2. The exponential growth of the knowledge: in the year 2005, for example, US corporations spent 15 billion dollars in training personnel.
3. The emergence of the communication technologies has created a digital divide. Exclusion from it means segregation from the state of the art of the so-called society of knowledge. In 2005, 11 % of the world population had access to Internet. In 2008, it is about 15 %. The 90 % of the connected persons live in the developed countries: 30 % in North America, 30 % in Europe and 30 % in Asia - Pacific Ocean. This gap is especially a problem of access to the infrastructures. Let us not forget that 2.000 million persons - nearly one-third part of the humanity - do not have access to the electricity. There is a narrow correlation between Internet and the indicator of Human Development (IDH) of the PNUD<sup>4</sup>.
4. The increase of the academic international mobility favors the students of the developed countries and of certain Asian countries and tends to increase the "brain drain".
5. Privatization of HE increases intensively in North America, Latin America and the Caribbean, in Asia and in East Europe and Russia. Only in Western Europe and Africa Public HE is almost entirely financed by the State.
6. The crisis of the academic profession is a fact in the less developed countries (LDC), but also affects the teachers of the developed world. The advices of the WB to the teachers (be also a consultant) to complement your salary (Makerere),

have had devastating effects for teaching and research as well as to educational development in LDC and in some occasions has driven to practices of academic corruption.

7. The inequity in the access for motives of various kind (gender, ethnic, religious, social class), continues depriving many people with sufficient merits to do university studies. Tertiary GERs range from 70% in North America and Western Europe to 32% in Latin America, 22% in the Arab States and 5% in Sub-Saharan Africa. In 2005, Ivy League private universities in USA, such as Princeton, Yale and Harvard, spent US\$100,000 or more for student. The equivalent figure for a student at Dar-es-Salam University was US\$3,239. In spite of important affirmative actions policies developed by the Lula's Government, the university participation rate for black Brazilians aged 19-24 is 6%, compared with 19% for white Brazilians. From five quintiles, 74 % of the students in Brazilian universities belong to the highest quintile and only 4 % to the lowest quintile. (UNESCO, 2009, pp. 89-90)

8. The impulse towards the development of the procedures of management, evaluation, accountability and accreditation, often have had a positive character. Nevertheless, in more than one occasion, bureaucratic and formal aspects have characterized them, and in others, these procedures are used as pretext to accelerate processes of privatization or of reduction of state funds.

9. There is a lack of updating and flexibility in the curriculum offered in the various curricula of HEI as well as in post-graduate courses, with the exception of a minority of national public research universities and a few private.

10. Private Higher Education Institutions include higher quality institutions (Harvard, ITAM, and Catholic universities) and low quality institutions (garage universities) simultaneously. The low-quality ones are also named of "absorption of demand", since their students are all those that do not have the requirements to accede either to the costly private universities of the elite or to the public ones.

11. Another new phenomenon is the emergency of "pseudo-universities", institutions that do not fit with the traditional definition of the university, but offer, "training specialized in a variety of areas ". The majority of them are entities "for profit", essentially worried for earnings, not for values or the quality of the teaching and research. We have as an example, of these new providers for profit, Phoenix's University that belongs to the Apollo Group.

12. One of the negative consequences of the economic globalization and of the privatizing trends in HE to which we have referred in the point 5, is the offer of the WTO to include it as a service subject to the regulations of the GATS. Though this offer is in a discussion stage, the countries - USA, New Zealand, Australia, and Japan - that obtain important earnings for concept of foreign students defend strongly this initiative.

13. There exists a trend according to which higher education institutions (HEI) of LDC request accreditation from agencies of foreign countries, especially of USA, without noticing that these agencies do not know the values and needs of autochthonous development. It can be positive to invite not national experts to join to the national teams of accreditation, but providing that these processes have a focus from values, procedures and autochthonous needs.

