

Impact of Information and Communication Technologies on Education Delivery: The Case of Global Understanding Course at the University of Jammu

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Abstract

In the growing globalized, highly competitive and turbulent world, understanding and adopting the best practices in various cultures plays a crucial role in surviving and thriving. Information Technology facilitates global accessibility of information, diffusion of cultures, online delivery of education and just in time learning. This paper portrays the learning experiences and understanding of students undergoing global understanding course at the University of Jammu in context to their inter-cultural experience, their knowledge of handling computers and perceptions of different levels of students on online delivery of education. The paper provides an analysis of information furnished by students on problems, benefits and convenience of online learning.

Introduction

Advances in Information and Communication Technologies (ICTs) have had a profound influence on the way we do delivery of education and learn. Besides compact storage and quick retrieval of learning resources, developments in ICTs helped linking information with information, packaging and repackaging of information, development of more aesthetic learning material, distribution of learning resources over networks and facilitated real time learning. Increased communication and sharing of knowledge and experiences among a global community of students, quick sharing of ideas through video conferences, blogging, tweeting, and other social networking sites is taking place. Information is being directly streamed in smart class rooms to provide access to the most appropriate and comprehensive learning resources. Collaborative tools such as wikis are making possible the creation and accumulation of need based content that helps to meet the repetitive information requirements of several users. The voice over Internet protocol is helping learners to instantly exchange information through word of mouth.

A teacher can not only simultaneously deliver a lecture in several classrooms in the institution but also deliver the same lecture across universities existing on different continents. Developments in information communication technologies have helped to

overcome the barriers of geographical distance and facilitated democratic access to educational resources. The ongoing digitization of print documents and development of institutional digital repositories further enhanced access to large volume of learning resources. The open access movement and development of accumulated research resources such as Biomedcentrum are enabling free access to desired learning resources. Open source content creation software packages such as Joomla! and Druppal help to create and manage educational content. Software package such as Moodle serve the need to manage educational resources. Educational institutions are using open source software packages like DSpace to create institutional repositories and Greenstoneto develop digital libraries.

Besides enhancing access to learning resources, use of ICTs has increased communication with students, authorities and administrators. Students are able to use computing power and access networks when and where they want on the university campus. Wi-Fi and WiMAX are providing increasing freedom for Internet access anywhere in the campus including the classrooms. Students with the intention of learning and continuing their education through distance mode, students with disabilities and students interested in learning from their homes and employees from their offices are facilitated by the Internet to access the learning resources. Learning on the go may receive greater attention with growing time constraints, greater need for learning, increasing competition and availability of more learning resources. Conscious that mobile learning may eventually come to mean learning from a cell phone or a personal digital assistant, researchers at Stanford University's Learning Lab have studied the possibility of teaching people anything useful in sessions as short as a few minutes at a time (Cairncross, 2002). The pedagogical development thus is taking place in response to technological advances and emerging new learning spaces and requirements.

In a split second, learners can retrieve and access learning resources through search engines on any subject under the sun. Video conferencing and chatting facilitate live exchange of ideas and information. Technology has offered comprehensive learning resources and conveniences but actual learning depends upon individual's efforts, training and motivation to take advantage of what is available. We have an ocean of learning resources that can be used and the sky is the limit for learning. Computing power is increasingly shifting to personal space with the growing availability of hand held computing devices and smart phones. Content creation is also more or less personalized as ideas are now boxed in blogs. With the increasing availability of choice based credit systems in universities and need based e-learning programs, learning is also becoming more focused, skill centered and personalized.

Although advancing technologies, greater content and more choices have made the learning process more learner centric, the very process of learning is predominantly a human interactive course of action. It involves information sharing, prior domain knowledge to understand new concepts and to absorb and assimilate new learning. It requires explanations, instructions, mentoring, reason, logic, consent and dissent, and acceptance of ideas according to learners' mental framework and background. It requires expert assistance to know what is at the other end of the tunnel. It needs co-studying and

information sharing to know various perspectives and to grasp multiple points of views. According to the views of Alexander (2004) and Ayers and Grisham (2003), IT has transformed higher education without transforming the places which set the standards for higher education.

Massive efforts are required for online education to meet the demands for learning in the hyper competitive globalized world. Networking and collaborations are emerging as efforts for providing more effective institutional framework for facilitating learning as well as individual level means for sharing ideas and facilitating collaborative learning. Educational institutions are undergoing metamorphosis to stay competitive and provide state of the art education. As the funding requirements for quality education and commercial interests grow, educational institutions have started functioning like corporate houses. In the emerging competitive educational scenario, they are collaborating and building strategic alliances for delivery of need based and high quality sustainable education. "Co-operate to compete as a strategy of 'collabotition' (collaboration + competition) will be a critical strategy for colleges and universities in the future" (Casanovas, 2010, p. 76).

