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Sociedad digital y educación superior: impacto y consecuencias para las políticas

Digital Society and Higher Education: Impact and Consequences for Policy

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Resúmenes/Abstracts



Keynotes

The Future of Knowing in Digital Times. Schools and Universities Facing the Challenges of Mobile Connectivity Media

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The overwhelming presence of digital media is changing how knowledge is produced, stored and circulated. In the last years, my research has focused on understanding how these changes affect schools, as sites primarily concerned with knowledge and language. Oriented by my training in history and pedagogy, I have sought connections between old and new technologies of teaching and learning, and analyzed how new media are inscribed in different contexts that have particular cultural and economic resources, pedagogical traditions, and local practices. My research has focused in Latin American schools that either adopted one-laptop-per-child programs or are trying to deal, simply but not less significantly, with the new socio-technical conditions brought by mobile computing and social connective media. I observed classes, interviewed teachers and students, and analyzed texts and materials produced by students in public schools in Argentina and Mexico ranging from highly selective preparatory institutions to low-income schools in shanty towns or semi-rural areas.

My findings point to changes that affect not only basic education but also the production of knowledge in universities and the education of researchers. One visible transformation is the shift from research to search: teachers emphasize the need to master the ability to navigate search engines instead of developing critical research skills; knowledge is equated to information, contents seem interchangeable, and most decisions are delegated to algorithms. Another relevant change is the dominance of images as means of expression and of capturing an ever more fleeting attention. Writing is declining in favor of visual records, a decline that could speak of expanded expressive possibilities for the new generations but that, when seen through the inequalities of schooling and family upbringing, appears to maintain the privilege of the few who can produce complex arguments or be fluent and creative in different modes of representation. Through examples taken from my fieldwork, I will argue that, despite its many promises, the spread of digital media in education raises disturbing questions about its long-term effects on the education of the public and on the quality of democratic life.

Publish and Impoverish: Reflections about the Use of Simplistic Forms of Accountability in Higher Education Research

Gustavo Fischman. Arizona State University, USA

Publish and impoverish: Are there any alternatives to simplistic forms of accountability in higher education research?

This presentation will ask a few ostensibly simple questions that unavoidably require complicated answers: Why do we need to count citations in high impact factor Journals? Who does the counting? What counts? Who pays for the counting? What's the scientific benefit of this counting? Addressing such questions involves paying attention to historical trends as well changes in scientific systems, technologies and higher education infrastructures through which research is produced and made available for multiple agendas and stakeholders. Through a discussion of current trends and shifting roles of academic journals and accountability systems, this presentation will explore criteria to avoid constraining the academic journals as simplistic tools of accountability, and propose changes to both reaffirm the journals' centrality in the process of knowledge production as well as the urgent need to expand their usability to serve the public good.

En línea en un mundo fuera de línea

Judith Kalman. Department of Educational Research, Center for Research and Advanced Studies, Mexico City

La convocatoria para esta reunión, el 16º Congreso Internacional Sobre Reformas en La Educación Superior (HER2019). Sociedad digital y educación superior: impacto y consecuencias para las políticas inicia con esta frase: La transición a la sociedad digital implica un inmenso cambio en la vida económica, social y cultural de las naciones. La selección del artículo definido, "la", denota lo conocido y lo identificable y el uso del sustantivo singular "sociedad" no es simplemente una decisión estilística, pues coincide con una tendencia presente en los discursos sociales de homogenizar la gran diversidad de significados, experiencias y prácticas que distinguen unas sociedades digitales de otras, una diversidad que no sólo apunta hacia múltiples arreglos, sino también a grandes desigualdades. En esta conferencia busco cuestionar la idea de una experiencia única y transformaciones unidireccionales en las sociedades digitales y explorar algunas de las implicaciones que tiene para la educación superior reconocer la pluralidad de vivencias, materialidades y posibilidades en las sociedades digitales.

The Role of the IT Director of Higher Education in The Era of Digital Society: The Need to Create Synergy

Nadja Starocelsky. Southern University of Chile, Chile

It is not unknown that Chilean universities must innovate in teaching and that educational technologies are essential to carry out this transformation, thus allowing our students to develop the skills and competencies appropriate to the 21st century. As a consequence of the rapid advances and increased access to the Internet, education and technologies are increasingly developing relationships that make them inseparable, which has allowed people to belong to a more interconnected world with almost unlimited access to knowledge. Knowing the importance of technologies today, are they part of the institutional strategies? Do IT managers influence strategic decisions? What is the role of the Technology Directorates in this educational transformation? Are students and academics prepared for these changes? Do we use educational technologies to generate value in our educational processes or in our university? Have policies been developed for the incorporation and use of technologies in Chilean universities?

Japanese Higher Education in the Digital Age

Shinichi Yamamoto. Professor Emeritus of the Universities of Tsukuba, Hiroshima and Oberlin, Japan

“Society 5.0,” that means 4th industrial revolution, is one of the keywords widely discussed in Japan recently. Main topics on this matter are what this society will be, how we should respond to, and how universities should train students for this change. AI, Big Data, Internet of Things (IOT), Robotics are the concerns for those who are dealing with policy formation and business management. However, relationship between higher education and the new society has much room for further discussion.

University has been an important social entity and has long history of nearly 900 years, if we think of European-style institution. Even in Japan, we have 140 years history since establishment of the first modern university. The digital age is now challenging a lot of traditional functions of university, i.e., teaching, research, and social contribution. I will discuss mainly about the situation in Japan expecting the audiences think about their own higher education globally.

La Iniciativa del Consorcio de Educación Superior para la Sociedad Digital en América Latina y el Caribe

Celso Garrido (Coordinador del panel). Metropolitan Autonomous University, Azcapotzalco, Mexico City

Germán Álvarez-Mendiola. Department of Educational Research, Center for Research and Advanced Studies, Mexico City

Alfredo Camahi. Foro Consultivo Científico y Tecnológico

Miguel Guajardo-Mendoza. Centro de Investigación y Docencia Económica

Este panel expondrá la iniciativa que diversas instituciones de educación superior (IES), organismos representativos de instituciones, redes y asociaciones (Universidad Autónoma Metropolitana, Centro de Investigación y Estudios Avanzados, Universidad de Guanajuato, Unión de Universidades de América Latina, Foro Consultivo Científico y Tecnológico, Red Universidad Empresa ALCUE y Fundación para el Conocimiento y Cultura Digital) han emprendido para desarrollar un Consorcio de la Educación Superior para la Sociedad Digital en América Latina y el Caribe, el cual, en la actualidad, está conformado por 23 IES mexicanas comprometidas en el desarrollo estratégico en torno a los desafíos que plantea la sociedad digital.

La digitalización es un cambio de era que afecta prácticamente a toda la sociedad. Es una transformación tecnológica planetaria de nuestras formas de comunicación, circulación y administración de información, y de los modos de representación científica y cultural. Es un cambio en todos los campos de la ciencia y de las profesiones.

Este cambio está impactando profundamente a las IES mexicanas y, en general, latinoamericanas, en una acelerada dinámica cuyos resultados son difíciles de prever. Las IES han tenido muchos desarrollos relacionados con la digitalización en diversos ámbitos, pero lo han hecho de manera no planeada o poco planeada y con baja o nula integración institucional y sistémica.

Esto supone un enorme reto para las universidades, que tendrán que multiplicar sus capacidades para apropiarse de lo que se produce cultural y socialmente en la era de la digitalización, desarrollar conocimiento digital, habilidades y destrezas, así como métodos e infraestructuras para contribuir al bienestar de la sociedad. Algunas de estas ideas fueron desarrolladas en el Seminario Internacional “Opciones y desafíos en México para las instituciones de educación superior ante la sociedad digital” realizado el 8 y 9 de mayo de 2018, del cual se ha publicado un libro de memorias que comentaremos en este panel.

La transición hacia la sociedad digital es un proceso sumamente complejo y ocurre de forma heterogénea, en gran parte por las desigualdades socioeconómicas, la distribución desigual del conocimiento y las prácticas sociales, así como por el acceso diferenciado a los dispositivos y las tecnologías. En ese sentido, las IES del Consorcio de la Educación Superior para la Sociedad Digital

asumirán el desafío de transformarse y propugnar porque los cambios en curso se desarrollen con un signo social progresivo. Se trata de crear un espacio de diálogo estratégico entre actores, con el fin de enfrentar los cambios con una perspectiva favorable para el desarrollo sostenible. Las instituciones del Consorcio desarrollarán sus propias estrategias, siempre abiertas a la colaboración y la suma de esfuerzos y fortalezas.

Este panel se propone exponer y discutir cuatro conjuntos de ideas: a) los problemas más relevantes en cuanto a la enseñanza y los desafíos que plantea la sociedad digital; b) la visión estratégica del Consorcio para enfrentar éstos y otros problemas; c) las acciones que el Consorcio propone impulsar en las IES de México y América Latina; d) la agenda a corto y mediano plazo del Consorcio

Las instituciones impulsoras del Consorcio parten del reconocimiento de la existencia de problemas complejos que deben ser asumidos y enfrentados. Entre otros, destacan:

- exclusión y rigidez de la educación superior;
- programas académicos con temas y tiempos para todos los estudiantes por igual;
- rezago en habilidades digitales;
- no se diseñan los programas educativos de manera óptima para equipar a los graduados para el cambiante mercado laboral, en función de las diversas realidades del país;
- normatividades rígidas, falta de portabilidad de títulos, certificados y créditos, y de reconocimiento de aprendizajes previos;
- débil coordinación IES – empresas;
- problemas de titulación y emergencia de necesidades de certificación.