14. Rankings are increasingly fashionable<sup>5</sup>.

15. There is a growing debate concerning rankings and World-Class Universities or Research Universities.<sup>6</sup>

16. The processes of evaluation and accreditation offer to us major information about the HEI. The assault to the conception of HE as a public good; the emergence of the TIC, the role of new providers "for profit" of HE, and the deterioration of the working (wages and other aspects) conditions of the academic profession, among other factors, have led to a debate on what many people consider an increasing phenomenon of academic corruption. To obtain qualifications, university titles, academic positions or certifications of accreditation, by means of such irregular procedures like: payment of bribes, sale of titles, selling an academic position to a candidate instead of granting it according to merit, giving proper accreditation to credit to an HEI or program without the proper requirements in exchange for paying certain quantity.

17. HEI's are shaped by Nation-State policies, as well as by the global trends of the capitalist system. These influences on the University are much more powerful than the changes and transformations that the HEI can produce inside them and in the society where they take root. Maybe for this, a certain frustration takes place on having seen that UNESCO policies (World Conference of HE, 1998 and later Meetings of Follow-Up) are having a low impact on HE worldwide.

This leads us to ask ourselves. Is a deep transformation of the University possible without a previous transformation in the society (Nation-State) and even worldwide?

### C. MAIN TRENDS OF HIGHER EDUCATION IN LATIN AMERICA AND THE CARIBBEAN

Until the decade of the 80s, public HE with institutional and academic autonomy, had predominance in the region over the private education. At the end of the 80s and beginnings of the 90s, globalization meant neoliberal strategies. This implied replacing the typical policies of the "Welfare State", for others of reducing funds to public services and privatization of them. These market strategies had an impact in the increasing privatization of HE and in the deterioration of public universities, due to the lack of appropriate financing among other factors. In spite of this, during the 90s HE grew a great deal.

HE reforms in LAC in the last two decades, have been oriented towards the satisfaction of an increasing demand according to World Bank policies and in much lesser degree to the policies recommended by UNESCO in the WCHE (1998). Because of it, these transformations are mainly counter-reforms and not the needed reform of the national public university. <sup>7</sup>

The low index of innovation in LAC can be seeing in Annexes 1-3. Annex 1 shows the lack of opportunities to apply what has been learned in a creative way. The academic production of LAC is a great deal lower in comparison with Asia, East Europe and Western Europe (Annex 2). Annex 3 shows that the scientific production of LAC is only 3% of the world total and patents are only 0,1%.

The following outlines prevailing trends in higher education in LAC between 1990 and 2009:

1. HEI's increased from 5.438 in 1995 (53,7 % private) to 7.514 in 2002 (69,2 % private). Universities grew in number from 812 in 1995 (60,7 % private) to 1.213 in 2002 (69,2 % private). (Garcia Guadilla, 2006, p.261)

2. The matriculation in the HEI increased from 7.405.257 students in 1995 (38, 1 % in private HEI) to 12.186.260 in 2002 (47,5 % private). In the universities in strict sense the matriculation increased from 5.070.731 in 1995 (30,4 % private) to 8.316.649 (40,1 private). According to the last figures available, total enrolment in LAC was of 16,247,000. Of this, 54 % are women. (UNESCO, 2008, p. 114)

3. In 2003, the average of matriculation of HE in private institutions was 50 %, being greater in countries such as: Brazil and Chile: 70 %; Colombia: 60 %; Central America: about 60 %. For Mexico, it is of the order of 40 %, for Argentina of 20 %, for Uruguay of 10 % and for Cuba of 0 %. (IESALC/UNESCO, 2006; Fernandez Lamarra, 2008).

4. There are *mega systems* of HE with more than two million students (Brazil has 4,275,027). *Big systems* with more than 2 millions: Mexico (2,384,858) and Argentina (2,127, 113). *Medium* – between 1 million two thousand hundred and 500,000 students - in the cases of Chile (663,694), Colombia (1,223, 594), Peru (909,315) and Venezuela (1,049,780).