Technology has also enabled personalization of such sharing of information and facilitated choice for connectivity and networking through social networking tools such as Face book, Twitter, LinkedIn, etc. There is now an enormous number of social networking based learning resources where learners can find content, tutors and words of wisdom. Students and others on the social network are tending to make more use of social networking sites rather than email for their communication requirements.

Educational Technologists helped to develop a variety of tools and artificial intelligence techniques that enhance learning and comprehension of the information delivered in various fields. Companies are using such methods for delivery of education and to effectively train their staff. For instance, one well known giant manufacturer of aircraft engines has developed a simulation of a running Boeing 777 engine. Students have been found to learn ten times better than they do from an instructor using audio-visual equipment (Cairncross, 2002). Encyclopedia Britannica's e-learning tool names SmartMath not only better equips the teacher to deliver learning but also enhances students' understanding of mathematics. As knowledge and ideas are largely becoming resources to provide a competitive edge over others, many companies not only invest in technologies but also encourage their employees' work specific learning, for their capacity building and performance enhancement. Some companies have seen a very positive impact of e-learning. Unilever, a big British household goods company, tracks the results of e-learning in an attempt to evaluate them. The company argues that e-learning has helped its sales staff to produce more than US\$ 20 million in additional sales (Hoekstra, 2001).

In the globalized and hyper competitive business environment, companies are attempting to understand cultural traits, value systems, beliefs and behavior patterns of societies where increasing interconnectivity is leading to instant exchange of information and diffusion of cultures. The spread of fast food restaurant in India and yogic practices and

Ayurveda based herbal medicines in the western world are some instances of the cultural diffusion. Studying and understanding the culture and work practices of different parts of the world help businesses to make choices and adopt the best practices. The importance of understanding cultures and societal moral philosophies is not only increasing for effective communication with distant colleagues and BPO work, but also for marketing of products and services.

This study focuses on the online Global Understanding Course (GUC) which is being offered at the University of Jammu, Jammu (Tawi). Students registered for this course were asked to provide feedback regarding their level of learning, intercultural encounters and experiences of online delivery of education. Online education helps in acquisition of knowledge, helps to eliminate obsolete ideas, and facilitates learning the best practices across different cultures, and thus has great relevance for learners in the contemporary world. The GUC is aimed at students who wish to learn and understand other cultures through online education. This course is helpful for any major where communicating with diverse populations is a key for success in the chosen career pursuit. As far as the course content is concerned, the GUC gives an opportunity for scholars to learn and understand different societies, without voyaging. In this course scholars join forces for the span of the course accommodating and respecting cultural values and permitting an atmosphere of trust to develop. This trust helps to impart information, suppositions, qualities, mentalities and passions. Students exchange information with one another regularly to understand each other's customs. This coordinated dialogue advances the sense of fellowship. Students scrutinize one another's daily papers to learn what is going on in their associate society.

Moreover students develop a joint paper. This joint endeavor educates them how to work in a team. When distant learners collaboratively learn, they figure out similarities, look at positive practices in other cultures and also identify the negative distinctions. This helps them to have a broader point of view and learn the good features of other societies. The participants learn to interact effectively in a culturally diverse interactive environment. This prepares people to think deliberately about not just what they express, but how they state it. Moreover, scholars learn how to listen, so they fathom the significance of the expressions as well as the state of mind and passions that accompany them.

This course uses various information communication technologies which are useful for facilitating online education. For instance, it uses Centra: an online education software tool which gives students a classroom feel where students chat, talk, and view presentations, use white boards to write and express, hand raise to ask questions and reply. Skype and Polycom are used for video exchanges. The mIRC is used for chat, and students' blogs are created to share their views and information.

Objectives

This study was undertaken with the following objectives in mind:

- To study the students' level of knowledge for handling computers and the Internet related programs.

- To study the experience of students undertaking GUC at the University of Jammu including the intercultural experience.
- To know the satisfaction level of students who pursued the GUC and to study the impact of ICTs on online education.

Method

Participants

Five batches of students registered for the GUC course at the University of Jammu, Jammu were studied. A total of 41 students registered for this course were studied, 26 males and 15 females. Of these students, 7 were less than the age of 20 years, 18 belonged to the age group of 21-25 years, 14 were from 26-30 years and 2 were beyond the age of 30 years. As far as the qualifications of participants are concerned, 18 were graduates, 16 were postgraduates and 7 were just 12th pass.

Materials

A questionnaire was developed and used to collect data. The questionnaire included 13 different elements of study (Table 1) and another element was included for students' suggestions. The lowest anchor point 1 represented strongly disagree and the highest 5 represented strongly agree.