La visión estratégica del Consorcio es desarrollar programas y proyectos para impulsar la capacidad de acción de las IES con relación a la transición digital, en cooperación con otras IES y con la sociedad. Esta visión parte de cuatro premisas de la transformación digital de las IES:

1. Se requiere una transformación de personas y cambiar culturas educativas;
2. Es preciso conocer la realidad sistémica sobre cómo se cumple el flujo educativo en la institución;
3. Es necesario determinar las opciones estratégicas para habilitar una transformación digital;
4. Es imprescindible asumir una perspectiva cultural de época sobre la educación en general y la del nivel superior

La digitalización genera cambios sistémicos en las IES, que requieren la interacción entre las estrategias institucionales y el área de TI. Entre otras acciones, el consorcio propugna por:

- Inclusión social y enseñanza distribuida;
- Procesos centrados en el alumno;
- Aprendizaje y pensamiento crítico;
- Recursos humanos;
- Aprendizaje de por vida;
- Investigación;
- Gobernanza;
- Intervención en la comunidad;

- Arquitectura digital y servicios a la comunidad;
- Analítica, inteligencia artificial, nube, móvil, consumidor, redes sociales y capacidades de almacenamiento

La agenda de corto y mediano plazo del Consorcio es impulsar:

1. Programa de investigación sobre educación superior y sociedad digital en México;
2. Programa de capacitación en el uso de herramientas y habilidades digitales en la educación superior, dirigido a docentes y estudiantes;
3. Flexibilización de la estructura curricular. Actualmente existe la oportunidad de ampliar y diversificar la matrícula de las IES, facilitando otras modalidades educativas no presenciales (semipresencial, a distancia, en línea) en sistemas multimodales;
4. Certificación y educación continua. El otorgamiento de títulos y reconocimientos está cambiando en esta etapa digital;
5. Investigación científica y educativa aplicada;
6. Desarrollo de un observatorio del cambio continuo.

Digitalization of Higher Education - Possibilities, Practice and Policies

Hans G. Schuetze (Panel coordinator). Department of Educational Studies, University of British Columbia

German Álvarez-Mendiola. Department of Educational Research, Center for Research and Advanced Studies, Mexico City

Carlos Ornelas (Discussant). Metropolitan Autonomous University, Xochimilco, Mexico City

Maria Slowey. Dublin City University

Shinichi Yamamoto. Universities of Tsukuba, Hiroshima and Oberlin, Japan

Muir Houston. School of Education, University of Glasgow, Scotland

Digitalization and the development of artificial intelligence are fundamental, epoch-making changes affecting every individual and all sectors, activities, and institutions of society. They raise fundamental questions, for example about the future of the state and its institutions, about personal freedom and control, and about the future of work and of learning. Digitalization is thus not a theme restricted to higher education (HE) although higher education is already, or will be in the future greatly affected by digitalization.

Universities are commonly assigned two main missions—research, teaching and learning (a third one, service to the community, is seen by many not as a separate “third mission” but as an extension of the former two). How have universities traditionally carried out these missions? How are or will these missions likely be affected by digitization? And what has changed regarding governance and administration of universities as a consequence of digitization?

Administration

In autonomous HE institutions, especially universities, academic activities are managed and coordinated by administrative units. Traditionally, administrative work was decentralized i.e. carried out by the faculties, departments and institutes. The administration has recently become more centralized. This increase of power at the centre rather than at the periphery has several other explanations, yet many functions (e.g. the admission of students, accounting for funding, information about programs and policies) have been facilitated and expanded through digitization. Also, the digitization of higher education requires new IT infrastructures such as data banks, Internet-based communication systems, and new software for teaching and learning.

Research

Research has become more important as most countries have understood the close connection of new knowledge and economic development and societal progress. Digitization allows for analysing 'Big Data' which allows collaboration with individuals and groups outside the universities ('Open Science') so that universities are losing their unique role and quasi-monopoly as producers of new knowledge. The dissemination of new knowledge, traditionally done by independent scientific publishers and academic journals is also changing as researchers are

starting publishing the methodology and results of their work on Internet-based platforms and blogs which increases the both access and circulation.

Teaching and Learning

Academic teaching occurs traditionally in the form of lectures and seminars, and student learning was partly based on individual tuition and dialogue with teachers, and partly on self-learning, mainly from academic writings such as books, scripts and journals. Increasingly, online teaching and learning are complementing and partly substituting for the traditional forms of imparting and acquiring knowledge. In many ways, this benefits the learners as it allows for individual feedback and support of learners and for quality control. On the other hand, the online tool allows for the collection of great volumes of personal data of the learners which could also be used for manipulation and control of student behaviour, not just their learning.

Central to the two mainstream missions are professors who design and conduct research and teach students, as well as students who engage in learning and, at an advanced stage of their studies, participate in their professors' research or conduct their own research studies. Critics from both groups are concerned about the dangers of digitization and wonder how they can be avoided or controlled.

The panelists will discuss five sets of questions:

1. To what degree have HE institutions already digitized and is further digitization part of their planning? What types of digital infrastructure are in place or planned by single institutions, institutional consortia or specialized bodies that design digital networks and common infrastructure for the HE system as a whole?
2. What are the objectives of HE digitization (e.g. independent or individualized learning; quality enhancement of teaching; new on-line based ways of collecting and analyzing research data, 'open science', and the efficiency of administration)?
3. What are the reasons for the reservation/resistance on the part of the professoriate, students and academic bodies (e.g. the standardized contents and control of student learning; the danger of easy plagiarism and other forms of unethical behaviour, the rise of fake or fraudulent peer reviews and publications)?
4. What are the attitudes and roles of collective academic bodies such as faculty unions, rectors' conferences, and science councils about potential negative effects of digitalization for academic freedom, open access to knowledge, independent learning, and institutional autonomy?
5. Do government ministries, independent public bodies such as funding councils, standing ministers' of education conferences, etc. advocate and push digitization through policies that require, support, regulate or control the digitization in HE? Are there policies in place that aim at protecting professors and students from potential negative effects?

Plagiarism and Digital Practices

Héctor Vera (Coordinador del panel). Research Institute on University and Education, National Autonomous University of Mexico, Mexico City

Miguel Alejandro González-Ledesma. Department of Educational Research, Center for Research and Advanced Studies, Mexico City

Catalina Inclán. Research Institute on University and Education, National Autonomous University of Mexico, Mexico City

Fermín Reyes. Legarreta y Asociados, S.C., Mexico City

Mariana Tovar. Legarreta y Asociados, S.C., Mexico City

Through new information technologies, a seemingly unlimited amount of texts are available to any person with access to internet. These texts can be easily copied, manipulated, and even partially translated into another language. This explosion of textual availability has been pointed out as the culprit for the abundance of cases of plagiarism in universities (among students as well as professors). On the other hand, information technologies have also played a crucial role in detecting plagiarized papers and articles. Thus, the digital age has enhanced our abilities to both facilitate and deter plagiarism. This panel reflects on several topics related to plagiarism and digital practices. One paper tackles the questions regarding how students actually plan and instrument “copy-paste” strategies to navigate scholar assignments. Other analyzes the current legal framework in Mexico to combat plagiarism. And another one reflects on the causes of institutional paralysis in universities to deal cases of plagiarism among faculty.

How Should Graduate School Education at Research University be Reformed: Findings from the NRC Graduate Student Survey 2006

Soichiro Aihara. Shibaura Institute of Technology, Japan

The issue of my presentation is about significant factors for the reform plan of graduate school to improve research productivity of doctoral students. The dataset comes from the doctoral student survey undertaken by the National Research Council: NRC in the United States of America. As part of the graduate school assessment, this survey was conducted for the doctoral candidates in 2006. The focus of my presentation is the engineering field and examines the determinants of research outcomes to improve research productivity of doctoral students. My presentation concludes that financial supports to doctoral students and academic support from faculty advisors are the crucial factors for the reform plan of graduate school.

In Japan, the Ministry of Education, Culture, Sports, Science and Technology: MEXT announced the Higher Education and Research Reform Initiative (Shibayama Initiative) in the February 1st, 2019. Under this initiative, higher education institutions have promoted the integrated reform of education, research, and governance. For the future directions include: (1) Securing high-quality researchers who can lead their fields and ensuring mobility in their careers, (2) Reforming research funding to support researchers' continuous efforts, and (3) Realizing research environments that can improve research productivity.

A hundred years ago, students in the United State of America were studying abroad for excellent research. After that, they have developed the graduate school and it forms the academic center today, attract excellent students from all over the world. It would be sure that we can learn a lot from the graduate school system in the U.S.A. It is also, however, there are problems such as attrition rate, time-to-degree, efficacy, etc. have been pointed out.

The development of internet communication technology has made it possible to analyze and assess 'big data' across borders. It also comes to require evidence-based policymaking. Reforms in the field of higher education are of no exception. In this presentation, factors for reform of graduate school to improve research productivity of doctoral students will be presented. It comes from the assessment data of graduate schools in the U.S.A. The graduate school is an important institution that plays a leading role in the digital society over the world. In the digital society, under open science, we can also access across borders to the data. And we could get the findings to improve academic work in the higher education system.

Policies for Digital Society and Higher Education in Mexico

Germán Álvarez-Mendiola. Department of Educational Research, Center for Research and Advanced Studies, Mexico City

Fanny Urrego-Cedillo. Department of Educational Research, Center for Research and Advanced Studies, Mexico City

This presentation offers an overview of the government policies in Mexico that promote the digital society and, in that context, argues that efforts in higher education, although important, are poorly coordinated. Mexican HEIs, with few exceptions, lack plans or programs with integrated action routes around the development of the digital society.

The policies for the development of ICTs that the Mexican government has promoted for 30 years, are currently expressed in four areas: open digital government; digital economy; health services paperwork; and education. However, according to international evaluations, Mexico lacks a mature digital development: McKinsey & Company noted that Mexico is ranked 55th out of 151 countries (Cesar et al., 2018), and OECD (2108) indicated that it is a regional leader in digital government and open data, but it is necessary to effectively coordinate the policy areas for a coherent transformation in the public sector, within a governance framework that involves various actors.

The government and HEIs have invested in infrastructure to use ICT in all higher education functions. At the federal level, efforts to promote virtual education (i.e. Open and Distance University of Mexico and MOOCs platform) stand out. Within each institution, ICTs are used in teaching, research, innovation, extension, outreach and administration, but their use is highly differentiated and is not usually articulated with general development objectives of the institution itself or with social and environmental objectives of great importance, such as attention to the problems of global climate change.

The use of ICT in HEIs has different development types: a) “spontaneous adoption”, following the trends of expansion in the use of technologies; b) intentional but scattered uses not integrated into projects of global institutional scale; c) planned uses at institutional level of a technical nature but without a global vision; and, finally, d) developments with a prospective vision that encompasses the institution as a whole with links and coordination with other HEIs through networks and consortia.

In sum, there is a huge differentiation in the use and development of ICT in Mexican HEIs, which implies important inequalities between them. Additionally, there is a lack of coordination and systemic vision about the meaning that the use of ICT should have and the role that HEIs are called to have in the development of the digital society. This situation contrasts with what has been done by other countries and other institutions in the world.