*Small* - between 500,000 and 150,000 students - in countries like Bolivia (346,056), Cuba (471,858), Ecuador (312,769), Guatemala (114,764), and Dominican Republic (293,565). *Very small* - between 500,000 and 150,000- like in the cases of Costa Rica (110,117), El Salvador (122,431) Honduras (122,874) Nicaragua (103,577), Panama (126,242), Paraguay (149,120) and Uruguay (103,431). HE systems in all the Caribbean Non-Spanish, Anglophone, Francophone and so on are also *very small*: Jamaica (45, 770), Trinidad Tobago (16,920), Saint Lucia (2,197) (UNESCO, 2007)

5. The Gross Enrolment Ratios (GER) of matriculation, changes from countries with a rate of 60% or more (Argentina 64%; Cuba, 88%<sup>8</sup>). To countries between 30 and 60%: Barbados 53%; Venezuela, 52%; Dominican Republic, 35%; Peru, 35%; Aruba, 33%; Bolivia, 41%; Uruguay, 46% Panama, 45%; Chile, 47%. The countries among 20 and 30%: Colombia, 32%; Brazil, 25%; Costa Rica, 25%; Mexico, 26%; Paraguay, 26%. The countries below 20%: Anguilla 5%; Belize, 3%; El Salvador, 21%; Guatemala, 9%; Guyana, 12%; Honduras, 17%; Jamaica, 19%; Nicaragua, 18%; Saint Lucia, 10%; Trinidad

#### MAIN FIGURES OF LATIN AMERICAN HIGHER EDUCATION

##### Higher Education Institutions in Latin America:

1950 : 75	1985 : 450
1975 : 330	1995 : 812 (319 públicas, 493 privadas)

Today: more than 2000

##### Students of HE in Latin America

1950 : 267.000	1990 : 7.350.000
1970 : 1.640.000	2000 : 11.500.000
1980 : 4.930.000	2005 : 15.293.181

##### Higher Education Gross Enrolments Ratio (GER)

1950 : 2,0%	1990 : 17,1%
1970 : 6,3%	2000 : 19,0%
1980 : 13,8%	2003 : 28,7% (IESALC)

##### GER in developed countries: between 50 and 88%

Europe : 56/88 % - EE.UU.: 82 %

##### Asia, Africa and Arab States:

Asia: 1% Afganistán/89% South Korea  
Africa: 1% Angola/10% Nigeria  
Arab States: 3% Mauritania/29% Egypt

**Sources:** N. Fernández Lamarra, 2008. UNESCO, Institute of Statistics, 2007. GUNI, 2008. IESALC. F. López Segre, 2007.

and Tobago, 11%. The tendency is to an increase in enrolment, nevertheless in some countries – Saint Lucia, Trinidad and Tobago- you can find a slight diminishing. (UNESCO, 2007, 2008, 2009)

