Inclusion Needs Of 3.0 Students In Latin America

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ABSTRACT

Recent changes in information and communication technologies offer people unprecedented opportunities to generate and share knowledge. Currently, inclusion refers to equal opportunities for the 3.0 person and it is not limited to special physical needs or reducing the digital divide. Faced with this reality, universities, in general must transform themselves. Open universities, in particular, will have to renovate themselves and build the scenarios required by new students. This research paper explores distance learning students' new inclusion needs and proposes four strategies to attend them.

Keywords: inclusion, technology, 3.0 person, university, distance learning

INTRODUCTION

Recent changes in information and communication technologies offer people unprecedented opportunities to generate and share knowledge. Currently, people can collaborate and innovate without space or time limits. This phenomenon has been called 3.0. Therefore, at present, inclusion, in a broader sense, refers to equal opportunities for the 3.0 person.

Faced with this reality, universities, as knowledge generators and formative institutions, must transform themselves or risk being left out of the mainstream. Distance education, in particular, must be renewed and build the scenarios required by new students. The objective of this research is to identify current and future inclusion needs of distance learning students in the new context and to propose strategies leading toward this renovation.

According to Friedman (2003), globalization 3.0 began in 2000 and is based on a world that has been "flattened." This results from the convergence of personal computers that enable people to produce, in digital format, optic fiber that allows access to massive contents and software that permit collaboration with people located anywhere in the world.

These conditions enable any person to be not only an information and knowledge consumer, but also a producer. The 3.0 person is not limited to receive information and knowledge, but can generate them at any time, any place. This will permit the introduction of new ideas or methods come from all over the world. According to Frey (2007) we are witnessing a massive transition from consumers to information and knowledge producers. Within this context, Distance University and its inclusive role faces additional challenges. According to García (2006):

Even though there still may be hopes of an expansion in almost geometric progression, those who came first will have an unreachable advantage over late arrivals. That means that the divide will carry on and will probably increase. Therefore, we are aware current distance education raises new challenges in regard to democratization in access to education. Definitely, challenges to the non exclusion of education, and the integration of many who may be marginalized in today's ICT (Information and communication technology) world, requires access on equal terms and prevention of exclusion. (p. 3)

It has been argued by some that universities are slower to react to changes in the market than are businesses and consequently fail to prepare adequately for changes. For instance, Maddox (2007) reported that among one group of advertisers, 73 percent were budgeting for and experimenting with new platforms. Still, while many are jumping on the technology bandwagon which holds great promise, Fernando (2007) mentions that questions arise as to how to use new media effectively and openly. As Jones et al (2008) mention, effectively reaching markets through targeted appeals requires informed decisions on media selection.

METHODOLOGICAL APPROACH

To approximate a profile of the 2050 university and its implications regarding the need of inclusion of 3.0 students, research efforts have been carried out encouraged by the prospective network on education. Frey's (2007) efforts reported findings for Asia, Europe and the United States. Because of the unique needs of Latin America and distinct differences in the cultures of the region, the need to investigate further was evident. Baraya, Budden and Brenes (2007) discussed the development of regional business treaties and removal of trade barriers and how such efforts created new paradigms and challenges for Latin America. Possessing a population of more than 500 million, Latin American are also young. The Inter-American Development Bank reported in 2000 that approximately 60% of Latin Americans were under the age of 30 (Inter-American Development Bank 2000). So, the inclusion of a young and educated populace in the mainstream is paramount.

Inclusion in the education system of 3.0 people can be found in South Korea and Japan. Both countries show marked actions in the field of robotics and its role in life and future education. According to Thomas (2006), South Korea is expected to have a robot in every house by 2020 and, according to King (2007), the subject has evolved to the point of the approval of an ethics code on the relationship between person and robot.

In turn, in Japan, academics argue about the difference in the robot's role in the education of children and adults; for example Jim (2007), Osaka University experiments with multifunctional robots which can serve as company and as support for adult teaching learning processes.

In another part of the world, the European University Association dedicated its recent conference to future university leadership. The president of that group proffered university leadership in Europe should change as institutions answer to the development of a competitive economy of knowledge while approaching greater cohesion and social inclusion (EUA 2008).