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The Use E-learning at a University Technology in a Higher Certificate in Renewable Energy Technologies

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The trend in renewable energy (RE) has generated a lot of interest in the provision of a formal education in the sector. There is a need in the world to produce professionals in the RE sector, with the necessary skills to initiate and sustain the RE projects. RE education has seen a significant growth in the past few years, with more and more universities adopting RE in their syllabus/curriculum. This field of study is being offered as a post graduate as well as under graduate instructional offering in some Universities around the globe. The Central University of Technology (CUT) is one of the Institutions offering renewable energy technology as an under grad qualification. The instructional offering promotes the use of mathematical knowledge, simulation software, practical implementations as well as basic scientific principles to address and provide sustainable solutions to the energy crisis. The inception of this instructional offering adopted the CUT's strategic teaching that promotes the use of learning management system amongst other pedagogical approaches. Lastly, the aim of this paper is to investigate the effective use of e-learning to promote student engagement in a higher certificate in renewable energy technologies. The proposed pedagogy focused on bridging the communication gap between students and educators whilst encouraging a vast participation in the duration of the programme offering.

Sociedad Digital: Acceso Abierto y Repositorio Nacional en México

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En este trabajo, se presenta el itinerario que ha seguido la iniciativa gubernamental mexicana en materia de acceso abierto (AA), enfatizando logros y principales dificultades para su puesta en marcha, pero también tomando como referencia lo que ha ocurrido en la región de América Latina y en el mundo sobre el Acceso Abierto.

En México, el AA comenzó a ser un asunto de políticas públicas al comienzo de la segunda década del siglo XXI. Una iniciativa que, como ocurrió en diferentes naciones, recuperó la intencionalidad del Congreso de Budapest del 2001, cuya definición es mejor conocida como la BOAI (Budapest Open Acces Initiative, por sus siglas en inglés). Una reunión en la que se reconoció, por primera vez, la inminencia del AA a revistas científicas y académicas por la posibilidad que ofrecía Internet para la libre diseminación de bienes, algo que no era posible en los días del formato único de papel impreso.

La propuesta inició en 2014 con el diseño de un marco normativo que permitiera poner a disposición pública el cúmulo de información científica y tecnológica. Este incluyó una modificación a la ley de ciencia y tecnología, a la cual se le añadió un capítulo (capítulo X) para destacar los principales rasgos "Del Acceso Abierto, Acceso a la Información Científica, Tecnológica y de Innovación del Repositorio Nacional". Un capítulo para precisar conceptos y establecer las responsabilidades del caso.

En la normatividad, el Consejo Nacional de Ciencia y Tecnología quedó como responsable del diseño de una estrategia nacional para democratizar la información científica y tecnológica, mediante la cual se podría ampliar, consolidar o facilitar el acceso a la información, a texto completo, en formatos digitales.

Las normas también establecieron que el AA se daría a través de una plataforma digital “y sin requerimientos de suscripción, registro o pago”. Desde luego, bajo la premisa de que la información, investigaciones o materiales hubieran sido financiados con recursos públicos o utilizado infraestructura pública en su realización.

En la misma ley quedaron establecidos los plazos que debían cumplirse: 180 días para expedir los lineamientos y disposiciones para el funcionamiento del Repositorio Nacional y 18 meses, contados a partir de la publicación de los lineamientos, “para capacitar, convocar, organizar y coordinar a las instituciones e instancias en materia de acceso abierto, diseminación de la información y funcionamiento del Repositorio Nacional”.

La calidad de la educación en línea impulsada por una regulación adecuada

Abraham G. Cárdenas-González. Head of Anáhuac Online, Anáhuac University, Mexico City

Como directivo en una universidad privada soy consciente del papel estratégico de la educación en línea -acreditada y de calidad- en la educación superior tradicional, que no se ha adaptado al ritmo de la sociedad digital, pues su estructura institucional está sostenida por algunas premisas, conceptos o teorías que ya no son válidos. “Esta falta de correspondencia entre el nuevo mundo tecnológico y las viejas instituciones, explica la mayor parte de los problemas...” en nuestra actualidad digital (Obregón, 2018).

Urge que los actores principales encuentren sólidos criterios de calidad, pero no por ello menos ágiles o competitivos. Martín Moreno, VP para Blackboard LATAM, afirma que los países latinoamericanos vanguardistas en educación en línea -Brasil y Colombia- deben su vigor a legislaciones acertadas que promueven, incentivan y no coartan el desarrollo de una nutrida oferta pública y privada. (Moreno, 2019).

Anant Agarwal presidente de edX, plataforma de MOOCs que agrupa a cerca de 20 millones de alumnos y ofrece su plataforma abierta a 45 millones de personas en el mundo, percibe la magnífica oportunidad de ofrecer contenidos en español, pues de casi 2300 cursos en edX, sólo 265 están en español, lengua cuya demanda muestra el mayor crecimiento. (Agarwal, 2019).

La disrupción de la tecnología toca y trastoca profundamente todas las fibras de la educación tradicional; esencialmente arroja nuevas métricas (Christensen, 1997) académicas, que llenan de colorido la analítica de los resultados de aprendizaje. Ahora no todas las métricas de calidad de la educación escolarizada son válidas ni pertinentes para la educación no escolarizada. Es preciso “nacer de nuevo” (Cfr. Jn 3) y no imponer una vieja normativa remendada.

La educación tradicional, que nace con la Universidad de Bolonia hace 931 años, es ahora como la enorme estatua del sueño de Nabucodonosor (Cfr. Daniel 2) (Biblia de Jerusalén Latinoamericana, 2014)“...enorme, de extraordinario brillo...La cabeza de oro puro, el pecho y los brazos de plata, las caderas y el vientre de bronce, las piernas de hierro, pero con los pies parte de

hierro mezclado con barro” La advertencia del sueño es que una pequeña piedrecilla que se desprende sola -la digitalización-, choca contra los pies de barro, haciendo pedazos la estatua. (Cfr. Daniel 2, 31, ss) (Biblia de Jerusalén Latinoamericana, 2014).

La mezcla actual de la educación tradicional con la educación en línea no está amalgamada. Y esa imperfecta mezcla, o la ausencia del segundo elemento es una grave debilidad de la Educación Superior tradicional.

Si nuestras autoridades educativas impulsan un marco exigente y realista de calidad para la nueva educación superior, podríamos tener en México la oferta iberoamericana de mayor vigor académico.

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The Era of the Specialized Application Software

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In Mexico, the national policies towards integration of Information and Communication Technologies (ICT) into education are either oriented to the basic education level, related to the construction or improvement of digital infrastructure or far from a disciplinary view of ICT usage in Higher Education Institutions (HEI). What we present in this contribution aims to provide insights for policy makers with regards to a specialized view of software applications and a disciplinary approach of ICT integration to ICT.

The technological revolution and the digital culture are generating deep transformations in Higher Education Institutions, whereas the most important and transcendent issue is the boom in the variety and high degree of discipline oriented details of specialized application software and databases. The era that once was assumed as the technological promise of education is well overpassed. Teaching how to use an office suite is no longer enough. A new era of application software has raised and its quintessence is the high degree of discipline oriented digital solutions. This new bread of software and databases touches all academic fields procured in Higher Education Institutions, bringing within cultural changes, new demands of organizational adjustments and derived intense curricular updating needs.

In this contribution we present results from a research intervention in which by means of 80 focus groups with 500 Educators from 70 different careers offered in a Mexican public university we made evident the great variety of software and databases related to the different careers, needs, problems and strategies required at a University level.

Each academic discipline or higher education career is in the process of a reconfiguration, driven by the digital knowledge set that distinguishes the academic practices of teaching and research; as well as those related to the professional field that are influenced by ICT.

In the university, as well as in other educational contexts, we are experiencing an uncertain moment with regards to ICT integration to the curricula, due to the lack of a general consensus about what needs to be taught; the amount of it; and the right moment to integrate it along the degree program. This is a serious problem, as it implies the poor definition of what is expected from educators in terms of their technological expertise; the level of digital related content to be included in the academic programs; the desired alumni profile with regards to their general digital skills; and the dosage, timing, order and ways of teaching specialized application software and database usage. The same problem represents a challenge in postgraduate studies and in the definition of professional profiles for applying for an academic position. It is then a critical moment in Higher education that needs to be solved with the active intervention of faculties to reorganize the academic world in the digital world.

Functioning of Two Virtual Higher Education Institutions in Mexico. Different Institutional Logics, Different Results

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The use of information and communication technologies (ICT) have promoted the accelerated creation of virtual higher education programs. The National Association of Universities and Higher Education Institutions (ANUIES) reported a total of 1,545 undergraduate programs and 1,535 postgraduate programs in 2012-2013, while in the 2017-2018 reported 2,286 and 2,029 programs respectively, which implies a growth of 48% and 32% in five years. Nevertheless, there are important differences between public and private sectors. In 2017-2018, private institutions offered 3,383 programs, while public institutions only 932, which means a significant difference of more than 300%.

However, the virtual educational has been developed in a context characterized by the preeminence of very different and contrasting logics that constrains the public and private institutions behavior. Consequently, the virtual offer is currently distinguished by the wide diversification of its programs, educational models, management and infrastructure (ANUIES, 2015). These elements generate differentiated behaviors in the acquisition and maintenance of enrollment, as well as in the creation, validity and closure of educational programs.

To illustrate the differences in the institutional behavior, this paper analyzes the cases of the Online Campus of the Technological University of Mexico (CL-UNITEC), a private university with a

successful expansion; and the no longer active Virtual University System of the Autonomous University of Hidalgo State (SUV-UAEH), a public institution. The categories for the analysis are: educational programs, educational models, school management and marketing.

The theoretical approach integrates contributions from higher education sociology and organizational sociology. The main incorporated notions are virtual higher education, organizations and logics of institutional functioning: public bureaucracy and market. The public bureaucracy logics is characterized by the establishment of verification and control mechanisms, which leads to routines, slowness and accumulated interests (Olsen, 2005; Clark, 1983; Brunner, 2006). While the market logic pushes organizations to generate strategies that tend to attract and maintain students more efficiently, as well as gain participation in the segment in which they compete. Either through the broadening of its offer or the generation of prestige (Brunner, 2006, 2007; Clark, 1983).