6. The average of GER in LAC grew from 17 % at the beginning of the 90s to around 32 % at present (2008).
7. In LAC, expenditure for student (US\$ 2380) is a great deal lower than in developed countries.
8. Private expenditure finances 50 % of the total enrolment
9. In the pre-graduated courses in public universities, tuition is very low or completely free as a rule - except the case of some countries as Chile-, but in the post-graduated courses (Master, PhD, specialization.) tuition must be paid even in public universities as a rule.
10. The 60% of the total regional enrolment in HE is concentrated in three countries: Brazil, Mexico and Argentina. Public HE in LAC has had great relevance in the support of post-graduated courses and research. Mexico and Brazil have an enrolment of 100,000 students in post-graduate courses. (A.L. Gazzola, 2008)
11. The population of low resources tends to be excluded from the HEI, since they studied at schools of minor quality, which prevents them from approving the examinations of selection. Many of them are going to join the universities of minor quality of the private sector. In Brazil 74 % of the pupils registered in universities belongs to the highest quintile and only 4 % to the lowest one. In Mexico, the proportion is of 58 and 6. In Chile of 65 and 8. In Ecuador of 42 and 6.
12. The model of financing prevailing in HE in LAC is the historical- negotiated one. In the private HEI, prevails the payment of tuition as main source of revenue. Nevertheless, recently new formulas of financing have been introduced (Mexico, Chile, Argentina.) linking results to resources.
13. The governments of some countries (Uruguay) have introduced solidarity funds to give more possibilities to the most economically disadvantaged students, with academic merits.
14. The region has attracted several foreign institutions of HE, with and without spirit of profit. We are witnessing the rapid increase of Foreign Institutions of HE (proceeding from USA, Europe and from other countries of the region) with diverse modalities: distance education (102), units decentralized from headquarters (50), alliances (125) and agreements (816). In many cases they don't have proper quality or violate national regulations, very scarce concerning transnational HE.
15. Internationalization of HE has expressed itself in LAC through intercontinental Programs such as ALFA and COLOMBUS; subregional, such as the Andres Bello Agreement and the Montevideo Group Association of Universities (AUGM), for MERCOSUR; through Iberoamerican networks (RIACES) and regional agencies (IESALC). Also by various programs of different countries and networks of universities from de region and worldwide, giving various sorts of funds and scholarships to LAC professors and students. (Didou, 2005, 133; CINDA, 2007).
16. In 2004 ALC received around 365.000 foreign students of 2,45 millions registered worldwide (1,5 %), which indicates that the countries of the region do not constitute attractive destinations for the international students. Information that ratifies this fact is that none of the Latin-American countries appears nowadays in the list of twenty-three destinations that attract major number of foreign students.
17. In 14 countries 31 institutions grant educational credits for an amount of US\$ 400 millions. The Federal Caixa Económica of Brazil covers 50 % of this amount and the ICETEX of Colombia and FUNDAYACUCHO of Venezuela have similar programs. In addition, Cuba grants thousands of scholarships to students of the region and finances a Latin-American School of Medicine.
18. Privatization of HE in LAC led to diversification of HEI and in many cases to lack of quality. In order to solve this problem, since the decade of 90s, almost all the countries of the region created organizations of accreditation. The National Commission for the Evaluation of HE and the Council for the Accreditation of HE (Mexico). The HE Council (Chile). The National Council of Accreditation (Colombia). The National Commission of Evaluation and University Accreditation (Argentina). The Central American System of Evaluation and Accreditation of HE (Central America). The CAPES in Brazil. The Experimental Mechanism of Accreditation of Careers for the Recognition of Titles of University Degree (MEXA/MERCOSUR). (Dias Sobrinho, 2006)

19. There is a trend to arrange in juridical terms the systems of HE with a general law of education, regulating all the levels of education and a specific law for HE systems. Nevertheless very few countries (Chile) have a specific law regulating quality assurance and accreditation.

20. Of special interest is the Project 6x4 that Columbus has been preparing in the CENEVAL (Mexico). A pilot project bearing in mind Bologna's European experience, with the aim building a Latin-American common space of HE. (Dias Sobrinho, 2006, p. 219)

21. The University of the Antilles (UWI), also named West Indian University, is the principal institution of HE in the Anglophone Caribbean. It has campus in three countries: Jamaica, where the major one is located, Trinidad and Tobago and Barbados. It receives approximately 19.600 students of 17 countries of the zone. If the inscriptions concerning distance HE are considered, the total matriculation amounts 23.200 students. The rate of enrolment (GER) differs from country to country: 19% in Jamaica and 12 %, in Trinidad and Tobago. According to Martin Trow's definition, in the Anglophone Caribbean HE in some countries like Jamaica is "mass" HE, whereas in others, as Trinidad and Tobago, is "elitist", but in none of the countries is universal with the exception of the British Virgin Islands.

22. The average budget in Latin America for HE is lower than 1,5 % of the GDP, which is clearly insufficient to satisfy the needs of a system in development and particularly to attend to the national demands for research.

23. The average investment in Science and Technology of the countries of the Region from the GDP is 0,72 %.

24. The WCHE (1998) and its Follow Up Meetings had as a central impact in Latin America and the Caribbean the offering – beginning with what was expressed in the Regional Conference of LAC (1996) and in the Action Plan, as well as in the WCHE – of a theoretical frame with consensus to transform HE in the region.<sup>9</sup>

#### **D. CONCLUSION**

We are witnessing the transformation of the idea of the university in Latin American and Caribbean nations (LAC) in regards to their management, funding, accreditation and curricula, and ultimately the very conception of the university. We must adapt the university to a new environment, reinventing it through innovation and preventing the triumph of pessimism.

