TOWARDS A CULTURE OF OPENNESS: RAISING AWARENESS AND ENABLING POLICIES IN LATIN AMERICAN HIGHER EDUCATION.

HACIA UNA CULTURA DE LA APERTURA: CONCIENTIZANDO Y POSIBILITANDO POLÍTICAS EN LA EDUCACIÒN SUPERIOR EN AMÉRICA LATINA.

RUMO A UMA CULTURA DE ABERTURA: AUMENTO DA PERCEPÇÃO E HABILITAÇÃO DE POLÍTICAS NA AMÉRICA LATINA NO ENSINO SUPERIOR

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Abstract

In the current knowledge society, ICTs offer the opportunity to access and share knowledge in ways never seen before. The world is witnessing a transformation towards a culture of openness. Research, teaching and learning practices are changing towards an ubiquitous, collaborative, and connected practice. This new culture of openness demands a new role from higher education institutions (HEIs) and all the actors involved.

The open access movement and the open educational resources are having a strong impact in education and represent an alternative to face the knowledge society challenges. They are proving to be an opportunity to adopt innovative teaching and learning practices, to improve the acquisition of critical thinking and learning skills, and to enhance research communication. They present a chance to commit education as a truly social and public good. In the past years, OA and OER initiatives have expanded rapidly, mostly in developed countries. In Latin America, the involvement has been much smaller and slower.

In this article, we analyze the state of the OA movement and OER initiatives ten years from their beginning. We review some examples that mark out a "next generation" of the open access. We address the lack of awareness as the major challenge impeding Latin America to get more involved in the movement. Finally, we identify the need for more active leadership from stakeholders and the need for implementing policies to support the sustainability of the OA and OER in this region.

Key words: open educational resources, awareness raising, open access policies, Latin America

Introduction

In today's knowledge society, the rapid evolution of the information and communication technologies (ICTs) and the web 2.0 tools provide the opportunity to create, access and share knowledge in collaboratively ways never seen before. The world is witnessing the transformation towards a culture of openness, sharing, and collaboration. For instance, research practices begin to shift to a collaborative scholarly community. The access to scholarly information promotes a high social value and sense of responsibility in society. The learning practices are also changing. While educational resources become available each day, learning gradually shifts from a closed, formal model towards a culture of connected, informal, self-directed, and lifelong process (Steiner & Ehler, 2010). Anderson and Dron (2010) refer to this new learning process as connectivism, where "learning focuses on building and maintaining networked connections that are current and flexible enough to be applied to existing and emergent problems" (p. 87). Today´s learners must have a new informational and digital literacy. Also, they are responsible to have an active role in their learning and they must demonstrate to have the new skills and competencies defined as the 21st century skills[1]. This new culture of openness and ubiquitous learning are challenging the role of higher education institutions as the traditional owners and providers of knowledge.

Latin American education: urgent need to face the knowledge society

The obsoleteness of higher education in Latin America and its inability to face the knowledge society challenges is an issue addressed by many (Brunner, 2000; Global University Network for Innovation [GUNI], 2008; Lamarra, 2003; Santiago, 2008; World Bank, 2002) Education in this region characterizes to have dominant educative paradigms. For instance, acquisition of knowledge continues to be defined as a process of teaching rather than learning. Academic programs are known to be rigid in their curriculum and to lack flexibility to validate

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[1] The OECD has defined the 21st century skills as those "skills and competencies young people will be required to have in order to be effective workers and citizens in the knowledge society of the 21st century." (*21st century skills and competences for new millennium learners in OECD countries*2009)

knowledge acquired outside the institutional structure. Teaching practices still focus on teacher-centered approaches and new generations are not acquiring the "21st century" skills.

New innovative scenarios and educational reforms are needed with urgency. Dridikson (GUNI, 2008) talks about a new alternative open organization model, characterized by the production and social value of knowledge, supported by a culture of collaboration and articulation among its management, academic and research structures. For López Segrera (2009) "it is necessary to go from the traditional university based on classical teaching methods to a participative university based on teaching-learning, and reach an innovative university with a modern paradigm of knowledge" (p.2). These arguments resonate with Siemens` (2006) statement on the challenge of the knowledge society:

"We are in the early stages of dramatic change—change that will shake the spaces and structures of our society. Knowledge, the building block of tomorrow is riding a tumultuous sea of change. Previously, knowledge served the aims of the economy—creation, production, and marketing. Today, knowledge is the economy" (p.3).