The main findings are these: In the case of the public university (SUV-UAEH) the institutional decline was related to three important factors: the limited educational offer; the scarce and limited marketing strategies; and dense institutional management, constrained by its dependence on the normative and organizational structures of the face-to-face modality. In contrast, the success of the private university (CV-UNITEC) is related to the wide diversification of its educational offer; its wide-ranging marketing campaigns; and an institutional management focused on the effectiveness and efficiency in the use of its resources.

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The effects of ICT on Academic Working Conditions

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This paper analyzes how the working conditions of academe in Mexico have changed because of the interplay of three forces: the increasing use of ICT, academic capitalism, and public policies. Our argument is that, not so long ago, faculty members were the owners and repositories of valid knowledge. Universities had to hire full time faculty, because only they were able to elaborate the curriculum, teach and do research. Universities were professional bureaucracies, run collegially by the professionals, whereas administrators played an auxiliary function (Clark, 1983). Teaching and learning occurred within the black box, to which only teachers had the key.

The use of ICT has put this ownership in dispute, leading to the commodification of knowledge. Almost all courses now exist on-line, even the classroom-based ones. Platforms register content, learning objectives, teaching and evaluation methods, interaction, student satisfaction surveys, grades and underlying evidence. Almost all scientific publications are now available on-line as well. In this way, teaching and research have become commodities.

Commodification is central for academic (or knowledge) capitalism: a broad variety of market and market-like activities, used by institutions and faculty, in order to procure additional private funding, or performance-based public funding, in times of reduced overall public funding (Slaughter and Rhoades, 2004).

Policies of the last three decades have promoted both the use of ICT and academic capitalism, through performance based funding and evaluation. In order to compete for additional revenue, both universities and faculty have to show evidence of productivity, as well as success, measured by impact factors, in marketing and branding their products.

The changes we will discuss show up in the registration or usurpation of intellectual property rights (restricting access to tuition payers) or in the omission of some actors from these rights. This change clearly occurs in research, as several researchers point out: faculty sells, or yields, inventions and publications to institutions who obtain the benefits. It gradually occurs in teaching as well, when clients and providers buy and sell degree programs, on-line courses, MOOCs and teaching methods, while teachers rarely appear as proprietors. The effects also show in hiring practices (temporary part-time teachers) and high turnover rates.

As a result, faculty are becoming dispensable knowledge workers, as ICT automatizes their work. This not only affects careers, but also knowledge production, income and authority.

Building Online or Hybrid Experiences in Higher Education

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Though digital technologies are transforming the landscape of higher education, we argue that the impact of such technologies on teaching and learning practices has been marginal, and that traditional pedagogies are replicated at scale with these new tools. Digital technologies have improved access to higher education. In the US, for example, the growth of distance education exceeded that of overall higher education by 3.9% between 2013-2014, while nearly two-thirds of online students were enrolled in courses offered by public institutions (Allen, Seaman, Poulin & Taylor Straut, 2016). And in 2015, about 30% of students were enrolled in at least one distance course (Seaman, Allen & Seaman, 2018). With the expansion of online learning there are also

concerns regarding the quality of online education and student learning outcomes (Seaman et al., 2018).

Protopsaltis and Baum (2019) mention that “student-faculty interactions” are a vital component of quality online courses. Given the importance of “regular and substantive interactions” in online higher education, we discuss models from the field of Mind, Brain and Education as well as the Community of Inquiry (COI) framework to design online or hybrid educational experiences that support such interactions. We use the course classifications described by Allen et al. (2016) to identify blended/hybrid (30-70%) and online (80+%) offerings, based on the percentage of web-based content.

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Digital Society and Higher Education: Impact and Challenges

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The so-called “digital society” constitutes a superior phase and a qualitative change in the development of the “knowledge society”. This is due to the dominance acquired by new technologies based on the digital revolution. But, fundamentally, to the radical transformations of social relations that are produced by the configuration of a cyber-physical society. Some features of this are: half of the world's population is connected to the Internet; few large technology companies concentrate extraordinary power; the interrelation between human and artificial intelligence is growing.

The development of digital technologies accelerated the trend of the knowledge society towards the production of socially distributed scientific knowledge and, with this, the picture of participating social actors, the picture of participating social actors became more complex, among which are: private actors for business purposes (i.e. technology companies, private universities), the state with new roles in public higher education and, finally, traditional universities that are confronted with the loss of their monopoly in the social production of scientific knowledge. The foregoing has generated tensions in determining the governance of the social knowledge ecosystem.

The digital society produces a strong impact and drives radical changes in higher education, especially in teaching, which is the function that faces major transformations. For example, distance education relocated this activity; open educational resources (OER) modified the means of circulation of knowledge; the changing dynamics of occupations socially deteriorated academic

degrees and the importance of certificates increased; competency-based training became more relevant compared to the one focused on disciplinary knowledge; and learning analytics enabled individualized and adaptive learning. Overall, a complex transition to the digitalization of teaching in higher education is taking place.

Faced with these changes, universities must redefine their role in social life, which implies a deep commitment to help direct the general transition to a cyber-digital order that is favorable for society and the planet. This implies a complex agenda of issues to be addressed by universities: citizenship and democracy; environmental sustainability; food safety; work and organizations; social inclusion and poverty; responsible data science; cyber security; digital citizenship; and cyber security.

Tensiones de la enseñanza universitaria en el mundo digitalizado. Algunos apuntes para las políticas institucionales

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El trabajo cotidiano de docencia requiere de toma de decisiones que evidencian algunas de las tensiones con las que nos enfrentamos en el mundo digitalizado con relación a la trasmisión, distribución y transferencia del conocimiento en el marco de los cambios sociales, políticos y económicos que han caracterizado los primeros veinte años de este siglo. En este trabajo se hará un recorrido basado en investigaciones desarrolladas en el contexto español y latinoamericano sobre tres tensiones básicas: transmisión-participación; conocimiento abierto o privativo; y el uso de big data en educación y evaluación (learning analytics).

La tensión transmisión-participación (Carli, 2013) coloca al profesorado y a las políticas institucionales en la tesitura de habilitar entornos que prolongue la institución en otros tiempos y espacios, además de posibilitar el encuentro con la cultura juvenil construida en las lógicas de las redes sociales por las que están transitando en la contemporaneidad. Esto pone en cuestión la mediación con el conocimiento que él o la docente realizan. El uso de los diferentes entornos digitales de aprendizaje y nuevos medios ¿implica nuevos modos de apropiación del conocimiento? Qué dispositivos se usan y cómo, influyen en su construcción y distribución.

En ese contexto surge la tensión en relación con la propiedad del conocimiento y los modos de compartirlo y distribuirlo (repositorios digitales abiertos y recursos educativos abiertos). Las decisiones con relación a esta cuestión involucran importantes cambios en la enseñanza y en la forma de compartir la producción académica e intelectual, de manera que otros puedan acceder, modificar, adaptar, distribuir, traducir. Esto significa rupturas con las formas de producción y publicación académica tradicionales, en el marco de un cambio de paradigma hacia un modelo más equilibrado del derecho de autor (Rodés, 2018).

Por último, el profesorado también se enfrenta a la tesitura del uso de datos para la toma de decisiones en la enseñanza y la evaluación (learning analytics) en base a algoritmos para la búsqueda de automatización de toma de decisiones en distintas escalas (nacional, institucional o a nivel de clase). Se usan para predecir performances, seleccionar estudiantes y evaluar docentes

o “Sistemas de Tutorías Inteligentes” o “Adaptive Learning Systems” para recomendar lecciones y contenidos a los alumnos (Williamson, 2019).

Las respuestas que las políticas institucionales ofrezcan para resolver estas tres tensiones podrían definir el recorrido que realizará en los próximos años.

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Branding Building of Private Higher Education Institutions in the Digital Age. The Cases of Chile and Mexico

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While there is an increasing interest on online educational environments and technologies that allow them, the way that online interactions are shaping our perception of education itself has been largely neglected. Our scope is to contribute to fill this gap by focusing on branding strategies of private higher education institutions (HEI) in the digital age, and the way this phenomenon is influencing customer’s perception. The growth of private HEI constitutes a strong trend in most Latin American countries. Strategies of private institutions to promote their brand identity varies according to (1) the market context in which there are embedded (degree of privatization of the national systems), and (2) the particularities of their institutional diversification and segmentation processes. However, despite these differences, efforts to create a well-crafted online brand identity is a highly interesting feature of private HEI all over the region. Through a comparative analysis on six universities in Mexico and Chile, we stress the relevance of this common trend in terms of the alignment between what institutions want the public to believe of them (through online advertisement and websites design), and what are they really able to provide. Interestingly, we found that this alignment has less to do with traditional benchmarks for assessing higher education, than online branding capacity to reflect elite expectations, middle-class values or even a sense of opportunity for low-income customers.

Research in the Digital Age: Secondary Data, Social Media and Governance Issues

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Big data in all its forms has vastly increased in terms of its scope and scale and covers almost all aspects of human life, our administrative, health, welfare, economic, retail and increasingly our social interactions. However, the introduction of GDPR and the negative publicity surrounding the activities of certain academic researchers and private sector organisations in the access, use, sale, algorithmic agglomeration and the ability to link and aggregate our data has resulted in renewed efforts to provide some form of guidance in relation to both the ethical and moral dimensions to the use of this type of data in academic research. This paper will address some of these points; and, hopefully encourage discussion around potential ethical and legal issues in the digital Age.

The paper begins with an overview of the concept of research governance and its components or constituent parts: research integrity, research ethics and data management. After providing an outline of each of these three elements as they tend to operate in human subject research – with an emphasis on developments in the social sciences. The paper will then go on to look in more detail about the impact of digital media and networks in relation to issues of governance including issues or public versus private, consent, sharing, reuse and outputs with a focus on disclosure control.

Finally, it will look at one institution's attempts to wrestle with some of the quandaries that the use of digital media in academic research has placed before us through education, training and awareness raising.

Ejes clave para la integración de TIC en las instituciones de educación superior en México

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En este trabajo presentamos algunos resultados del estudio Uso de TIC en la educación superior en México, realizado por la DGTIC-UNAM para el Fideicomiso SEP-UNAM en 2017.

El estudio tuvo como propósito realizar un diagnóstico del uso educativo de TIC en diversas instituciones para poder formular ejes que orienten la integración tecnológica en las IES.