In synthesis, the transformations that have taken place in LAC in the last years, have not contributed in a perceptible way to progressive transformations of social mobility. Innovation in order to reach equality and sustainable development through proper values should be our aim in an era of deep crisis.

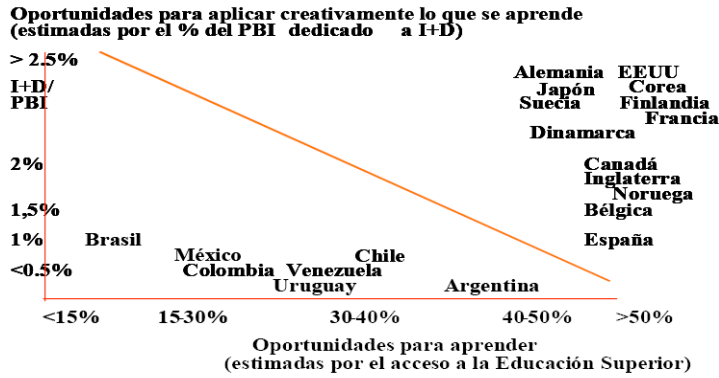
It is time to recognize that, despite advances, we still have not been able in LAC to achieve a new university "model" in which the production of knowledge and innovation predominates, not its mere transmission. In this processes of transmission we should put in place a clear will of socializing knowledge, so we should not limit ourselves to be mere academic institutions, but leaders of social change and innovation.

We are aware that there is no such thing as a unique model of university. There are many successful examples of university reforms and transformations that we can, through proper adaptation to the conditions of LAC, generalize and apply in order to be innovative.<sup>10</sup>

ANNEX 1.

**Si limitada inversión en I&D se correlaciona con bajo acceso a la Educ. Sup. , el impacto es mayor:**

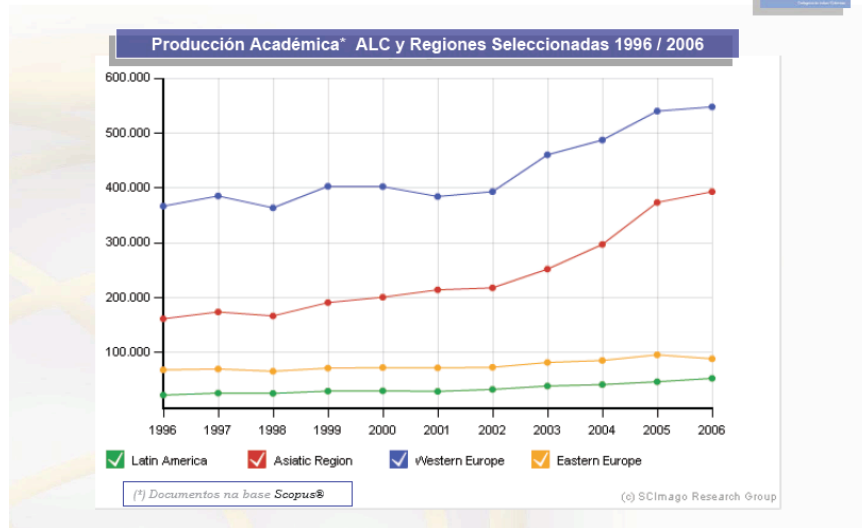
**Las divisorias del aprendizaje**



Fuente: Judith Sutz: Reflexiones sobre CT&I; Bogotá, marzo 2008.

ANNEX 2.

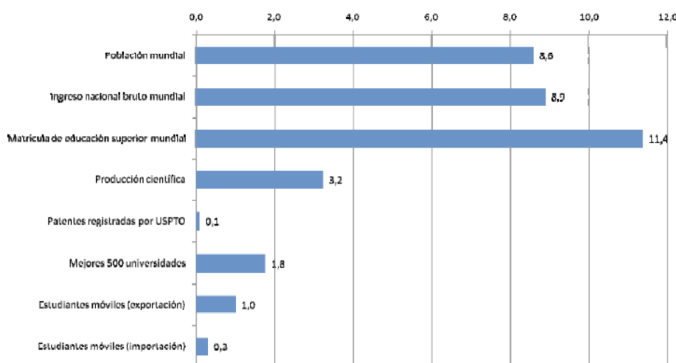
**Panorama de la Educación Superior en ALC**



ANNEX 3.