Many in the United States, like Frey (2007), believe the education system requires not a mild renovation but a redo. In Frey's words "education in its current state is the equivalent to roman numbers, a system that did not allow humankind to advance and reach new heights." This need to move forward is indicated by a world that possesses technology that was unimagined a short time ago, but a reality that the technology still has more to offer in serving the needs of man. Just as computers alone cannot solve the problems of a firm, technology alone cannot solve the problems of the world. It is through understanding the promise, assuring the widespread use, and the open dissemination of technology that one can begin to address the myriad problems that man faces. Gates (2008) declares that:

Through history, a person's life expectation was determined to a great extent, by his/her place of birth. In an advanced and rich society an average child had more possibilities to live longer and better than even the most talented and brilliant child of a poor country. This is still probably true, although it is less probable than ever before. (p.32)

A four basic aspects instrument was developed consisting of: a) study programs, b) professors, c) students and d) university action. This document presents the first results in Latin America and its objective is to consider distance students' perspective. The study was carried out with UNED (National State Open University) students. UNED is a pioneer in Latin America in distance education and provides graduate education. As with other universities, it can take advantage of increased knowledge of its students and their outlooks.

In this study, 336 graduate students from UNED who registered in the first four month period of 2008 were surveyed. The respondents represented 17 graduate programs in the areas of management, law, health, natural resources, education and theology. Instruments were completed during students' on-site sessions. Following are results by categories:

RESULTS

According to most graduate students from UNED's graduate studies system, career programs in 2050 will have a diverse combination of disciplines (74.49%), high use of new technologies (88.51%), high use of various languages (75.80%), high internationalization level (74.34%) and of equal or less duration (82%). Programs with higher growth will not be technical (11%) or graduate (59%) but an entirely new type of multidisciplinary degree (16.67%).

Preferred coursework will involve various professors who will team-teach courses (40.73%) and having professors serve as *coaches* or advisors rather than traditional classroom professors is expected (34.56%). The use of robots for teaching and to facilitate learning was envision by a small group (6.42%). A significant use of technology by professors is expected (43.58%) in classroom settings. Professors who are teaching outside of the traditional classroom environment are expected to use technology even more (52.34%) to facilitate learning and participate in networks linking their activities with their surroundings (94.5%).

Regarding university students in 2050, they are expected to be younger when entering the university (46.93%), use more CIT than today (96.28%), socialize less with fellow students (46.89%) and have greater socialization with people from other parts of the world (80.06%). Greater speed to act (80.06%), sensitivity to global issues (78.09%) and participation in study networks (85.6%) will be utilized to a greater extent than today.

In regards to organization and the study plan or curriculum, 78% think it is likely or more than likely the student will have it custom made and 81.17% say that teaching learning processes will be more flexible. Universities are expected to have global coverage (53%) or international (43%) and university authorities will need to include representatives from stakeholder groups of interest (81.3%) including as social organizations, professional schools, graduates, business chamber, etc.

DISCUSSION AND CONCLUSIONS

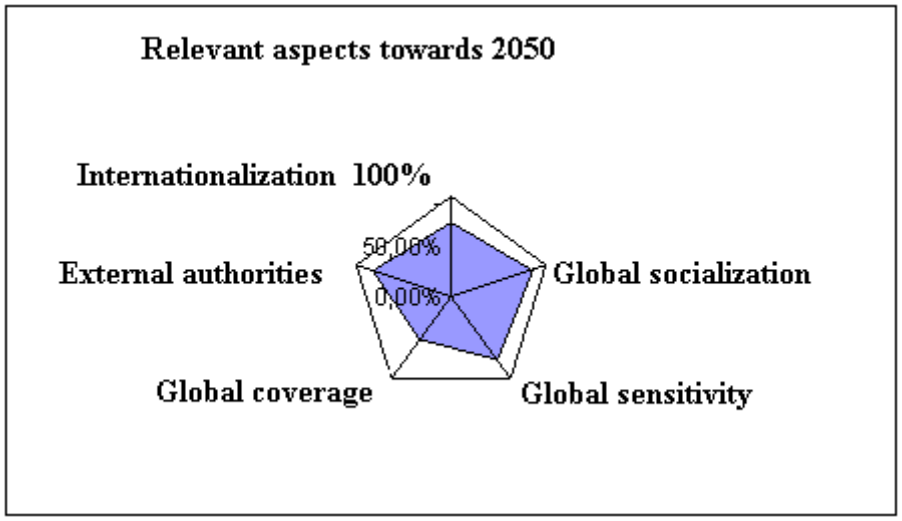
Preliminary results on future universities in Latin America show that new inclusion needs are related to a 3.0 person's way of acting. For example; students say they will require participating in learning communities without being limited by their special needs. Students are interested in socialization with people that can be physically in any part of the world and require, in addition, development as a new citizen, locally, nationally and globally.

Based on these results one can discern some aspects related with expected course projections or coverage. Internationalization, sensitivity socialization and global coverage are expected to grow. At the same time, other actors, that are currently poorly related, are expected to be integrated to the university. These aspects are illustrated in Chart 1.

In short, more flexibility, expanded coverage, greater association, new technologies and new degrees are expected. These preliminary results in Latin America show similarities with those obtained elsewhere in relation to areas of coverage, socialization and technology as the student of the future does not consider it necessary to have a separate time and space to study, learn about any topic of interest, work, socialize, entertain or participate as a citizen.