Iniciamos con una revisión bibliográfica acerca de tendencias en el uso de TIC en educación superior, lineamientos de organismos internacionales, publicaciones de instituciones dedicadas a la investigación en educación superior y revisión de modelos de integración de TIC de universidades nacionales y extranjeras. Con esa información diseñamos entrevistas semiestructuradas que aplicamos a diversos puestos clave dentro del ámbito de TI de universidades nacionales y extranjeras, públicas y privadas y de diferentes tamaños. Obtuvimos datos de cantidad y disponibilidad de TIC que tratamos cuantitativamente. De los resultados obtenidos conformamos dos ejes de análisis: tecnológico, que abarca el gobierno y gestión de TIC, y pedagógico, que abarca la formación de profesores, la integración de TIC al diseño curricular y la calidad y pertinencia de recursos educativos digitales con los que cuentan las IES. Estos ejes nos permitieron proponer una clasificación de las IES para analizar las brechas existentes entre

ellas. Ahora, proponemos lo que llamamos Agenda de trabajo para orientar las políticas de integración tecnológica de las IES. Con esto pretendemos contribuir a la planeación estratégica de la inversión tecnológica para que aporte beneficios a las instituciones educativas en el marco de la realidad actual de distribución de presupuesto y de la competencia en el mercado laboral que enfrentan los estudiantes egresados de dichas instituciones.

La Agenda de trabajo se compone de 5 líneas de acción fundamentales para asegurar que la inversión tecnológica impacte realmente en los propósitos educativos de las IES. Estos rubros son:

- Gobierno y gestión de TIC
- Operación de la infraestructura de TIC
- Formación de profesores
- Integración de TIC al diseño curricular
- Unidades de TAC (Tecnologías para el Aprendizaje y el Conocimiento)
-

Finalmente, ponemos a discusión estrategias de gestión de TIC para diversos tipos de IES así como modelos de formación docente y de integración tecnológica en el aula para promover el aprendizaje de los estudiantes.

A Comparative Study of the Global Excellence Initiatives

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Over the recent 25 years, *excellence initiatives* in higher education have spread around the world: among the countries of the European Union, we can list the examples of Germany (*Exzellenzinitiative*), France (*Initiative d'Excellence*), Spain (*Programa Campus de Excelencia Internacional*), etc., in the dynamic countries of South and South-East Asia it is Japan (*Top Global University Project*) and South Korea (*Brain Korea 21 Project*), China (*Project 985, Project 211, World Class 2.0*) and India (*Institutions of Eminence*). In Russia, two initiatives of excellence have been launched: *Program 5-100* and the program of *flagship universities*.

The experience of implementing excellence initiatives has been studied in large part using the methodology of the case study, applied research is most often done in benchmarking programs. The time has come for theoretical comprehension and generalization of the accumulated experience. The study aims at comparison of excellence initiatives in different countries and regions. Such an analysis will enable identification of mechanisms that affect the effectiveness of national and supranational excellence initiatives in higher education.

Methods

1. *Comparative analysis* enables comparison of both the different states of the object, spaced in time (time series) and the properties and dynamics of two different objects.
2. *Case analysis.* This method is aimed at conducting an intensive analysis of a specific situation, which involves taking into account the context and using a combination of different (qualitative, quantitative) research methods, data collection, and analysis.
3. *Institutional analysis.* We understand institutions as a set of formal norms, informal constraints and coercive mechanisms. They are quite different for each country and university.

Results

The study is in progress; that's why we describe preliminary results and do it in a rather brief manner. However, we plan to accomplish the study by the end of August. The expected results are twofold:

1. Theoretical contribution. The results of comparative analysis show the relationship between design of excellence initiatives in higher education and national (or regional) and cultural context. These findings are the first step in bridging quantitative and qualitative analysis in higher education research. Thus, we will be able to extend the quantitative model of efficiency by non-scientometric and non-financial variables.
2. Highlights for practice, i.e. strategy insights for policymakers in the area of higher education.

Mexico's Intercultural Universities and the Digital Divide

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The so-called Knowledge Economy has placed new demands on higher education institutions, particularly those in the developing world. Universities face pressure to democratize and incorporate previously excluded populations while at the same time preparing graduates to compete in an increasingly competitive, globalized economy, in which digital literacy and workplace certification are essential elements. In the case of Mexico's 11 Intercultural Universities—whose missions are anchored in reviving traditional knowledge and practices rather than in fueling the technological sectors—those challenges are particularly acute. In addition to major economic and human resources constraints, the institutions face two key challenges: a lack of digital literacy among students and staff (the digital divide) and difficulties securing workplace certification for their graduates. In this presentation, I discuss the main challenges facing these institutions in the context of the Digital Society, as well as some of the strategies they have adopted to address them.

Internacionalización y Endogamia en la UAM: una Mirada desde el Análisis de Redes Sociales

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Desde un punto de vista relacional, la endogamia académica es la contraparte del proceso de internacionalización. Sin embargo, mientras éste último constituye un fenómeno más visible debido a las características de un contexto en el que la producción de conocimiento es colaborativa, de alcances mundiales y para el que se han desarrollado importantes indicadores (Vinck, 2015), la endogamia académica, por el contrario, no sólo es un fenómeno periférico (Altbach, Yudkevich y Rumbley, 2015), sino que su estudio no ha supuesto el despliegue de instrumentos acordes con las características de ese contexto. Aunque en los últimos años la endogamia académica ha despertado interés, continúa abordándose desde un punto de vista contractual (IES que contratan a sus propios graduados, del doctorado principalmente). En otros

casos se le concibe como una situación más general, pero se plantean escasos referentes empíricos para su análisis.

Este trabajo pretende dar cuenta de esas dos caras [internacionalización y endogamia] en la Universidad Autónoma Metropolitana (UAM). Así por ejemplo, en el documento *Ideas sobre la Universidad y Programa de trabajo para una posible gestión como rector general para el período 2017-2021*, Eduardo Peñaloza, a la postre rector de esta institución, señalaba: “Una de las debilidades que a mi juicio hay en la Universidad es una endogamia que en ocasiones pervierte el trabajo, y que podría ser resultado de la estructura transversal, dialógica de esta universidad”. Sin embargo, ¿cómo dar cuenta de esta circunstancia?

Recurrimos a los instrumentos del Análisis de Redes Sociales (ARS) para abordar las redes del Programa para el Desarrollo Profesional Docente (Prodep, antes Promep) en el período 2009-2015. Si bien éste ha sido objeto de controversia, las redes Prodep, generadas como parte de la vertiente colectiva del programa, ofrecen información relacional que permitirá, por un lado, mostrar el alcance e intensidad de los vínculos nacionales e internacionales de los Cuerpos Académicos (CA) de la UAM, así como posibles patrones interinstitucionales, y por otro, aportar elementos para el abordaje de la endogamia académica desde un punto de vista relacional: tipos a que dan lugar las particulares reglas del Prodep, la frecuencia con que se presentan y las relaciones institucionales con que se engarzan.

Finalmente, los resultados del programa a lo largo del período dan paso a una reflexión sobre el razonamiento que, entre los académicos, suscita el hecho de que la generación de redes se haya asociado desde un principio a recursos extraordinarios sujetos a los resultados de la evaluación.

Impacto de los Índices Internacionales en las Políticas de Ciencia y Tecnología y en las Prácticas de la Investigación. El Caso de las Revistas de Investigación Educativa en los Países de Iberoamérica

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La presentación procura analizar el impacto generado por los índices internacionales en las políticas de investigación científica y en ciertas prácticas relacionadas con la forma de producir y divulgar el trabajo científico en los países de Iberoamérica, lo cual se realiza a partir de cuatro aspectos: a) al brindar un marco contextual que nos ayude a comprender por qué han adquirido tanta importancia los índices internacionales en el ámbito de la investigación científica; b) al ofrecer un panorama sobre las principales tendencias de participación que muestran las revistas de investigación educativa en los índices internacionales, utilizando para ello la información proveniente de las bases de datos internacionales (WoS, Scopus y SciELO) e información de las páginas web de las propias revistas de investigación educativa de los países iberoamericanos; c) al comentar sobre los retos que enfrentan las revistas de los países de Iberoamérica para aumentar sus márgenes de participación en dichos índices; y d) al exponer una serie de problemas vinculados con la repercusión de los índices en la forma de producir y divulgar el trabajo científico.

La participación de las revistas de investigación educativa de los países de Iberoamérica en los índices internacionales, muestran como éstas ocupan una posición muy marginal en los índices internacionales, pero principalmente en WoS (que es el índice más selectivo) y presentan situaciones semejantes en Scopus y SciELO; asimismo, muestran diferentes patrones de participación de acuerdo con características tales como país de edición, idiomas en que publican, etcétera. La baja participación, a su vez, está repercutiendo en la aparición de una serie de problemas relacionados con las prácticas que siguen los investigadores en el proceso de producción y divulgación de su trabajo científico, quienes están reorientando sus esfuerzos ante la urgencia de publicar en revistas consideradas de “calidad”. Estos problemas, llevan a reflexionar sobre si la participación en índices internacionales nos está llevando a hacer mejor ciencia o hacia la necesidad de establecer otros parámetros para la valoración del trabajo científico, a partir de sus impactos en los ámbitos locales y nacionales.

Moocs as Part of National and Institutional Policies to Expand Higher Education and Advance UN’S Sustainable Development Goals: The Case of Mexico

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Massive open online courses (MOOC) are a global trend with more than 100 million students. Their rapid evolution is the result of software development, hardware storage capacity, as well as data analytical algorithms. Never in the history of education has there been a technology capable of distributing knowledge and learning opportunities to so many people at barely no cost, with the only requirement of computer access and Internet connection.

Today, there are more than 60 technological platforms that host these courses from all around the world in developed and underdeveloped countries. It is true, notwithstanding, that Coursera, edX, Udacity, all three from the United States, hold the largest market share, but China’s, India’s and other countries’ platforms are rapidly catching up. MOOCs were at its highest media attention in 2012 when a New York Times’ article stated that they would radically change the higher education landscape. That has not been the case, but they have certainly made an enormous contribution to lifelong learning and this is where MOOCs have their best shot at helping attain United Nation’s 17 sustainable development goals.

In recent years MOOCs have been under severe scrutiny and critique due to their low completion rates. Many studies have provided evidence of this phenomenon and have offered different explanations for its existence. Some have stated reasons related to students’ initial motivation to participate and others have concentrated on internal issues concerning the different instructional models used in their design and production.