Education systems in Latin America must urgently respond to the challenges of the knowledge society in three aspects. First, nations must build capabilities to use knowledge as the economy driver. In the current knowledge society, the use, access and accumulation of knowledge and information have become as important as capital accumulation for economic growth (World Bank, 2002). This capacity not only points to nations but to individuals as well. In an open and increasingly connected world, the ability to make new knowledge accessible and to update expert knowledge gains an increasing importance (Steiner & Ehler, 2010).

Second, it is urgent for higher education institutions to raise competitive citizens, digital literates with a culture of self-directed, life-long learning and with high analytical critical thinking skills. It is well known that graduates in Latin America are not acquiring the 21st century skills demanded in the global market. In October 2010, the OECD´s survey "Raise your Hand" posed one question for the community to respond: What is the most important action to take in education today? From 27,000 votes and 325 ideas, the number one response was "teach to think, not to regurgitate". In the knowledge society, graduates of higher education "are expected to be well informed and deeply motivated citizens, who can think critically, analyze

problems of society and look for solutions to the problems of society" (Donkor & Tagoe, 2010, p.1). Learning to learn, learning to transform information into new knowledge, and connect and transform new knowledge into applied situations become more important than memorizing specific information.

Third, it is important to commit education as a public good. Around the world and especially in developing countries, there is an insufficient capacity of higher education institutions for fulfilling the increased demand of student´s enrollment. The provision of education with support of ICTs, or distance learning, increased in the past decade as a catalyst to provide more access to education and respond to the growing demand of students´ enrollment. However, despite the increase of provision of education (either by face-to-face or distance delivery), higher education institutions have not yet been able to satisfy the high enrollment demand and access to education is still the privilege of the minority.

The Open Access and the Open Educational Resources

The definition of Open Access (OA) was initially established by the Budapest Open Access Initiative[2] in 2001. The term is used to describe published academic papers, books, reports, and other periodicals that are electronically available to readers without financial or technological barriers (Kumar, 2009). On other hand, the Open Educational Resources (OER) were defined as: "The open provision of educational resources, enabled by information and communication technologies, for consultation, use and adaptation by a community of users for noncommercial purposes" (Witherspoon, 2002, p. 3). OA refers to materials that are more suited for graduate and post-graduate levels of education and more specifically to scholarly, peer-reviewed journal articles. The OA "is the best method to maximize the flow, interchange and production of scientific knowledge" (Rossini, 2010, p. 23). On other hand, OER refer to a wide variety of materials that can be used for teaching and learning purposes either in formal or informal educational contexts. According to Vukovic & Martin (cited by D'Antoni, 2009) and Hylén (2007), the fundamental principle behind the definition of the open access and the OER is

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[2] www.soros.org

the freedom to share knowledge and that knowledge should be legally, socially and technologically open.

Many have studied the benefits and impacts that the open access (Alperin, Fischman, & Willinsky, 2008; Harnad, 2009; Schmidt, 2008) and open educational resources (Atkins, Brown, & Hammond, 2007; Kumar, 2009; Plotkin, 2010; UNESCO, 2010) are having on research, teaching and learning practices, as well as the enormous possibilities they offer to alleviate some the knowledge society challenges. First, the OA movement is proving to have a high impact and many benefits on the scholarly research communication. In a new culture of openness and increasing possibilities to share and access to information and knowledge, more individuals have an opportunity to contribute to the knowledge society, reducing with it work duplication, saving money, and promoting a truly collaborative community. The OA is changing the scholarly communication as it has shown to promote access to scientific literature and to enhance communication between researchers with similar research interests (Sánchez Tarragó, 2007). Harnad (2008) states that the OA helps to increase research´s visibility, enhancing the chances of good work being recognized, credited and rewarded. He also argues that the benefits and impact of open access are not only for the sake of research itself, but also to new and future researchers, institutions and research funders. Schmidt (2008) and Brown and Sadler (2011) stated the potential benefits and future impacts that students, as future researchers, will have by opening access to their initial research work. By opening access to the graduates´ master theses and doctoral dissertations, they are contributing to the knowledge society as "more people are aware of their work and can contact the student to pursue their interest in the thesis" (Brown & Sadler, 2011, p.12).