Procedure

After the completion of course for every batch of students, questionnaires designed for the purpose of this study were distributed among the students. Questionnaires for data collection were distributed to 45 students and 41 students returned the questionnaires duly filled. The learning center where this course was conducted was also visited to make on the spot observations regarding the learning activities of students participating in the GUC course. The participants were asked to freely and sincerely comment so that, in addition to other objectives, this course may be further improved. Student input was also used to improve infrastructural facilities at the learning center.

Results

In order to study the impact of the course, various factors taken into consideration were knowledge of computers before the course, their past experience of interacting with the students abroad, the need of moderator during interaction, evaluation of online education vs. traditional education, the technology used for the course is up to the expectation or not, efficiency of the technology used during the course, scope of information that has been exchanged during the interaction, problems faced by students and suggestions to improve, over all experience and satisfaction level of the students, etc. The data are summarized in Table 1.

Table 1
Impact of GUC on Learners

Descriptive Statistics	Mean	SD
1. Basic knowledge of handling computers and online interaction	5.00	0.00
2. First experience of interacting with students abroad.	4.41	1.43
3. Are you satisfied with what you have learned online?	4.82	0.54
4. Interaction was moderated by the coordinator or self-driven	4.29	1.14
5. Course has helped you to established interpersonal links with the people you have exchanged information shared through this online interaction.	4.85	0.69
6. Programme enriched learning in your own area of study.	5.00	0.00
7. Online education is better than traditional offline learning.	4.53	0.95
8. Technology used in the course is appropriate for e-learning.	4.29	1.36
9. Course met your expectations.	4.63	0.91
10. The enabling technology worked fine during the course period.	4.56	0.77
11. Recommended this course to others.	5.00	0.00
12. Information exchanged during interaction with distant students.	5.00	0.00
13. Cultural and Communication barriers experienced in Interaction.	3.97	0.79

Table 1 indicates that the mean value of basic knowledge of handling computers and online interaction is 5.0, which means that all the students were familiar with these skills. Most of the students agreed that this was their first experience interacting with students from other countries whereas some of the students had experience interacting through online chatting and social networking. Ninety-seven percent of the students were satisfied with their online interaction experience. Students rated it worthwhile knowing about something sitting far away from the place of delivery of education which was interesting and they learned many things. The same percentage of the students were satisfied with the course, the rest few were of mixed views. Some students recommended increasing the duration of interaction and some faced other issues such as blurred images and

broken voices during interaction. Eighty-six percent of respondents said that the interaction was moderated while fourteen percent said it was self-driven. Ninety-seven percent of respondents said that this online interaction has helped them to establish interpersonal links. They learned about the socio-cultural life of different countries. They had opportunities to share their views and ideology with the students abroad. Students also saw change in themselves and were encouraged to establish relations with new people. Eighty-six percent of respondents found the technology used for e-learning was appropriate while the rest did not agree with this. They assumed that the technology should be further upgraded. Eighty percent of students who opted for the course experienced communication and cultural barriers. Dialect and language problem seemed to be one of the factors interfering with students' ability to understand some questions, particularly when interacting with Chinese, Russian, and Mexican students. Due to this they were unable to discuss the issues effectively. Most of the students agreed that the technology worked fine during the course period. All of the students responded that they will recommend the course to others. Ninety percent of students said that online education is better than traditional offline learning, and 92 percent of them reported that this course of study met their expectations. All the students exchanged information during interaction with distant students and all of them also reported that this program enriched learning in their own area of study.

Discussion

The global understanding course run at the University of Jammu is taken by learners from diverse backgrounds and levels of education ranging from pre-college students to Management, Computer Science, Law, Dental, and Tourism students. Basically the students who really consider that understanding global culture may help them in their professional career registered for this course. Most of the learners mentioned that they were really benefited by this course. For instance, a student of law appreciated the course delivery on climate change and reported that this course helped him to understand environmental laws and to look at the issue of climate change from the legal perspective. Similarly the MBA students mentioned that in the era of globalized, highly competitive and turbulent business environment, it is very important to have adequate understanding of global cultures and society and potential customers from all over the world. They mentioned that it is important to have sufficient information and to do knowledge-intensive work to really compete in the hyper competitive business environment.

The learners were also of the view that the time duration of this course should be extended and there should be a well-defined calendar for various courses, and the university resource center should strictly adhere to that calendar. The majority of the students however were satisfied with the course and the learning outcomes and some of them even felt very excited when they communicated with their counter parts abroad. This course has also helped them to establish interpersonal contacts and further exchange the information with their friends abroad. It has had another positive effect of developing the culture of cross-cultural collaborative learning and working together on various issues of common and current concern. The learners very frequently exchanged their ideas and even made their joint presentations on various important issues and had a feeling that

information technology has overcome the barriers of space and time. They mentioned that student will enjoy this course much more if sound quality is improved.

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