In this paper we underline the importance of evidence based instructional design of MOOCs as being the main reason for higher than average completion rates in nine MOOC case studies offered by the Mexico X platform, and provide insights as to the relevant issues involved in obtaining these results. We focus on university courses, but pay special attention to MOOCs provided by other type of organizations involved in topics related to sexual harassment prevention and immediate psychological attention to people suffering from natural calamities like

earthquakes. The case studies analyzed are examples of MOOCs directly related to United Nation's sustainable development goals.

Use of Online and Blended Learning in a Multidisciplinary Curricula and Promotion of Global Citizenship (Policy Implication for a Contact University in South Africa)

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In this paper, the convergence of online and blended learning for presenting a multidisciplinary curricula for both contact and distant students is explored. The debate is in view of constructing botherless teaching and learning, and also proposal for policy change in higher education qualifications framework (HEQF), with a university of technology at the centre of change. Convergence as a construct allows for a consideration of converging academic structures, programme design, mode of delivery, curricular as well as the obligation of role players and practitioners in higher education to address the needs of contemporary and modernized students learning and pedagogy aiming at converging and increasingly mediated world through the use of online and blended learning as modes of delivery. Use of information and communication tools such as mobile phones, social media applications, computers or television to reach students without contact is explored with a special focus at universities of technology in South Africa. The ultimate goal is that of ensuring graduate attribute which defines the student as a global citizen.

Estrategias en torno al plagio académico en instituciones de educación superior pública mexicanas. Nobles ideales, infortunadas realidades

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Este trabajo presenta un panorama actual de las estrategias de regulación, prevención, detección y sanción del plagio en 35 de las instituciones de educación superior públicas mexicanas más antiguas y consolidadas. Se analiza la normatividad institucional en torno a la integridad académica y, en especial, sobre el plagio en prácticas escolares, de investigación y publicación arbitrada.

En el ámbito legal, se observa que todas las legislaciones de orden general, como la ley orgánica o el estatuto universitario contienen los principios éticos fundantes que deberían observar los universitarios, como la honestidad e integridad. En los reglamentos operativos, como los de docencia, titulación, publicaciones, también se observan elementos regulatorios del comportamiento académico. Sin embargo, es impreciso qué constituye una práctica deshonestas, y específicamente, el plagio. En el mejor de los casos se enuncia de forma ambigua y, en la mayoría, hay una franca omisión al respecto.

Por otro lado, es notorio que pocas instituciones cuentan con recursos de prevención del plagio, ya sean cursos presenciales o virtuales, plataformas o sitios web. Asimismo, las instituciones tampoco ofrecen licencias de software antiplagio para sus profesores, por lo que la tarea de

identificar prácticas deshonestas queda acotada por los recursos, tiempo y criterio de los académicos.

En paralelo, podemos observar que sólo 10 instituciones editan alguna revista que declara utilizar un software de detección de plagio; aunque éstos también tienen limitaciones, como el costo elevado si es un software propietario, la búsqueda de coincidencias o copia de párrafos en un solo idioma o bien, cuando se trata de datos citados con tanta frecuencia que pueden clasificarse como plagio. Por esta razón, el trabajo de un(a) editor(a) especializada es insustituible a pesar del uso de dichos software.

Sumado a lo anterior, destaca que sólo una minoría de las instituciones define sanciones claras a las conductas deshonestas, las cuales se refieren usualmente a la falsificación de documentos oficiales más que a otras prácticas cotidianas como el plagio académico en trabajos escolares o de investigación.

Con base en estas ideas, planteamos que las reglas formales contempladas en la normatividad tienen poca correspondencia con las reglas informales y los valores operantes en el entorno institucional. Es decir, aunque la legislación ha incursionado en la honestidad académica, sus principios han permanecido como grandes ideales alejados de la cultura institucional y las prácticas cotidianas de los universitarios; pues en éstas se advierte tolerancia y laxitud de la comunidad en torno a este tema. Además, parece que el comportamiento fraudulento tiene consecuencias irrelevantes, su denuncia es poco valorada y la dificultad para detectarlo son factores que contribuyen al desinterés de los universitarios sobre el tema, pues aunque sus principios éticos son claros, se observa poca inversión de recursos financieros y académicos para prevenir y sancionar las conductas deshonestas en la realidad cotidiana de las aulas y las publicaciones científicas.

Incorporación de la educación a distancia en línea en una universidad con tradición áulica presencial

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En esta ponencia se relata la experiencia de la Universidad de Guadalajara en la búsqueda de estrategias para la incorporación de la educación a distancia en línea como una modalidad alternativa a la tradición áulica, con énfasis en factores considerados de gran incidencia en la posibilidad del desarrollo de nuevas modalidades académicas. Entre estos factores están los académicos, culturales, políticos y económicos, estos dos últimos los de mayor fuerza y constancia.

Dada la cercanía de estos hechos, que son parte de un proceso inacabado y de buscar explicaciones a situaciones actuales, este estudio tiene un enfoque presentista. Una especie de “historia vivida”.

El propósito que anima este estudio, que considero una primera aproximación, es describir, pretender explicar y reflexionar acerca de los factores que inciden en los cambios y continuidades en el desarrollo de la educación en línea en la Universidad de Guadalajara, con énfasis en las relaciones de poder como factor dominante; lo económico como fuerte factor incidente; lo

cultural presente tanto en la organización escolar como en las personas y lo académico subordinado a otros factores.

Metodológicamente, en este estudio se parte de la dificultad que implica entender la complejidad del conocimiento histórico de lo educativo por su multidimensionalidad; la diversidad en sus perspectivas y subjetividades; los tiempos tan dispares entre sus distintos procesos y sus distintos contextos. Además, el hecho de ser una historia en gran parte “vívica” provoca que esté muy impregnada de la subjetividad de quien escribe.

De acuerdo con esas consideraciones, se plantean algunos referentes conceptuales, para luego narrar las historias de la educación áulica y las modalidades alternativas, como éstas surgen en la medida que lo áulico se cierra y tiende a la homogeneización y seriación rígida. Narración ubicada en la coyuntura de la reforma universitaria que entonces se vivía, en la que se explica cómo se injertó una nueva modalidad académica basada en el aprendizaje en línea, en el esquema y modos de operar áulicos y presenciales. Con énfasis en las negociaciones y los factores críticos que afectaron tanto en los logros como en lo no logrado en las políticas y gestión organizacional universitaria.

Cientum: Transformando Dados de Currículos de Pesquisadores em Informação para Apoio à Tomada de Decisões Institucionais

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Para garantir a excelência na pesquisa, as universidades precisam periodicamente analisar o rendimento da produção acadêmica de seus pesquisadores, grupos de pesquisa, projetos, programas de pós-graduação e departamentos. Tais informações, se fossem disponibilizadas de forma automatizada, poderiam auxiliar na tomada de decisão para distribuição de recursos institucionais. Neste artigo é apresentado o Cientum, um sistema de apoio a tomada de decisão que auxilia na mensuração e quantificação do progresso científico. O Cientum é fruto do desenvolvimento iniciado pelos alunos do curso de Ciência da Computação da Universidade Federal de Pelotas. Este grupo, iniciou o desenvolvimento do Cientum ainda como Empresa Júnior e hoje são jovens empreendedores criadores e sócios da Indeorum, startup incubada pela Universidade Federal de Pelotas. O Cientum, seu primeiro produto, implementa cálculos estatísticos e técnicas de processamento de linguagem natural para transformar os currículos dos pesquisadores da instituição em informações qualitativas e quantitativas para apoiar os processos decisórios institucionais com relação à pesquisa e pós-graduação. O Cientum pode ser implantado em qualquer universidade que possua uma base bibliométrica da produção de seus pesquisadores.

Empowerment of Women, Affirmative Actions Through the Use of Reasoned Technology

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Introduction

At the national and international levels, legislative efforts have been made aimed at achieving Equality between men and women. Despite the fact that at the World Conference on Women, held in Beijing in 1995, ICTs were defined as a crucial sector to improve equality, democracy and social justice, at the XXII Regional Conference on Women in Latin America and the Caribbean (United Nations, 2013, page 98), with regard to the digital strategies and policies of the countries of the region, it was stated that:

The absence of a gender perspective in these policies is directly noted. The important thing to keep in mind at this point is that digital strategies, when they are hierarchized and implemented with continuity, have led to significant results in terms of inclusion and digital development.

It is relevant to identify gender asymmetries in universities and those that promote the empowerment of women through ICTs. Given the fact that ICTs constitute an essential and transversal support of economic, political, cultural and social activity. This can be seen if these technologies are allied to achieve equality.

This work arose in the Interinstitutional Program for the Strengthening of Research and the Postgraduate of the Pacific, within the VIII National Meeting of Professionals of Research and Technological Developments. Table 10 Human Rights and Gender Equity.

Themes

Identify the level of skills, knowledge and gender gaps that exist in the female community of Polytechnic University of Sinaloa (UPSIN) and University of the Ciénega of the Michoacán de Ocampo State (UCEMICH).

Identify affirmative actions to be implemented in UPSIN and UCEMICH, for the reasoned use of ICTs and the exercise of Human Rights in the participating universities, which allow the students access to technologies, to promote their empowerment during their academic career.

Propose the implementation of affirmative action policies that allow students access to the use of technologies for their empowerment in TIC`s

Theories. Affirmative actions are "those positive actions that reduce or eliminate discriminatory practices against sectors excluded from the population, such as women" (Begné, 2011). Stryker (1983), cited by (Alvaro, Garrido, Sweiger, & Torregrosa, 2007, page 65), with Symbolic Interactionism, points out that any "(...) social structure influences the possible formation and stability of social groups, and the consequent interactions, and thus penetrate the systems of meanings that people use to organize their behavior.

The technology is not neutral. From the point of view of gender, it can lead to the exclusion of women who are more than half of the population (Fundación CEPAIM, 2015). The gender gaps, in terms of the use of ICTs, are visible in the form of access, experience, skills, intensities, and the lack of presence of participation. (...) all the data suggest that it is necessary to act for women not to be left out (Bertomeu, 2008).

Those who can not include themselves, personify the Digital Divide "manifestation of social, cultural, ethnic and social differences existing in society, which includes physical or economic limitations of access to ICT and deficits in skills and abilities for the effective use of such tools"

(Organization for Economic Co-operation and Development, 2019). The perspective of ICT empowerment refers to the level of access, uses, competencies and attitudes towards ICTs (from Prete, Gisbert Cervera, & Camacho Martí, 2013).