On other hand, the OER contribute to turning teaching and learning into more collaborative, open, flexible processes (McAndrew, 2011; Siemens, 2003; Wiley, 2011). The OER are expected to "affect curriculum, pedagogy and assessment" (Hylén, 2007, p.125) and are "likely to accelerate changes in the traditional teaching role and the evolution of more independent learners" (OECD, 2007). For Hilton III, Wiley, Stein, & Johnson (2010) "as the world becomes increasingly connected, OER provide a significant opportunity to share both content knowledge and pedagogical practice" (p.43). The OER enhance the adoption of innovative and connected learning processes. They also contribute to improve the acquisition of

analytical and critical thinking skills in students. Current students enrolled in formal education systems are not the only ones who may benefit from the OER. As noted before, learning has become an ubiquitous, lifelong process that occurs not only in the formal environments such as the classroom. In such a connected world, learning occurs also in informal contexts such as the social and collaborative networks. Therefore, OER will not only be useful for prospective and current students but can become a source of continuous professional education (Donkor & Tagoe, 2010).

Third, the OER "hold the promise of equalizing the opportunity for learning across the globe" (Plotkin, 2010, p.5) supporting the role of education as a social and public good. Morgan and Carey (2009) and Lane (2008) have remarked the great potential that OER have to providing access to knowledge for the global public, including students who are excluded from higher educational opportunities. It is well known that higher education institutions are not fulfilling the high enrollment demand. This has become an international issue that will only aggravate in the upcoming years. Ker (cited by *Towards an OER university,* 2011) remarked that "OER is the means by which education at all levels can be more accessible, more affordable and more efficient"(para. 4.). More than ever, there is an opportunity for education systems to offer access to knowledge to learners who do not have access to formal education around the globe.

The next generation of open access and OER

Although the first institutional repository to provide open access to the public is documented (Flores Cuesta & Sánchez Tarragó, 2011; Sánchez Tarragó, 2007) since 1991, many (D'Antoni, 2009; Hilton III et al., 2010; Morgan & Carey, 2009; Plotkin, 2010; Witherspoon, 2002) have attributed the beginning of the Open Access movement to the OpenCourseWare (OCW) initiative of the Massachusetts Institute of Technology (MIT). In 2001, when the MIT announced the OCW initiative, were "virtually all its courses would be posted on the Web, available for use by faculty members and students around the world, at no charge" the objectives were to give access to education to more people, to increase collaboration between faculty and help their students to be more prepared. Since then, the OA attracted the attention and interest of the international community.

The story of the MIT initiative is widely documented in literature (Atkins et al., 2007; Friesen, 2009; D'Antoni, 2009; Humbert, Rébillard, & Rennard, 2008; Lane, 2008; Wiley & Gurrell, 2009; Witherspoon, 2002). It is not the objective of this article to offer another detailed chronicle. However, it is important to remark the initiative´s influence on other higher education institutions around the world. Since the initiative was launched, many HEIs have gradually left behind their closed paradigms to shift into a culture of openness and high social responsiveness. OA initiatives around the world grew exponentially and today thousands of educational resources are accessible to the public. At the same time, as the ICTs rapidly advance the learning process gets more connected. In 2011, facing this open culture and connected learning scenario, new projects supporting a next generation of the OER movement begin to emerge. Three examples demonstrate it.

OCW Scholar and edX projects

Since the MIT initiative was launched a decade ago, thousands of resources were made available on its institutional repository (or OCW) for learners to access them freely. Any person interested in learning could access the institution's OCW and conduct a search to find an educational resource that would be useful for its learning purposes. However, the educational materials available in the IR were originally conceived to be used in formal courses. Later, they were deposited in the institutional repositories (IR), opening access to the public to such materials but lacking any formal academic structure or curriculum.

