

Online Education: A Topic at the Heart of MIS

Panel

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ABSTRACT

Online education is often disregarded by MIS faculty as yet one another way of consuming time teaching; however, online education (i.e. Technology-Mediated Knowledge Transfer) is at the core of our discipline and we should be leading it. It is like most of our topics, an interdisciplinary one bringing together pedagogy, technology, information science, and MIS. This panel will discuss how five MIS researchers have approached eLearning from the undergraduate to the doctoral levels and provide ideas on how to engage in it. Dr. Gómez-Reynoso will discuss his experience teaching students who live in a very spread-out areas Dr. Alanís-González will discuss how to leverage it for an international experience, Dr. Guzman will discuss how to use it in doctoral programs, Dr. Esteves to provide a worldwide elite experience in a hybrid mode, and Dr. Ferran will examine how to use it to leverage limited financial resources without lowering quality.

Keywords

eLearning, Online Education, Teaching, Research, Technology-Mediated Knowledge Transfer, Doctoral Programs.

INTRODUCTION TO ELEARNING

Technology-Mediated Knowledge Transfer (eLearning) has been around for more than a decade and while its growth has been exponential, it has not changed higher education substantially. Perhaps this is because eLearning is merely a fad, it is not technologically ready, is encountering social, political, and bureaucratic hurdles, or is not properly developed (yet). Nonetheless, many higher education institutions have multiple courses and programs under the eLearning modality using a multitude of approaches.

Higher education is very expensive. In the USA the cost is mostly passed down to the individual student while in Europe it is mostly covered by the state. Either way, this high cost limits the number of students that can benefit from the experience. ELearning can reduce the cost of education by increasing the student to faculty ratio (without lowering the quality of the interaction), reducing the physical plant costs, and reducing transportation costs. It can also increase the quality of the education by providing a more engaging and better-developed interaction that can be massively replicated and that is not only dependent on the knowledge and communication skills of the individual instructor.

ELearning allows students and educators to work together without having to be in the same place (colocation) at the same time (asynchronously). That opens the classroom to students (and faculty) from all over the world. But there are also many challenges associated with eLearning; it makes the interaction much more complex as asynchronous communication is slower, typing versus speaking is slower, recording of the event tends to hamper open expression, technology-mediated communications reduce the amount of cues exchanged (media-richness), cultural diversity increases, and the options for cheating explode. Each of these (and many others) might be the reasons for why traditional higher-education institutions have not really been replaced by eLearning.

On the other hand, courses do not need to be purely face-to-face or purely online. There is a hybrid option which has some interactions taking place in the physical face-to-face world and others in the virtual, online world. Some studies have even shown that hybrids are even better than its two counterparts. Hybrids have many names; including "blended learning", "hybrid learning", "technology-mediated instruction", "web-enhanced instruction", "mixed-mode instruction" and the popular flipping of the classroom.

While we like to say that universities are about creating and disseminating knowledge; students come to us for three main reasons. They want (1) to acquire new knowledge. They need (2) a document that certifies that they have such knowledge. They want to (3) live a specific social experience that enhances their personal network. In general, most students expect at a minimum the first two. However, some institutions have already been tinkering with this model. We already have universities that do not teach students but only examine them (give credit for prior learning). They provide a document that certifies that the student has the knowledge but do not specify when, where, or how they obtained it. In addition, some of them provide free online courses but charge for these examinations. And clearly, these institutions do not provide any social or networking benefits to its students. A few universities are providing a mixed model: some classes offered the traditional way and some offered in this credit for prior-learning (examination-only) model.

At this stage of evolution eLearning (and particularly Massive Open Online Courses –MOOC–) does not provide all three benefits (knowledge, certification, and socialization/networking) to the students. However, we might not want it to provide all three at the same time. Nonetheless, this is not the general understanding and the public is expecting eLearning to replace at least the first two.

Classical education is imparted face-to-face in a physical place. Such education is regulated by the laws of the country in which it is located. Faculty and students involved in eLearning might still be in the same country and thus the laws of that country still prevail. However, eLearning can easily span political boundaries and then which laws apply blur. Inside the USA, this is already problematic as most of the applicable laws are State and not Federal laws. At this time, the environment is somewhat chaotic as the existing laws are asking institutions to undergo an accrediting process for each and every state in which they have students and that is not only expensive but complex and resource consuming. European institutions have similar issues as their students can reside in many countries inside the European Union and beyond. The Bologna accord was created to facilitate this process; however, this accord still has similar weaknesses as the Federal versus State laws have in the USA.