Questions: Do university students possess technological skills and / or knowledge that enable their empowerment in TIC'S? Are there policies or programs in UPSIN and UCEMICH that contribute to the empowerment of students in ICT? Can affirmative actions be implemented as a relevant tool for the empowerment of women in ICT?

Cases: UCEMICH and UPSIN

Methodology: Case study, which allowed finding in both universities, with differentiated characteristics, insufficient affirmative actions to correct the digital gender gap. It is relevant to characterize the phenomenon.

Type of data: In UPSIN, the instrument was applied to measure the Empowerment of Women, prepared by the Autonomous University of Tabasco in collaboration with INMUJERES and financed by CONACYT. This consists of seven factors, are:

1. Participatory empowerment;
2. Recklessness
3. External influences
4. Independence
5. Equality
6. Social satisfaction
7. Security

In UCEMICH, given the characteristics of the population, an instrument was developed to measure the empowerment of students through Tics. This analysis consists of seven factors:

1. Empowerment and participation
2. Tic's access
3. Use of Tic's
4. Lack of knowledge about Tic's
5. Digital divide
6. External influences
7. Actions of the authorities of the University of the Ciénega of the State of Michoacán de Ocampo.

Red Humanidades Digitales (RedHD): Construcciones Alternativas de Conocimiento

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Las humanidades digitales son un campo de estudio que ha tomado fuerza; si bien su definición es problemática, se puede hablar de “la aplicación de la ciencia informática a las humanidades”, de “un campo interdisciplinario” o “una disciplina independiente” (Fiormonte *et al.*, 2005: 15), en un sentido amplio, podemos decir que son la intersección del trabajo realizado por las disciplinas humanísticas y la tecnología digital (Kim y Drucker, 2014).

En 2011 se conforma la Red de Humanidades Digitales (RedHD), los principales ejes sobre los que se construye son: 1) Crear recursos digitales relevantes para las humanidades; 2) Elaborar metodologías que permitan generar nuevos elementos derivados de estos datos, y 3) Generar investigación y conocimiento para incrementar nuestra comprensión en las humanidades (Galina, 2011).

La RedHD es una figura clave para la representación, creación y difusión de las Humanidades Digitales, tanto en México como en América Latina. Gracias al trabajo colaborativo entre sus miembros ha logrado mantenerse como una entidad vinculada a la vida universitaria, sin que esto suponga restricción alguna para colaborar con instituciones (nacionales e internacionales) no vinculadas tan claramente a la academia ([#LatamHD](#), [ADHO](#), [Fábrica Digital El Rule](#), [editoriales independientes](#), etc.).

Gracias a este modelo, al trabajo y la participación de todos sus miembros, la RedHD se adscribe a un modelo educativo que fomenta el uso de herramientas computacionales para el estudio de las Humanidades y las Ciencias Sociales, dentro y fuera del ámbito académico universitario; sin dejar de fomentar un acercamiento crítico al uso de estas tecnologías en la cotidianidad y la vida académica. Logrando posicionar a las Humanidades Digitales como un área de investigación reconocida y prioritaria (Galina 2011).

Políticas Públicas Federales para el Uso de las Tecnologías de la Información y la Comunicación en el Aprendizaje Presencial. El Caso de la Red de Comunidades para la Renovación de la Enseñanza-Aprendizaje en Educación Superior en la Universidad Autónoma del Estado de Hidalgo

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El Proyecto Red de Comunidades para la Renovación de la Enseñanza-Aprendizaje en Educación Superior (RECREA) es una iniciativa de la Subsecretaría de Educación Superior para Profesionales de la Educación y de la Dirección General de Educación Superior Universitaria, que dio inicio en 2016 con siete Escuelas Normales (EN) y siete Universidades Públicas Estatales (UPES) de distintos estados del país. La principal estrategia de este proyecto es poner en interacción a sus docentes para innovar sus prácticas con el uso de TIC, Pensamiento Complejo y la Investigación-Acción con la finalidad de lograr mayores y mejores aprendizajes en sus alumnos. El requisito para que los académicos interesados participen en esta Red, es ser profesor de tiempo completo, contar con el perfil PRODEP vigente y pertenecer a un Cuerpo Académico en Consolidación o Consolidado. Por ser una política pública de carácter federal se acompaña de apoyo financiero para su desarrollo. A partir de diciembre de 2017 el Cuerpo Académico de Diagnóstico, Evaluación y Planeación de la Universidad Autónoma del Estado de Hidalgo participa en este Proyecto, la

ponencia da cuenta de las primeras experiencias obtenidas durante el proceso de la investigación-acción.

Marco teórico y conceptual

El objetivo general de RECREA (2017) es: *la formación de comunidades y redes de académicos orientadas a la innovación de las prácticas docentes, centradas en el aprendizaje de los alumnos y en la construcción colectiva del conocimiento.*

Temas

Los ejes transversales propuestos por RECREA para la innovación de la práctica docente son tres:

1. Un enfoque epistemológico sustentado en el pensamiento complejo y el desarrollo de competencias profesionales (Morín, 2016).
2. La incorporación de la investigación en el proceso y contenido de la enseñanza-aprendizaje (Bausela, 2004).
3. El uso de Tecnologías de la Información y Comunicación (TIC), (Espinosa, 2010).

Los tres ejes transversales considerados se concretan a través de una Propuesta de Diseño Instruccional, (Merriënboer y Kirschner, 2010), con el empleo de TIC.

Tipo de estudio

La presente investigación fue trabajar la docencia desde la Investigación-Acción, como se propone en el Proyecto RECREA.

Pregunta de investigación: ¿Es posible que una política pública concretada en RECREA permita repensar las prácticas docentes en las universidades y normales que favorezca los aprendizajes de sus estudiantes a través del uso de las TIC?

Administrative Procedures and Sanctions Against Plagiarism

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ICT's are changing the ways we create and share knowledge. In a digital world the frontiers of research and innovation are constantly challenged. Unfortunately, new technologies allowed unethical practices and criminal behaviors that challenge the frontiers of legislations. In this context plagiarism has become a seriously frequent problem affecting academia all over the world. This proposal addresses plagiarism in Mexican legislation. We first begin by offering a brief definition of the main concepts regarding copyright in order to frame the plagiarism from a legal perspective. Then we review the legal basis of plagiarism, focusing on penalties established in the copyright law. Finally, based on our professional experience, we analyze the most frequent practices related to plagiarism in the academic context, its legal consequences and how technology advances are helping to the proliferation of academic unethical behaviors.

Muegnet: Nuevo Modelo para Planeación, Construcción y Seguimiento Basado en Redes Moldeables y Mecanismos Colaborativos

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En nuestra experiencia en trabajos multidisciplinarios con énfasis en temas educativos (tanto en gobierno, empresas e instituciones educativas) hemos vivido que, debido a la carencia de mecanismos de trazabilidad, se olvidan detalles importantes o trabajo valioso previamente realizado, incurriendo en fallas, retrabajo y uso de recursos que podría beneficiarse de métodos más eficientes. Esto nos ha llevado a la necesidad de buscar mecanismos colaborativos para conformar estructuras de información que no sólo ayuden a entretener, planear y ejecutar sistemas complejos (como son los sistemas educativos) sino que también sirvan como mecanismos de memoria, análisis y apoyo en la toma de decisión para entornos altamente cambiantes.

Muegnet es un desarrollo mexicano que fusiona elementos de planeación, construcción colaborativa y seguimiento de proyectos con inteligencia artificial, neurocomputación y big data. Cuenta con módulos para la generación de estructuras de datos y relaciones, así como la generación de metadatos y reglas. La construcción colaborativa permite la extensión de la red de forma natural mientras que, a su vez, delimita el ámbito de trabajo para que cada experto se especialice en su campo de acción. Incluye mecanismos de búsqueda, consulta y visualización de datos, así como clustering.

Por estar basado en redes moldeables, su aplicabilidad es extensa. Sin embargo, en el ámbito educativo podemos listar varias áreas de aplicación, entre las que destacan:

1. Prospectiva educativa. Permitir a responsables de política pública realizar planes a mediano y largo plazo, considerando la integración de datos de diversas fuentes.
2. Planeación y estructuración curricular. Estructurar el currículum realizando una malla curricular y trayectos formativos. A diferencia de las estructuras tradicionales en tablas, Muegnet proporcionará un mayor dinamismo e información al realizar clustering, control de trayectos, información por promedios de tiempo y prioridades.
3. Conformación de repositorios. Creación de repositorios organizados por diferentes vistas de organización como son niveles educativos, competencias, currículum o tesauros, así como integrar cualquier tipo de metadatos (ej. especificaciones pedagógicas y técnicas, idioma/lengua, accesibilidad y tipo de recurso).
4. Generación de contenido. Planeación de cursos, bloques, temas, metaobjetos (ej. sugerencias didácticas, mapas conceptuales, relación con aprendizajes esperados, etc).
5. Integración de cursos, plataformas y contenido de diversa índole. Cuenta con un API para que pueda ser factible la integración de plataformas, tipo Learning Management Systems, con los que se puedan unificar en una misma vista (ej.: combinar cursos de Coursera con cursos de Moodle al hacer un single sign-on y concentrar la navegación, avance y resultados con Muegnet).
6. Planeación y seguimiento total del ambiente educativo. Vincular currículum con planeación prospectiva, cursos, repositorios y plataformas con una trazabilidad total.

En general, consideramos que la transformación de la educación hacia sociedades digitales implican un replanteamiento de fondo y que son necesarios mecanismos tecnológicos que ayuden a integrar de mejor modo el trabajo colaborativo en su totalidad. Actualmente existen

diversas herramientas tecnológicas que pueden ayudar en esta transformación y presentamos Muegnet como una alternativa.

Una sociedad digital exige una ciudadanía digital

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El concepto *Sociedad Digital* ilumina ciertos ámbitos de prácticas educativas, mientras ensombrece otras. En esta ponencia se examinan las implicaciones éticas y socioculturales que representan para las instituciones educativas la irrupción de formas de comunicación, de gestión de la información y del conocimiento actuales, gobernadas por tecnologías digitales organizadas bajo modelos de negocio que debilitan el ejercicio de derechos ciudadanos.