In January 2011, the MIT announced the launch of the OCW Scholar project (Colman, 2011). The project consisted in offering open educational resources linked to a structured curriculum. This way, independent learners will have a series of complete courses designed specifically for self-learning. The project began with five complete courses and would be launching more in the upcoming years. However, in May 2012, a new project, the edX[3] was launched by the IT and Harvard University. The project consists in the delivery of open courses and materials along with open study groups that would reach students from all around the world.

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[3] http://www.edxonline.org/

Only few weeks after the project was launched, the course 6.002x (Circuits and Electronics), the first courses offered openly, had around 15,000 learners applying for enrollment. Around 7000 participants could access the course and around 3500 received a certificate.

Government supports with 2 billion USD to create OER

Also in January 2011, the US Department of Labor[4] (DOL) from the US government, announced the allocation of $2 billion dollars in grant funds for the creation of OER in the next four years. The Trade Adjustment Assistance Community College and Career Training (TAAACT) highlights the importance of the lifelong learning of future and current workers and the promotion of a culture of collaboration, sharing and openness (Lorna, 2011). The TAAACT mandate will grant those learning proposals that will look accelerate the learning progress of workers and encourage them to acquire new skills and to combine their basic skills with career knowledge. The grant will also support the implementation of self-paced and innovative learning strategies.

One of the most remarkable and important requirements of this fund is that all OER created under the grant´s support will be required to be licensed under the Creative Commons 3.0 License. That is, the OER generated from these funds will be open to the public, increasing the impact beyond to other audiences than those they were originally directed to.

The creation of OERU

One month after, in February 2011 a group of universities from Australia, New Zealand and Canada announced the Open Educational Resources University (OERU) project[5] (Attwood, 2011). The main objective of the project is to bring together existing free online learning materials from around the world and develop new OERs to create whole degree programs that can be studied via the internet for free. The OERU will provide flexible pathways for learners to earn formal academic credit and pay reduced fees for assessment and credit. The concept of OERU is based on "in the "examination-only" model pioneered by the external degree program of London University one hundred and fifty years ago whereby learners could have their

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[4] http://www.doleta.gov
[5] http://wikieducator.org/OER_university

knowledge assessed and credentialised, irrespective of where or how the learning took place" (Stacey, 2011, p.1). A community comprised mostly of volunteer teachers and other faculty members from around the world currently works on establishing the pedagogical model, developing the curriculum and determine the assessment approaches for the OERU. Other topics that the steering group is working and debating on are the intellectual property and creative commons licenses, commercial uses, infrastructure, budgetary and administrative issues.

The launching of the edX, the DOL grant, and the OERU projects are on early stages of implementation, it is premature to predict their success and future results. However, there is no doubt these projects support the culture of openness and will have a high impact on education. For instance, the three projects promote a culture of collaboration and connected learning not only between institutions but among learners. Also, by having an open license and being accessible not only for US citizens but to the rest of the world, the products resulting from the TAAACT mandate will give access to a new profile of learners (informal, self-learners) and may benefit other education systems around the world. Finally, the three projects will position knowledge as a truly public good.

Lack of awareness in Latin America: a priority to attend

It is clear that the OA movement and the OER initiatives around the world are growing as a promise to alleviate some of the knowledge society challenges. A decade after the beginning of the OA movement, the world witnesses the start of the next generation of OA and OER projects. However, the involvement of Latin American countries has been significantly low compared to other regions in the world (Hylén, 2007; UNESCO, 2010). According to Atkins et al. (2007), the impact of the open access movement on the developing world is still modest with respect to the enormous need. The involvement of Latin America in the OA movement has focused more on the establishment of institutional repositories. Regarding the OER on teaching and learning practices, developing countries have been spectators rather than participants.

In 2008, after a two-year conversation among the UNESCO OER community, participants expressed their concerns about the future of the OER movement. The international community from developed and developing countries addressed awareness raising and

promotion as the main priorities for promoting the advancement of the OER movement (D'Antoni, 2008). Other issues addressed were the consolidation of communities and networking, the capacity development and supporting technology tools, the learning support services, research, policies, quality assurance, financing, sustainability, accessibility, copyright and licensing, standards, and the assessment of learning.