The main difference with studies in Asia is found in robotics. It seems this application will lead in Asia but its relevance is not foreseen in higher education in Latin America.

Chart 1: Aspects involving students' new needs for 2050



IMPLICATIONS FOR OPEN AND DISTANCE UNIVERSITIES

Based on that previously mentioned, it can be stated that Distance University must cater to a 3.0 person's needs. Distance education promoters must understand that their mission is continuously evolving. Four new inclusion needs of the 3.0 person for distance education are proffered:

1. To be part of learning communities that generate, disseminate and socialize knowledge
2. To foster access in spite of special needs
3. To foster socialization, especially as regards access to social networks
4. To foster and drive a sense of community in seeking to address local and global challenges

Following are options for each of these needs.

1. Flexible learning, knowledge generation and socialization communities

Distance University must propitiate learning, knowledge generation and socialization communities. It is necessary to rethink the way in which teaching and learning processes are delivered, developed and discerned. According to this research, high internationalization and participation of various professors in the course is expected, as well as high participation in networks linking activities with the environment of both professors and students.

This scenario can be approached from three angles: production by the university, production by the student and a provision for access. Production of materials and information must have options in audio, video and text and be able to be transmitted by television, radio, cell phone, internet or other means. Production formats must be diversified. New course design must consider existing tools and be open to the use of new ones.

There are for example, many tools that can be put to good use including cell phones, blogs, journals, wiki-type databases for collaborative knowledge construction, pod-casts for audio socializing, and utilization of the IPOD. Games like those of Wii format that allow interactivity and interaction with disparate people may play a role in learning and foster experience. According to Burns & Fulton (2007, pg.298) the catalyst for this production is work in networks or learning communities by professors.

Courses must promote student's production in different means for which it is necessary to facilitate the tools; collaborative production requires that spaces for production favor socialization and team work.

Parallel to that, it is necessary to increase Internet access and appropriate technologies for students with or without special needs. Even though most if not all universities may require in some degree the use of Internet, not all educative materials may be best delivered in digital format. However, if all educative materials require Internet access, Distance University would be advised to provide and encourage its widespread dissemination.

According to the Information and Knowledge Society Program (PROSIC, 2008), in Costa Rica, television can be found in 93.8% of homes. At the same time, some 54% of homes have radio. Internet access is currently available in only 9.8% of homes. There are 1,250,000 active cell phone lines in Costa Rica, providing communication access for one-fourth fourth of the population. It is advisable then to offer and maintain diverse means for delivering education.

Internet access for distance students must be propitiated; this can be through service obtained at the university, at home or also at work when working conditions facilitate studies. There are, however, other public initiatives contributing towards this effort such is the case of the Ministry of Science and Technology in Costa Rica (2008) which provided 110 communities with intelligent community centers that make available internet access.

The technological approach must include in addition to information and communication technologies, the different technologies of each profession; this facet will provide students and academics with actualizations. It is important to develop the ability to learn how to evaluate and select as well as to use different technologies. Also, the approach to research must be broad since network research experiences grow with student and professor participation. Networks have shown advantages to improve capacities on identification and valuation of information sources and subject matter information.

Finally, most important is to keep all stakeholders -academicians, students and interested parties – connected by means of networks that provide learning communities and knowledge generation and socialization.

2. To foster access and provide participatory opportunities in spite of special needs.

Distance University in 2050 must increase its contribution towards inclusion of 3.0 persons with special needs. It will be necessary to work with other institutions in order to improve conditions for education access of this segment. It is also necessary to increase research, development and innovation to generate solutions for inclusion of all if ICT is to attain its potential.

Providing access no longer means the development or building of ramps and other means of entering buildings, it means having ready-access to information and communication for people with mobility, vision, auditory or other disabling conditions. Options for inclusion of 3.0 persons with special needs are many.

The *Fundación Integración Discapacidades Red* (IDR) [Disabled Integration Network Foundation] was created in 2000 in Spain. According to IDR (2008), its main objective is to integrate the disabled through use of new information and communication technologies under the principle of universal accessibility and design for everyone. Among its achievements is a facial mouse that permits interaction between person and computer without using hands. It is based on a web camera and HeadDev software; it is a solution for people with disabilities such as sclerosis, cerebral palsy or other conditions that prevent the able use of hands. The project has been developed by a group of researchers from the University of Baleares and the TAGRV Company. The *Asociación Balear de Personas con Discapacidad* (ASPROM) (Balear Association of the Disabled) has collaborated in the evaluation of its usefulness. This is an example of research, development and innovation that has the benefit of being widely and easily available. The IDR has also produced what they call "accessibility information points" that use electronic emissions from "moopies" or advertisement signboards in the streets. In order to use it, the person points a cell phone to the signboard and with Bluetooth or infrared, obtains information about nearby accessibility options.