In the field of Knowledge Management (KM) knowledge is classified as explicit or tacit. Explicit knowledge is codified knowledge that is clearly contained in documents while tacit knowledge cannot be codified and is embedded or contained in the personal experience of individuals. However, these two are more ends of a spectrum than discrete groups. $E=mc^2$ is an example of explicit knowledge while the hunch a detective has that a suspect is guilty is an example of tacit knowledge. Explicit knowledge can be transferred from one individual to another (or to thousands of individuals) by copying it into a document and having the learner read the document. Tacit knowledge is transferred to the apprentice by observing and holding conversations with the master (holder of the knowledge). However, in many cases, the student reading the document containing the explicit knowledge still needs to hold some conversations with the master (or simply with another individual) to clarify some parts. Moreover, in some cases, the simple observation of the master is sufficient and no interactions are needed for the student to understand and acquire the tacit knowledge. Given the different forms of knowledge, different technologies work better or worse to mediate the knowledge transfer process (eLearning).

Students know to go into learning mode when they enter the traditional classroom. Multi-tasking inside the classroom is often done although highly discouraged so that the student can concentrate on the learning (and often boring) experience. The physical classroom provides the signal and proof that the student lived the experience while somewhat validating the examinations that certify the amount of knowledge acquired. ELearning lacks the signaling process, increases the options for multi-tasking, and opens the experience to a myriad of cheating opportunities.

Experience shows that designing a course for an online model requires special preparation and consideration for the material, the teaching methodology and the technology available for interaction. On top of the normal challenges of defining the course content and objectives, an online course has the additional burden of having to use leading edge technology and top quality designs. The instructor may not be an expert with the technology, graphical design or the teaching techniques used. To overcome that, the design of an online course requires a staff of specialists to aid the instructor in the design of a technologically feasible, visually attractive and pedagogically coherent course.

Advanced degrees in different disciplines have been offered since the eighteen hundred. Most traditional four year colleges offer some kind of doctoral degree. According to the 2016 report from the Survey of Earned Doctorates (SED) an average of 46,882 people earned a doctoral degree from U.S. universities every year since 2000, and the number keeps growing. The skills acquired through doctoral education, such as problem framing and data analysis, are increasingly valued in organizations (AACSB International, 2013). While the general expectations of doctoral graduates regarding their ability to create knowledge through an original research contribution with scientific methods are similar for all doctoral programs, technology has affected the way those programs are delivered. As a result, there has been a rapid increase in the number of doctoral programs offered online as well as the growing interest of doctoral candidates to complete doctoral programs online and on a part time basis (Paliktzoglou, 2011). Online doctoral degrees face similar challenges than traditional face to face programs but they are required to use technology constantly to make the programs successful. In this panel, the presenter will discuss current use of information

systems to create an online infrastructure to facilitate the doctoral journey in a fully online Ph.D. program offered since 1999, with more than 200 graduates in a university in the United States. For example, the learning management system tools developed to better manage and track the completion of doctoral dissertation milestones, the characteristics of an ePortfolio for students to highlight teaching and research philosophies, and the use of social networks and a wiki to share knowledge.

PANEL DESCRIPTION

This panel of international experts in eLearning will discuss the topic from a teaching and a research perspective not only presenting their experience but also giving ideas on how attendants could also engage in it. The panel provides a very wide-spectrum of approaches and uses of eLearning although all of them inside the MIS arena.

Panelists

The panelists will be Dr. Juan M. Gómez Reynoso from the Autonomous University of Aguascalientes in Mexico; Dr. Macedonio Alanís González from Tecnológico de Monterrey in Mexico; Dr. Indira Guzman from Trident University in California, USA; Dr. Jose Esteves from IE Business School in Madrid, Spain; and Dr. Carlos Ferran from Governors State University in Illinois, USA and visiting professor in La Salle Barcelona (Universidad Ramon Llull) in Spain.

Dr. Juan M. Gómez Reynoso

Dr. Gómez Reynoso is a professor in the Electronic Systems Department of the Autonomous University of Aguascalientes since 1.990. He obtained his doctoral degree from Claremont Graduate University, where he specialized in Design Research and Software Engineering. He has many international research projects and published multiple articles in peer-reviewed journals and conference proceedings.

The State of Aguascalientes has around 1.3 million people spread-out in an area of 5,618 m2. Using eLearning students can take courses from all around the state and at their own pace. The courses include material in electronic format such as videos, PowerPoint presentations, documents, etc. Students can interact among them and with the instructor using a learning management platform (LMS) that provides email, wikis, forums, blogs, chat, and other communication tools. Also, students can deliver projects or work related to class content using hot potatoes, SCORM packages, and questionnaires, among others. E-Learning has allowed us to reduce the number of students failing courses from a 40% to around an 8% because this approach demands a student hands-on-participation.