D'Antoni (2008) states that "the diversity in the ranking of issues underlines the importance of developing regional and local communities and initiatives that will focus on local needs and conditions" p. 13). In countries with more involvement, the priority issues become more specific such as copyright, sustainability, financing or policies. In countries with little involvement in OER initiatives, the priority issues remain in the level of raising awareness, promotion and capacity development. The little involvement and lack of awareness about the open access in developing countries, specifically Latin American countries, have an impact in other issues. For instance, there is a lack of sufficient research and publications addressing the OA from the Latin American context or promoting local initiatives. The Brazilian experience on the OA movement and experiences on OER is well documented (Gourley & Lane, 2009; Lane, 2008, McAndrew, 2011; OECD, 2007; Sánchez Tarragó, 2007; Wiley, 2007). Brazil is the Latin American country with the highest number of institutional repositories and is one countries with high leadership on the OA and OER movement in this region.

Some authors (Alperin et al., 2008; Atkins et al., 2007; Burgos Aguilar & Ramírez Montoya, 2011) documented the definition, challenges and potential benefits of the OA and the OER for the region. Two well documented initiatives of the impact of OA in LA (André et al. 2010; Alperin et al., 2008; Burgos Aguilar & Ramírez Montoya, 2010; Sánchez Tarragó, 2007) are the Scientific Electronic Library Online SciELO and the Red de Revistas Científicas de América Latina y el Caribe, España y Portugal (REDALyC) .

Others began to document the use of OER in teaching and learning practices in Latin America. For instance, Morgan and Carey (2009) documented how OER were incorporated into the curriculum of students of English as another language from three institutions in three different countries (Mexico, Canada and Russia). The project consisted in supplementing face-to-face courses with online discussions. Students participated in an intercultural collaboration and discussed on a variety of issues. They were evaluated according to the requirements of each

host institution. The authors state that by reconceptualising course curriculum and delivery and changing the way of thinking about OERs, it is possible that OER and internationalization may converge, enabling global participation and increasing access for students from developing countries.

Burgos Aguilar and Ramírez Montoya (2010) documented the early use of OER for teaching and learning in Mexico and other Latin American countries. They documented 30 case studies addressing how Mexican and some Latin American faculty members incorporated OER in their teaching practices. The participating teachers used the Temoa[6] OCW initiative, a Mexican OER project that provides "a public and multilingual catalog of OER aiming to support the educational community to find those resources and materials that meet their needs for teaching" (Burgos Aguilar & Ramírez Montoya 2010, p. 10). The authors provide clear evidence of the adoption, adaptation and reusing of OER and their potential benefits for Latin students.

As local research and publications on OER gradually increase, they will also contribute to lessen the lack of awareness in the Latin American region. However, more research and documentation of case studies on the uses and impact of the OER in Latin America are needed with urgency. There is also a need of research on all the priority issues addressed by the international community. For instance, the topic of open access policies from the Latin American context is very scarce as we demonstrate below.

Policies on open access and open educational resources

Each day, there is more evidence on the advances of the open access and the OER movement around the world. However, many issues remain important to attend. Policies play an important role to guarantee the success of the open access movement, yet they are still a long way behind and very few actions have been taken by governments to favor of open access (André et al. 2010). Mandates and policies have mainly grown towards the open access of

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[6] www.temoa.org

scholarly research and the publication of electronic theses and dissertations. Policies on OER are still limited compared to open access policies.

The usefulness of implementing a policy on OA has been widely demonstrated (André et al. 2010; Brown & Sadler, 2011; Sale, 2006). According to Harnad (2011), "deposit analyses comparing mandated and unmandated self-archiving rates have shown that mandates (and only mandates) work, with self-archiving approaching 100% of annual institutional research output within a few years" (para. 6).

A known (Atkins et al., 2007, Guntram, 2007; Sánchez Tarragó, 2007) example of a leadership institution with an established institutional open access mandate is the National Institute of Health (NIH) from the USA. Implemented in 2005, the NIH open access policy required that every grantee should agree upfront that the research results should be accessible within a reasonable amount of time. However, the policy implementation process is not a simple one. This policy took about 5 years to be implemented because it represented a significant amount of culture change to both researchers and stakeholders. This policy represented a huge culture change not only to the NIH but also to society. Not only the accessibility to information but the social responsiveness that open access represents to the community made this policy and others to have a high cultural value.

