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Higher Education 2050: Disruptive Innovations and Incremental Adaptations
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Axis of Innovations

During the last 30 years, global HE enrollment increased by 161 million students, averaging above M. Trow's mass access threshold. The gross tertiary enrollment rate increased from 14% to 39%. In Latin America, enrollment grew almost four times during the same period and the gross participation rate went from 17% to 53%. What can be expected to happen with HE in the region during the next thirty years, that is to say, by 2050?

We take for granted that the expansion will continue, albeit probably more moderately. Rather, the question is whether during the next three decades there will be disruptive or only incremental innovations, in the double dimension of the global and the regional / national spheres. Our thesis is that, in light of current trends in HE and speculations about future scenarios, disruptive innovations in the global dimension and incremental innovations in the regional / local dimension can be anticipated.

Disruptive Innovations

The argument about disruptive innovations at the global-central level of HE has been proposed for at least four decades. It is associated with structural, discontinuous changes which are destroyers of competition, creators of new markets or industries and related to discoveries, reinventions or the emergence of new paradigms (Christensen, 1997). This argument began to become popular at the end of the last century. Among others, Peter Drucker announced in an interview in 1997 that, in thirty years, big university campuses would be relics; universities would not survive, he said, and he compared this change to the printing revolution. Since then, radical transformations of the HE provision model have been proclaimed, be it by an unbundling of the traditional functions of the university, the dissemination of massive open online courses (MOOCs), the displacement of degrees and titles by nano and micro certifications, or the disappearance of humanities in favor of a technological convergence of knowledge (Peters, Jandrić & Hayes, 2021).

Conservation with Transformations

Despite this, the changes observed during the 21st century in HE maintain the political and organizational economy matrix of national HE systems: expansion of access, horizontal and vertical differentiation of systems, dominant fiscal financing but with increasing participation of private resources, competitive coordination via markets or quasi-markets, global expansion of a variegated academic capitalism with a diversity of 'glonacal' expressions, greater demands for accountability, hierarchical internationalization within the center / peripheries scheme, rich and complex stratification of national -"glonacal" systems (Marginson & Rhoades, 2002) reflected in international rankings where the top is occupied by the 100 world class universities (WCU) and down -to the bottom- thousands of institutions are distributed, some with a variable presence of research and others exclusively teaching and / or with short cycle and vocational character.

At the internal level of organizations, these changes are accompanied by new forms of bureaucratization of institutional governance, a managerialist revolution, and the transformation of the academic profession by the adoption of a highly rationalized regime of work, production and control of performance and productivity.

At the cultural level, all these transformations are accompanied by the gradual disappearance of the “idea of the university” as the ideological underpinning of the institutional tradition; instead, a notion is breaking through: that of academic organizations being closer to the economic sphere, at the service of the scientific-technological rationalization of the world and the formation of various strata of (advanced) human capital that, in increasingly greater numbers, would require the administration and reproduction of societies, economies and states based on the use of knowledge.

New Paradigm

In the global dimension, therefore, a cumulative series of incremental, supportive, non-disruptive innovations has been accumulating, which have facilitated the spectacular growth of enrollment, the continuous differentiation of systems and other abovementioned transformations. As a whole, they have established the new “glonacal” bases of an international division and organization of academic work, transforming it in all its aspects –psychosocial sphere, practices, patterns of collaboration and competence, coordination and evaluation modalities, etc.– that today organize the world-system of tomorrow’s HE.

We argue that this HE world-system will experience, in the next thirty years, a series of disruptive innovations, which have been ongoing underground but will soon emerge to the surface in the form of a new HE paradigm. Below we imagine some features of this world-system.

Global Space

The idea once enunciated by the founder of Udacity, Sebastian Thurn, that, in the future, the provision of HE would remain centralized in no more than 10 organizations / companies, seven WCU and three new providers, among them Udacity, is surely wrong, but it opens up a space for conversation that is interesting to explore here.

Indeed, the notion that there will be a global HE space (already in sight) seems familiar to us, although it is not from a few providers (as was thought with the rise of MOOCs) but as a “glonacal” space, stratified within a world-system with at least two centers (let us call them Anglo-Saxon and Mandarin, tentatively), where dominant providers (platforms / companies / universities, hybrid legal type, both for and non-profit) compete to create the architecture of that space.

Initial Higher Education

A wide stripe of this global space will be occupied by the basic or initial training of (advanced) human capital; let us say, in today's language, education at ISCED-2011 Levels 5 and 6. In the glonacal’ dimension, short-cycle training will be increasingly local-national, while first-degree training will be increasingly global-national. The former will respond to local labor markets and local technological development; the latter, to various interdisciplinary bachelor-type approaches (3 years) organized around “issues” and “projects” (as in project-based-learning). The former will be teaching in and for action (dual programs not only with one foot in the company but on all fronts of commerce and services, health, sports, community activities, personal care, legal assistance, etc.). It will have an important face-to-face component and a

preponderant weight of practitioners. The first degree programs, meanwhile, will be hybrid, with a component offered remotely through global platforms (which will combine lessons, tutorials, simulations, exercises, online work, virtual materials, simultaneous translation, etc.) and offered by central providers (not limited to 10, but surely a couple hundred). However, its “realization” (and not mere “reception”), at the local-national end, will be in charge of HE institutions of each country, specialized in network collaboration with central nodes and in the guidance-accompaniment and evaluation of students.