Se destacan tres cuestiones: las lógicas de operación subyacentes, proclives a una progresiva inequidad social; la conformación de subjetividades que justifican sus procedimientos y apuntalan su eficacia social, y; la tibia actuación de las IES -en materia de gobernanza institucional- ante semejante situación. Se sostiene que los derechos ciudadanos constituyen una dimensión desestimada en la gobernanza de las políticas educativas y de las instituciones cuando se habla de una sociedad digital; se argumenta en favor de lograr una renovada centralidad que la ciudadanía está llamada a adquirir en la agenda educativa, frente a los desafíos actuales de creciente desigualdad social y los procesos de desinstitucionalización generalizada a los que asistimos.

Digital Inclusion through MexicoX; Measurement and Prospects

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This paper will explain the emergence of MexicoX as the initiative in a global and normative context and then describe the conditions that allowed the growth and positioning of this innovative educational proposal, as a support to the educational system.

In recent years, governments have included digital technologies as a fundamental part of their agendas, in the case of Mexico, this component is considered essential to improve the quality of life of the Mexican population. In this sense, the potential shown by Information and Communication Technologies (ICT) is recognized through the various government actions that seek innovation in the priority sectors for the development of the country.

In this way, the initiative encourages across public actions to maximize the positive impact of ICT in Mexican society. Thus, MéxicoX is a digital platform for educational innovation that hosts and distributes mass courses online and free of charge, at different rates and modalities whose purposes are reflected in the development of digital skills of the various users, strengthening self-learning, this through the implementation of an open source (Open edx) developed by Harvard University and the Massachusetts Institute of Technology (MIT).

Also, it creates an inter-institutional collaborative effort that gives us the opportunity to build a fair and inclusive learning society where people can "learn to learn", develop skills, new knowledge and technological innovations that help improve their standards of living. A measurement methodology was developed with the main objective of analyzing the population of users of the MéxicoX platform. The study focuses on sociodemographic characteristics, interaction with the platform and user satisfaction.

MexicoX emerges in a favorable context, where they find fertile ground to grow and promote the use of ICT in the processes of quality educational training. These initiatives fit perfectly into the cross-cutting issues that link the needs of the population, the reforms promoted by the government, the institutional actions and the technological advances that result in the digital inclusion of millions of people through an intense institutional collaboration.

Research, technology and education is one of the nascent areas that require more attention. This will allow us to implement improvements at different operational and organizational levels, as well as to more effectively support institutions to gradually increase the pedagogical quality of MOOCs MexicoX is the most important digital educational platform in the country, which promotes the development of ICT for students who seek to integrate new and innovative models of learning and constant training.

Investigación Traslacional y Educación Basada en Evidencias, Alternativas para Movilizar el Conocimiento en Educación Superior

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Las decisiones para mejorar y reformar los sistemas educativos idealmente deberían integrar los avances del conocimiento científico. El Artículo 3º de la Constitución Política de los Estados Unidos Mexicanos dice: *“El criterio que orientará a esa educación se basará en los resultados del progreso científico...”* En este contexto, la investigación traslacional en educación adquiere una especial relevancia, ya que busca vincular los conocimientos teóricos con la práctica, así como establecer modelos y flujos de interacción bidireccional que abonen a movilizar el conocimiento científico, para que en ambos sentidos los sectores académico y social resulten beneficiados (Aymerich, Rodríguez-Jareño, Castells, Zamora, & Capellá, 2014; Brabeck, 2008).

El presente trabajo explora el potencial que tiene la investigación traslacional en educación para acelerar el mejor aprovechamiento de los resultados de investigaciones y atender las necesidades de la vida educativa cotidiana en la práctica. Utilizamos el marco conceptual de la investigación traslacional adaptado a educación propuesto por Aymerich y colaboradores. Se describen dos iniciativas de formación que se han llevado a cabo en la Universidad Nacional Autónoma de México (UNAM), como consecuencia de la creación de una estructura organizacional denominada “Coordinación de Desarrollo Educativo e Innovación Curricular” (CODEIC): cursos de Educación Basada en Evidencias (EBE) y la conformación de una comunidad de aprendizaje sobre el tema.

La EBE busca que los docentes, profesionales de la educación y funcionarios involucrados en la educación, informen sus decisiones y acciones con los hallazgos encontrados en la literatura científica publicada en el campo educativo. Tiene como propósito fortalecer el juicio profesional

de los involucrados en el campo y la práctica educativa (Kvernbekk, 2017). La CODEIC diseñó un curso de EBE, dirigido a estudiantes, docentes, académicos y funcionarios universitarios. La actividad académica tiene una duración de 20 horas, con dos sesiones presenciales de 5 horas espaciadas en dos semanas y tareas a distancia entre ambas sesiones. Hasta la fecha se han realizado siete cursos, atendiendo a una población de 159 académicos de diversas instituciones públicas y privadas. Los cursos han tenido evaluaciones muy satisfactorias por los asistentes.

Para dar continuidad y seguimiento longitudinal a estas actividades se desarrolló una plataforma digital que integra la comunidad de egresados de los cursos, en la cual se comparten experiencias y diseminan propuestas. Hemos tenido dos reuniones presenciales de académicos que pertenecen a la “Comunidad EBE”, con presentaciones de experiencias de aplicación de la evidencia en sus tareas educativas en contextos reales. Estas comunidades de práctica son fundamentales para consolidar las diversas estrategias de formación profesional (Steinert, et al. 2016; Wenger, 1998).

El modelo de investigación traslacional en educación puede usarse en instituciones de educación superior para generar políticas internas que involucren a los docentes en proyectos de investigación educativa, promover el desarrollo profesional continuo de los profesores, y desmitificar la investigación en la comunidad docente. Al considerar aspectos metodológicos que buscan integrar a la investigación básica con la aplicada en educación, puede adoptarse como modelo para informar las políticas educativas gubernamentales, con el fin de disminuir la brecha que existe entre la generación del conocimiento original en educación y su aplicación en la práctica.

Media and Digital Education in Mexico as a Study Field. A Bibliometric Perspective

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This paper seeks to identify the current status of studies on Media and Digital Education (EDUMEDI) in Mexico. This is a work that includes the exploration in some of the terms that are related to it (media education, educommunication, media literacy, digital literacy, multiple literacy and transmedia education). To that extent, it is clarified that more than the use of media and technologies for pedagogical purposes, these are terms related to the discussion and analysis of the interaction and the consequences that these have on the conformation of meanings, readings, critical interpretations, as well as production of own messages by the subjects. To identify how this academic field has developed, bibliometric analysis was used in two databases: Web of Science and Scopus. The search covered from the year 2000 to the first half of 2019. From the information collected, the institutions that have published the gathered works were identified, it was also determined who are the authors with the highest productivity in the field. In addition, a network was developed that accounts for the co-authorships, as well as a network of the relationship between concepts and, finally, the concepts are presented in clusters according with the results in both databases.

Higher Education in the Digital Society - In relation with access to Higher Education

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Higher education including universities and colleges have been challenged by the big movement of “University Reform” since 1990s. In the meantime, information and communication technology (ICT) has developed enormously and it has helped universities reform and improve their system, including teaching/research and management/administration. Now almost all universities have set up their own web sites and also their e-Campus, and both students and instructors may/must access their e-Campus to deal with academic and administrative work on the web. Application and admission by internet, searching books and documents by computer network become popular. Using cell phone in classroom as a new device for instruction is not rare now. Universities and other higher education institutions now cannot be managed effectively without the help of ICT.

Nearly three decades have passed since then, but the reform movement does not seem to end. Rather, the pace of reform become faster. Many people outside universities support the idea that universities should be more useful for the society. They think the current universities are too old and too conservative. The society that surrounds higher education has been changing rapidly. Japanese government and industry recently referred the new idea that “Society 5.0” will come soon where, beyond the information and knowledge-based society, everything connect digitally and relate each other in a very sophisticated mode. Universities must respond more and more to such a very big change.

At present in Japan, universities are regulated rigidly by laws and orders that the government sets up. The basic idea is that universities should maintain and improve their quality of teaching and research by following government regulations. Universities must have their own campuses and school buildings physically including classrooms and library. They must provide courses in the classroom at least 30 weeks a year. They accept their new students mainly in April according to their tightly scheduled academic calendar. They must not accept students more than capacity that is approved by the government.

In the digital age, large campus, way of providing course and its duration, way of students’ acceptance, maximum limit of enrollment, and so on which have been regulated by the government may be and should be changed. Digital and communication technology will overcome the limitation of space and time and people may access higher education far more flexibly and easily. They can access higher education even in other countries. Students can easily cross the border, both geographically and politically.

In the near future higher education will become essential if people want to live positively in the digital age. Value of university degree becomes higher. Access to higher education with reasonable cost become more important issue for higher education policy. People will look for such opportunity not only in their domestic market but in the global market around the world. In my presentation, several topics will be dealt which are observed in Japan as well as around the world.

Public Policies and Organizational Actions for Student Retention in Virtual Higher Education: A Comparative Study of Two Mexican Cases

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The aim of this paper is to examine the way in which public policies and university markets pressures affect the implementation of organizational actions for student retention in virtual education, in both a public and a private university. The results to be presented come from a broader research on mechanisms for student retention at the Universidad del Valle de México online and the Polivirtual.

In the past two decades, Mexico has experienced a rapid development in virtual higher education promoted by public policies to expand coverage, as well as the diversification of private educational services in response to competition within university markets. As a result, the supply and demand of educational services in the public and private sectors have grown considerably. However, virtual education has strong problems of student dropout, which, according to Sawil (2004), represent an expensive and complex problem because it can generate institutional discredit, budget cuts and, in the worst case, the ending of operations due to lack of profitability.

In addition, the virtual educational has been distinguished by curricular flexibility, which implies a great potential to adjust to a wide variety of student needs. Nevertheless, such flexibility is limited, mainly by the curriculum organization and the institutional times for the program's completion. In this scenario, it is necessary to know what student retention actions are carried out in the institutions.

The empirical research data were collected from two sources: documentary reviews and semi-structured interviews. The analysis was carried out under the light of a theoretical model that included contributions from both the sociology of higher education and organizational sociology. The most relevant notions of this research are institutional logic, degrees of organizational centralization, virtual higher education organizations and student retention.

One of the most significant findings is that public policies and the logic of the university market influence in different ways the implementation of actions for retention in the cases studied: On the one hand, in the private university, student retention represents an important problem to be attended due to the need of the institution to ensure its financial viability as a business. While, on the other, in the public university, the relevance is focused in the extension of the educational coverage, and, incipiently, in the evaluation of its quality, reason why the student retention is relegated.