The implementation of open access policies varies from one country to another. Flores Cuesta & Sánchez Tarragó (2011) analyzed the state of the institutional repositories in South Africa, Japan, India, Australasia, Australia, New Zealand, Germany, UK, Netherland, France, Sweden, Italy, Belgium, Brazil, Chile, USA and Canada. The authors found that open access policies among these countries were very inconsistent or were just not defined in a high percentage of the repositories. When defined, the policies referred mainly to the permissions to commercial and non-commercial use.

While some countries such as the USA and the UK have gained experience and have established exemplary policies, in countries with low level of involvement on the OA movement, policies are scarce. In the USA, one of the biggest advocate institutions in the implementation of

policies for open access is the Scholarly Publishing and Academic Resources Coalition[7] (SPARC). This organization advocates for policy changes that advance the potential of technology to advance scholarly communication. SPARC has served as an important advocate of the open access policies in this country. In the past years, there has been an increase in the policy environment in this country regarding the culture of openness and social responsiveness of institutions to their taxpayers (Suber, 2011). The biggest advance has been to making mandatory for researchers to publish the research results and give to the community the opportunity to access information.

Two active advocates on open access in Europe are SPARC Europe[8] and Electronic Information For Libraries[9] (EIFL). The former aims to promote an open scholarly communication system in Europe while the latter searches to enable access to digital information in developing and transition countries, to help them to build open access capacity and ensure long-term sustainability. Since 2008, EIFL has organized awareness raising, advocacy and capacity building events and workshops in 27 countries with participants from over 50 countries.

As the OA movement and the number of institutional repositories grow around the world, the establishment of open access policies starts to spread as well. Many research and funding institutions have followed the NIH steps. According to Suber (2011) in 2010, there were 38 new funder OA mandates in 17 countries. In 2009 by contrast, there were 15 new funder mandates in 10 countries. The EIFL website offers a list of 24 research institutions that have adopted OA policies under the EIFL network. However, although the open access culture is increasing around the world, policies to support it are taking longer to be established. In February 2011, the Registry of Open Access Repositories[10] (ROAR) website registered 1782 institutional repositories in the world, while the Registry of Open Access Repository Material Archiving Policies[11] (ROARMAP) registered 350 policies or mandates globally. This represents around the 20% on the total of IR in the world. From these numbers, 191 institutional repositories and eight

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[7] www.arl.org
[8] www.sparceurope.org
[9] www.eifl.net
[10] http://roar.eprints.org
[11] http://roarmap.eprints.org/

policies (approximately 3%) on OA correspond to Latin America. The eight policies differ on their level of support and involvement to the OA:

- The Universidad Autónoma Gabriel René Moreno from Bolivia and the Universidad Nacional de Colombia established electronic and theses deposit mandates. The latter was just published on March 31, 2011.

- The Universidad de Los Andes from Venezuela, the Universidad ICESI, and the Universidad Nacional Mayor de San Marcos from Colombia (October 2009, June and November 2010 respectively) established mandatory deposit policies of documents such as digital theses, articles in indexed journals, research reports, conferences reports. The former included in the policy the use of creative commons licenses.

- The information available from the Universidad of Rosario from Colombia and the repository on fetal medicine was not clear on what the policy is supporting. The former offers information related to its institutional repository but did not include any information regarding any policy and the latter intends to be the first IR specialized in the fetal medicine to open access to related scholarly research.

- Finally, the information from Brazil offers the best policy example to support OA. As previously mentioned, Brazil is the country with more involvement in OA. In 2007, the Brazilian house of representatives received a law proposal where "Brazil's public institutions of higher education, as well as all research units, should be required to establish institutional repositories in which all the technical-scientific output of their academic and researcher staff must be deposited" (ROARMAP, 2011). This proposal will not only fortify the country´s leadership on the open access movement but will serve as an example to follow for the region.

The number of policies may be higher but also they may not be registered at the analyzed sites. In any case, the contrasting number of OA initiatives versus the few policies and mandates is clear evidence that the open access movement is growing in the region without sufficient policy support and planning for its future sustainability.