**Participación de ALC en el mundo del conocimiento**

América Latina: Indicadores seleccionados de participación en la sociedad de conocimiento alrededor de 2005



Fuente: Por número de las columnas: 1 y 2, World Development Indicators - 2006; 3, 7 y 8, UNESCO, Global Education Digest - 2006; 4, SCImago (2007) SJR - SCImago Journal & Country Rank; 5, USPTO, Breakout by Country of Origin (2008); 6, ARWU - Academic Ranking of World Universities (2007)



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## ENDNOTES

<sup>1</sup> Higher Education (HE) experiences today a set of transformations and innovations that could be summarized in seven big trends:

1. Massification of the systems;
2. Horizontal and vertical differentiation of the systems and institutions;
3. Quality assurance and accreditation;
4. Increasing demand of specific knowledge;
5. Diversification and rationalization of the sources of financing of HE;
6. Adoption of entrepreneurial and organizational cultures because of these trends;
7. Displacement of the gravitational centre of HE from the spheres of the State towards the sphere of the market and the competition. (Brunner, 2005, pp.3-4).

<sup>2</sup> In the documents of the "The World Conference on Higher Education" (1998), summoned by UNESCO, and in the Follow-up Commissions, a number of valuable suggestions are available, to face the most urgent challenges concerning Innovation, Universities and its relations with Society. Such as: the permanent updating of the teaching staff and the teaching contents; the introduction of electronic networks for learning; translation and adjustment of the main scientific contributions; management modernization; the complementation of the public and private education as well as those of formal, informal and distance education.

<sup>3</sup> See F. López Segre: "Global and Regional Scenarios of Higher education". *Avaliacao*, n. 3 September 2007.

<sup>4</sup> La educación superior se encuentra en un proceso de transición de la educación superior tradicional presencial a la educación superior virtual. Esto no quiere decir que la presencial desaparezca, pero sí que cada vez ocupará un porcentaje menor del total. Se incrementa el *e-learning* y el *b-learning* (*blended-learning*). Hay un incremento exponencial de programas virtuales. De un total de 69 universidades españolas, 33 tienen oferta telemática. En un breve plazo, la educación superior virtual enfrentará nuevos retos. Una nueva generación está a punto de entrar en la enseñanza superior. Esta generación no sólo creció haciendo uso de las TIC, sino que también está habituada a desempeñar un papel activo, creando y diseñando recursos virtuales, y encontrándose en la Web con sus pares del mundo entero. Es una generación habituada a dos aspectos esenciales de la Web 2.0: su carácter abierto e interactivo y la posibilidad de acceso libre a conocimientos y comunidades virtuales, a *wikis* y a *blogs*. En la Web 1.0, los estudiantes pueden tener acceso al contenido creado por otros. Sin embargo, en la Web 2.0, los estudiantes pueden diseñar su propio contenido e interactuar con otros. Estamos ante un paisaje en que la eficacia de los sistemas educativos está cuestionada debido a que la sociedad del conocimiento y de la información demanda la generación y diseminación cada vez más rápida de estos, lo que sitúa a los estudiantes y profesores ante exigencias crecientes para cumplir su tarea. Emergen modelos de *software* de código abierto, como por ejemplo el Open Course Ware del Instituto Tecnológico de Massachusetts (MIT-OCW) que proporciona acceso libre a los materiales de los cursos del MIT. Empresas como Apple con su i-Tunes U, Google y YouTube, entre otras, ofrecen una diversidad cada vez mayor de conocimiento de acceso libre. En este escenario de proliferación creciente de proyectos de *open content*, los desafíos para el *e-learning* y el *blended-learning* serán cada vez mayores.