Credentials and Pathways

The evaluation / examination / verification / certification schemes of these training processes will be decentralized and multiple, and some trends can already be discerned: there will be a great variety of nano, micro and meso certifications, as close as possible to each learning unit; the link between training and work will increasingly move towards modalities of “practical demonstration of skills” for the tasks at hand; macro certificates –as terminal cycle diplomas or degrees (Levels 6, 7 and 8)- will be less and less relevant due to their rapid obsolescence, generic and uniform nature, and little signaling power within the labor market (due to the great variety of agencies and underlying training processes).

At the end of the initial or basic training of (advanced) human capital there will be a wide variety of options and possible pathways, which will combine “study” and “work” in less rigid ways than today, combinations that will increase with the multiplication of pathways and means of learning, the increasingly common practice of life long learning, the transformation of the work world with emerging technologies (“fourth industrial revolution”) and having –more and more countries– a guaranteed basic universal income. In this whirlwind of options and pathways, the very notion of “profession” and “professional careers”, so typical of the modern era, will gradually dissolve to be replaced by new forms of certification based on individual pathways and their registration in virtual “passports” or “portfolios” that will provide an account of the training and skills acquired and demonstrated, the performance achieved and the link with “glonacal” networks.

Knowledge Production

In the other major strip of the “glonacal” space of HE –corresponding to research, production of advanced knowledge, R & D & I– the following phenomena have been observed for several years: an increasing number of “production modes”, “triple helix” activities and disappearance of previous boundaries, between basic and applied research, non-commercial and commercial research, focus on academia or business and guidance by the curiosity of the researcher or by a mission defined by the public authority. Even the internal differentiation between teaching and research is no longer, looking to the future, the ordering principle of academic organizations. It is enough to think that among the 30 thousand universities estimated to exist in the world, and the tens of thousands of additional non-university HE institutions, only a small fraction (two thousand or three thousand universities) systematically carry out systematic scientific research work –while the WCUs included at the top of this hierarchy do not go from 100 to 500.

In perspective of the year 2050 it is possible to imagine that, as suggested by R. Barnett (2021), universities, forced by their “ecological situation” –that of being interconnected and mutually involved with other important ecosystems, such as those of knowledge, learning, social institutions, people, the political sphere, the economy, culture and the natural environment– will be distinguished from each other rather by the way in which they take responsibility, each with its own mission, traditions, resources and means, to interact with those ecosystems, which are

fragile themselves and altered or damaged by the maelstrom of late capitalist modernity. The HE entities of the future can be conceived, then, as organizations that work with advanced knowledge and are involved with the other ecosystems within the ‘glonacal’ space where they carry out their activities.

Centers and Peripheries

This new ecology of social knowledge management will in no way overcome the double constraint of the HE world-system: its “glonacal” character of centers / peripheries, on the one hand, and its academic capitalist organization at the world level, on the other. The example of Latin America around 2050 illustrates this point. According to our initial thesis, just as in the global center we can expect disruptive innovation of paradigmatic change, in the Latin American periphery, on the contrary, only incremental innovations can be anticipated, that is to say, gradual, cumulative continuity, partial improvements and, above all, varied adjustments to the disruptive transformations driven by the center (Anglo-Saxon and Mandarin) and their impacts on the periphery.

As the great historian of world-economies, F. Braudel (2002), says: “Splendor, wealth and joy of living come together at the center of every world-economy, at its very core. This is where the sun of history shines the brightest colors [...] Advanced techniques are usually there too, and the fundamental science that goes with them is with them. The same applies to innovations within the field of HE. The new international division of academic work and the increasingly complex production and transmission modes come from the center or centers and are transferred to the periphery, just as it happened originally with the medieval European institution of the university and later with the Humboldtian or Napoleonic models, and today with the WCU paradigm. What starts as a potentially radical change in the center is received, adapted and recreated incrementally in our own knowledge ecosystem where the other relevant ecosystems function equally in dependent or subordinate ways.

Between Economics and Politics

Therefore, it is likely that Latin America will be subalternly integrated over the next three decades into the global market for first-degree emerging human capital formation (baccalaureate) and will be forced to develop a more robust segment of short-cycle training for work, so as to be able to absorb the demand for tertiary education which is still neglected. In the other higher educational levels, the region will advance in the same direction as the global center but more slowly and surely with greater resistance from the professional and corporate structures of universities.

It is likely that in its relationship with the political ecosystem, which is in permanent turmoil in Latin America, with polar changes between weak democracies and authoritarian leaders and intense confrontations of classes and strata, our HE — universities in particular — will continue to be more “committed” or “militant” seeking to sustain the Gramscian-type “organic intellectual” role in relation to the subaltern classes, and that of “critical intellectual” vis-à-vis the structures of power and inequality (of which they are inevitably part). Perhaps this marks a differential feature with the “economizing” drift of the central academic capitalisms’ university compared to a “politicization” drift of the Latin American university that Medina Echavarría observed as early as in the 1960s.

Research Lagging Behind

Also in the area of knowledge production (R + D + i), adaptations in Latin America to foreseeable changes in the global science and technology system can be expected. The latter appears every day more clearly hegemonized by a few countries of the Anglo-Saxon North, Western Europe and the Asia-Pacific; it is there "where the sun of history shines the brightest colors" and where most of the theories, approaches, methods, evidence and their use by the other spheres of society are produced —economics, culture and politics— before arriving on our shores and being incorporated into our national academic systems. It means that the internationalization of the academy will intensify, reflecting on collaborative production, co-authoring of publications, exchange of experiences, testing of medical and other innovations, but all this within the stratifications and hierarchies of the academy-world: predominance of STEM versus SSH, unequal weight of publications according to indexing and languages, and leading role of scientific elites in each discipline and specialty located —almost without exceptions— in the central countries.

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