Dr. Macedonio Alanís González

Dr. Macedonio Alanis is Full Professor of Management Information Systems at Tecnológico de Monterrey, in Mexico. He teaches Technology and Management courses in the traditional setting, and in remote online format. His e-Government course, co-sponsored by the World Bank and the Office of The President of Mexico, reached over 1,000 IT Specialists in 9 countries. His e-commerce class is attended by students across Mexico and follows a semi-synchronous model where contents and videos are available online, but the course includes weekly online case discussions and optional live question-answer sessions. He participated in the creation of the MATI/MSIT Dual Graduate Degree Program between Tecnológico de Monterrey and Carnegie Mellon University. The program attracts accomplished professionals from all countries in Latin-America and starts with a one-week seminar in Pittsburgh, two and a half years of online semi-synchronous courses (half from CMU and half from Tecnológico de Monterrey), and concludes with a one-week seminar in Monterrey. Students receive two master degrees, one from each institution. Dr. Alanis also participates in a joint certificate program in Project Management with Stanford University. Dr. Alanis has been CIO for the Government of the State of Nuevo Leon, Mexico and participated in the definition of Mexico's IT policies. He has worked for Cemex and IBM, and works as a consultant of IT strategy for public and private institutions. Dr. Alanis has occupied the America's Chair at the Board of the AIS and received the Eisenhower Fellowship. He studied at the University of Minnesota, Brown University, and Tecnológico de Monterrey.

For the past 25 years, Tecnológico de Monterrey has been testing different techniques for teaching MIS courses remotely. Tecnológico de Monterrey is an AACSB and SACS accredited institution based in Monterrey, Mexico, with 33 campuses in 20 states and programs reaching most of Central and South America. Depending on the type of program, the delivery methods tested have been: synchronous satellite (or web) transmission, semi synchronous web-based class, and asynchronous online class.

Dr. Indira Guzman

Dr. Indira Guzman is the Director of Doctoral Programs of the College of Business Administration and Professor of Management Information Systems at Trident University International. She has published multiple refereed articles, books, chapters, and conference proceedings. Her research has been published in journals like Information Technology and People, Human Resource Management, Latin American and Caribbean Journal of the Association of Information Systems, and Data

Base for Advances in Information Systems. She holds a bachelor's degree in Computer Science from Donetsk National Technical University, a master's degree in Information Management and a Ph.D. in Information Science and Technology from Syracuse University. Dr. Guzman was awarded the prestigious NSF Research Fellowship and is a Fulbright Scholar. Dr. Guzman will present her ample experience in eLearning for doctoral programs as well as contrast how the operations differ in an exclusively online institution.

Dr. José Esteves

Dr. José Esteves is an associate professor of Information Systems at IE Business School, Madrid, Spain, since 2004. He holds a Ph.D. in Information systems, Diploma in Business Administration and, MSc. and engineer degrees in Information systems. He is the author of many articles about information systems published in international conferences, books, and journals such as MIT Sloan management review, Harvard Business review, International Journal of Human Resources and Enterprise Information Systems Journal. Before becoming a professor, Mr. Esteves served as an information systems analyst expert and consultant in some companies. Currently, he stills in permanent contact with companies developing consultancy and research projects applied to industry. Dr. Esteves will discuss the hybrid mode of blended-learning as an opportunity to improve the quality and experience of classical face-to-face instruction.

Dr. Carlos Ferran

Dr. Carlos Ferran is an associate professor of Accounting and Management Information Systems at Governors State University (GSU) in Illinois, USA. He is also a visiting professor at La Salle Barcelona (Universidad Ramon Llull) in Spain. He is the author of multiple peer-reviewed articles, books, chapters, and conference proceedings. He has spent the past year doing a sabbatical across Europe trying to learn more about eLearning. He is also the editor-in-chief of RELCASI, past-president of SIGASYS, past-president of LACAIS, and co-chair for AMCIS 2019 in Cancun, Mexico. Dr. Ferran created an online MBA in Supply Chain Management at GSU and is currently the coordinator for online education at his school. He has been teaching accounting, strategy, and MIS online for the past 10 years. Dr. Ferran will be discussing how to develop high-quality online programs with very limited budgets.

Panel Objectives

Online education is often disregarded by MIS faculty as yet one another way of consuming time teaching; however, online education (i.e. Technology-Mediated Knowledge Transfer) is at the core of the MIS discipline and we should be leading it. It is like most of our topics, an interdisciplinary one bringing together pedagogy, technology, information science, and MIS. This panel intends to promote the participation of MIS faculty and researchers in this important area. Furthermore, the panel will present ideas and opportunities for attendants to start involving themselves in eLearning.

The technology and approach that must be used in eLearning are different for different types of knowledge and for different level of courses. This panel will discuss experiences with different types of courses and at levels that go from undergraduate to doctoral.

Panel Overall Approach

The panel will consist of brief presentations from each panelist followed by a general Q&A from the audience. Each panelist will be introduced by the moderator (Dr. Carlos Ferran) and asked a few questions to frame their presentation. Interaction from the audience is considered important and considerable time will be given to the Q&A section.

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