Policies on OER

The literature confirms (Guntram, 2007; Hodgkinson-Williams, 2010; Plotkin, 2010) that the use of OER in educational practices is such an innovative concept that there are still very few incentives, rewards and specific-created policies to support educators to excel in OER.

The interest to supporting and promoting implementation of policies on OER has come from organizations such as UNESCO, OECD, the World Bank, the European Commission, the Commonwealth of Learning, the Open Courseware Consortium, and the William and Flora Hewlett Foundation. These organizations and funding institutions have constantly emphasized the importance of developing policies that support the OER movement. The OECD stated that "the rapid pace of development of the OER movement means that it will soon have an impact on all higher education institutions. This calls for management of institutions to consider the risk of doing nothing" (OECD, 2007, p. 15). Institutional policies, particularly around intellectual property rights, remuneration, and promotion, need to be adapted to support and sustain development and use of OER (Atkins et al., 2007). This adaptation includes budgetary changes to reward openness, collaboration and sharing among researchers and teachers.

To date, very few policies contemplate the creation, use and adoption of OER in the teaching practices. In the guide "Free to learn", Plotkin addressed the policy on Public Domain Learning Materials from the Foothill-De Anza Community College District as one of the best practices in policy implementation on OER. This policy was the first of its kind in the USA. According to Plotkin, it provided the foundation for much of the related progress and activity that has followed the OER movement in the USA.

Because Latin American countries are still in the early stages of involvement on the open access and open educational resources movement, the lack of awareness remains at the top of the list of priorities to address. D'Antoni (2008) states that "without adequate and accessible information about an option, it cannot be taken into consideration for planning, and it cannot be explored and assessed for its potential utility to any of the education stakeholders" (p.8). This means that the lack of awareness in the region is impeding the development of other priority issues such as the implementation of policies. To our knowledge, no policy supporting the adoption of OER for educational practices has been established to date in the region.

Conclusion

The open access movement and the open educational resources offer great benefits for education and great possibilities to face the knowledge society challenges. First, they enhance collaboration, allowing more individuals to contribute to the knowledge society. Second, they represent an opportunity for implementing innovative teaching and learning approaches. Third, they increase access to knowledge to students outside of formal education systems, placing knowledge as a truly public good.

The impact of the edX project, the DOL federal budget and the OERU are just early evidence of the proven impacts and benefits of the OA and the OER. These initiatives are taking the open culture, the open learning, and the OER movement to a new scope. In the meantime, Latin America is still at the level of raising awareness and promotion.

Kumar (2009) stated that open education needs a fresh perspective and a refocus on the roles of all actors in the educational systems. Teachers, learners, researchers, stakeholders, and society in general, need to better understand the concepts and rationales behind the culture of openness and the benefits and impacts of the OER. Today, many teachers don't know what OER are, their benefits they offer, and how can OER be integrated into teaching practices. On other hand, students born in a technology-rich world, are familiarized to collaborate, contribute and share information but may lack of critical thinking skills and informational literacy. It is important that students become critical, self-learners, and digital literates and that they take advantage of the benefits that the OER present for learning. Regarding the stakeholders, Ploktin (2010) stated that a "missing ingredient is preventing the most promising outcomes associated with OER from benefiting a wider audience of students and schools: more active support and leadership from higher education governance officials" (p.1). If stakeholders are not aware of the benefits, they will not provide incentives such as funding for research and training and for enabling supporting policies. They will not take the leadership to promote the open access culture and diminish the current lack of awareness in Latin America.

Many questions remain. What actions are stakeholders doing to raise awareness and promote the open access and the adoption of OER in their institutions? Which institutions will take the leadership to incorporate the culture of openness as a core institutional activity? Which

exemplary policies from other countries may be adapted to the Latin American context? What policies are needed to create, change, adapt and include in the HEIs strategic plans?

There is a clear need of leadership from this region to step ahead and promote the OA, not only at the level of awareness raising but on the implementation of supporting policies. Some progress has started with some institutional open access policies emerging and the national law proposal in Brazil. A decade after the emergence of the open access movement, a new generation of open projects begins and Latin American countries cannot remain passive actors to such a rapidly growing movement and innovative educational opportunity.

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