<sup>5</sup> In the middle of 80s the Asian Wall Street Journal was including, in a list of 10 better universities of the world, only 4 (Cambridge, Oxford, Sorbonne, and Tokyo) out of USA. According to Altbach some of these rankings are reliable as the one of U.S. News and of Times Higher Education Supplement (THES). The Shanghai Jiao Tong University ranking is published every year, but its results are controversial. The rankings are constructed on the base of parameters - number of Nobel Prizes, teachers of the university with works in the citation index, doctorates and master degrees, equipment, financing ... - of "world class universities" of the Anglo-Saxon world, especially of USA and UK, that in addition favors the hard sciences to the detriment of social and human. To apply the procedure and values of the principal academic powers will not measure in exact form the quality worldwide. It will not even give place to world rankings of interest. In the academic world orientated towards the market of the XXI century, the ranking are inevitable. The challenge is to assure that they should provide suitable and relevant criteria and should measure - through national and regional indicators - the real priorities not only for developed countries but also for LDC as well.

<sup>6</sup> This denomination is devoted to those universities who have a recognized excellence throughout the world (Yale, Harvard, Oxford, Cambridge, Sorbonne, Tokyo ...). Nevertheless, the LDC, instead of emulating to obtain indicators often difficult to reach in their specific conditions, should give more attention to the ideal of university that promotes the sustainable development of autochthonous character. More important than having indicators of "world class universities" or "research universities". More important than having a Nobel Prize is to guarantee autochthonous programs of tertiary studies with proper quality for agronomists, educators; to have good schools of medicine and good programs of engineer's formation in order to guarantee a suitable level of "human and social capital", in order to generate development with equity. (Altbach, 2006; Ordorika, 2008)

<sup>7</sup> Main traits of these transformations are the following (Mollis, 2003, p.11):

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- Diversification of HEI (university colleges, university institutes, short cycles with certificates and intermediate titles in the university level, new tertiary private institutions, etc.)
  - Sources of funds diversified, (registration, sales of services) as alternatives to the State financing.
  - Strategic alliances among international agencies and governmental decision makers.
  - New alliances between universities, corporations and the public sector.
  - Increasing presence of the private investment in the offer of HE education, as well as processes of privatization with mercantile character of educational offers not controlled by representative organs of the public interest; new providers. Evaluation, accountability, accreditation and certification of programs
  - HE laws as well as various institutional and normative reforms.
  - Policies of faculty differentiation through policies of incentives, according to indicators of productivity.
  - Academic Reforms: shortening of careers, intermediate degrees, flexible curricula toward credit modality, import of educational models based on the "acquisition of professional competitions".
  - Predominance of TIC, distance learning (virtual university), remote tutorship's, certification of knowledge's and skills, recycling of competencies.

<sup>8</sup> I am using for figures of enrolment and data on HE systems the last data available given by the UNESCO Institute of Statistics, in Global Education Digest 2008, Montreal. I am also in some cases using the figures of EFA Global Monitoring Report (UNESCO, 2009).

<sup>9</sup> This implied a shared general vision about how to carry out the transformation processes of the HEI of public character – and even private – through the institutional evaluation, with the goal of improving the management and financial systems as well as equity in access as a key priority. In addition, it implied much more: that the University should be a key agent in transforming society building viable alternatives in the middle of complexity and uncertainty amidst the crisis of paradigms and alternatives. International cooperation and building of networks has been one of the greatest inputs of the WCHE in the region as well as innovation and the internationalization of HE. IESALC-UNESCO has played a leading role in this sense, as an alternative and a counter balance of the agenda of the World Bank in the 90s. WB considered the only useful investment in education the one done in basic education and stimulated privatization of higher education as solution to growing acces. Main challenges of HE today in LAC are: the rapid increase of privatization, the insufficient public funding, the lack of access for the poorest and the low GER –despite its improvement- in comparison with developed countries. (B.C. Sanyal and F. López Segre in GUNI, 2008; Didriksson, 2008)

<sup>10</sup> The methodology applied in the studies of "benchmarking" might be relevant in this respect.