Robotics is another line of development that is being called upon to serve the needs of this segment. Kanter (2008) discusses the Ubot, a robot that attends people who live alone and can be used by remote control.

The University of Osaka has developed robot prototypes that help people with special needs in learning processes; it is activated by voice or movements and permits interactivity. People can learn while convalescing in a hospital or at home. They are programmed to prepare people for an independent life in spite of any physically disabling conditions.

In summary, Distance University must take advantage of existing options to facilitate inclusion of people with special needs and, must contribute its own research efforts by participating in research networks addressing the needs of this segment.

3. Being part of social networks

This research indicates that students expect that future students will have relationships with people from other parts of the world, even at the expense of decreasing relationships with fellow students. This is evident in the rapid development of social networks.

The internet was initially developed and its use restricted to scientific research by the US Department of Defense (Cheung & Huang 2005). In spite of early restrictions on the internet, it has grown exponentially and its uses are too numerous to mention. Cheung and Huang mention that it impacts business, shopping and social activities. The use of the net for social interaction is widely recognized. MySpace for instance had over 40 million members at the end of 2005 (Hempel & Lehman 2005). Recent reports indicate that FaceBook has more than 300 million users (Dobson 2009). Most social websites including www.myspace.com, www.facebook.com and www.hi5.com are free. Even though these platforms started in the recent past, their applications and the number of participants are still growing. According to studies by Deloitte (Fernandez 2008, p.6) these social networks will be the future channel through which firms will understand their clients. Indeed, Budden and Budden (2008) discuss how human resource departments are using social networking sites to assess applicants.

Social networks are enhanced with other resources, like www.youtube.com which permits the sharing of videos. YouTube, created in 2004 is a fast growing newcomer (Keen, 2006). YouTube viewers watch more than 100 million videos per day (Gill 2006). There are more sophisticated options for social network interaction like www.secondlife.com.

Secondlife offers a virtual world in 3D. Available since 2003, users register and enter a world where they can find people, a place to live, work and entertain themselves; they can design a new house or a new life. The site offers protection to intellectual authorship of residents. Residents can transact business with the official currency called *linden dollar* which can be converted into American dollars in money exchange offices of this virtual world. More than one hundred million people "live" in this virtual world. According to Combs & Peacocke (2007), children and young people consider these spaces as real as a party with friends. Some view the internet as means of bringing people together. In one study of college students, three-fourths of the respondents felt internet usage brought them closer to others (Weisskrich & Murphy 2004). However, educators often fail to recognize and use these options to enhance learning. Future students will arrive to Distance University already using social networks and with expectations about how they can use this valuable resource to facilitate learning. Indeed, current use of social networking sites by college students continues to grow. Budden et al (2007) reported that students in their study used the internet more than 10 hours per week.

For this reason, universities should develop and maximize strategies in order to enhance the learning experience and the personal growth of those they serve.

4. To foster and drive a sense of community in seeking to address local and global challenges.

Given growth in sensitivity about global issues, relations between people, independent of physical location, it becomes necessary to create opportunities for interaction. This will allow for a better informed population capable and willing to make decisions that will lead to better understanding. Ultimately, a better informed populace will advance democratic ideals and in turn, the democratization of information.

Internet based videoconferences are a current reality. Inclusion is made possible through widespread access. An immediate advantage of videoconferencing is that people may participate even with little or no previous technical knowledge or internet access.

UNED, for example, has developed a national video-conference network with locations in more than 15 communities. Participation has recently been made easy due to an association agreement between Central America and the European Community; while negotiations are carried out in Europe or in Central America those who are interested can participate free of distance location barriers. At the same time, this network is part of the learning Global Network which allows interaction with people from all over the world.

According to Sassen (2006) "we are at the beginning of the future but it can't be clearly seen. We are entering a phase where politics will change deeply." Even though the shape of future politics are conjecture; new politics will be built with people having more information and increased participation possibilities. This is a strategy that could democratize democracy; placing power in the hands of informed individuals collaborating for a better future.

FINAL CONSIDERATIONS

In general, new inclusion needs represent participation in a collective intelligence process. Despite the effect of new technologies the most relevant changes are produced in people and not in technology, consequently, inclusion becomes more a human matter than a technological one.

It seems that the road towards these new scenarios must begin with integration of teachers and technology, since today's students seem to partake readily with evolving technologies. Academicians must analyze which applications of every day use of present day and future students have potential to improve learning experience now and in the future. It is necessary to understand that life will not be divided into a space and a time for each activity. Instead, a portable life can be envisioned and the power of the individual in collaboration with others will be maximized.

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