

Les innovations dans la technologie et l'environnement de formation en ligne

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Résumé : Ce papier présente une étude de cas d'apprentissage en ligne. Il est basé sur la participation du chercheur dans un module en collaboration inter-universitaire à deux institutions d'enseignement supérieur en Afrique du Sud et États-Unis de l'août au décembre de 2001. Le papier adresse les avantages et les inconvénients de l'environnement d'apprentissage en ligne et ce qui est reconnu comme une Classe Virtuelle. Il fournit une interprétation critique de la classe virtuelle connue dans cette collaboration entre les institutions. Il constate qu'il y a des avantages d'appliquer cette technologie dans les pratiques éducatives et les programmes

particulièrement dans le contexte africain où une grande majorité d'apprentis quittant l'école a l'accès presque pas à l'enseignement supérieur. Cependant, il expose aussi le NEPAD (la Nouvelle Association pour le Développement de l'Afrique) l'initiative de produire ICT dans les écoles partout dans l'Afrique pour réaliser les Buts de Développement de Millénaire sur l'éducation dans les pays en développement.

Mots-clés : apprentissage en ligne, classe virtuelle, société de réseau, société d'information, Afrique du Sud, Nouvelle Université Scolaire en Ligne

Innovations in technology and the online learning environment: A case study of inter-university collaboration

Abstract: This paper presents a case study of online learning. It is based

on the researcher's participation in an inter-university collaborative module

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at two higher education institutions in South Africa and the United States from August to December 2001. The paper addresses the advantages and disadvantages of the online learning environment and learning in a Virtual Classroom. It provides a critical interpretation of the virtual classroom experienced in this collaboration between institutions. It finds that there are benefits from applying this technology in educational practices and programs particularly in the African context where a large

majority of school-leaving learners have little or no access to higher education. However, it also expounds the NEPAD (New Partnership for Africa's Development) initiative to produce ICT in schools throughout Africa to fulfil the Millennium Development Goals on education in developing countries.

Keywords: online learning, virtual classroom, network society, information society, South Africa, New School Online University

Introducing the Virtual Classroom: an “online” production¹

This paper presents a case study of online learning and the so-called “virtual classroom.” It discusses the collaboration between the New School Online University (NSOU) in New York City, USA, and the University of KwaZulu-Natal (UKZN)² in South Africa in presenting an online module. The article focuses on the effectiveness of the online learning environment and in presenting this module, which was titled, *Comparative “mediascapes” in South Africa and in the USA*. The online “classroom” in this case study, comprised of twelve students (or learners) and a “lecturer” who facilitated the discussions. Learning and teaching took place across two “qualitatively” different continents, but in a “neutral” and mediated (computer-driven) context. The virtual classroom that these twelve students accessed was not located in either of their two countries but in cyberspace. The paper addresses at least one question: ‘are we, globally, moving into an information network society (cf. Castells, 1986, 1987; Webster, 2004)?’

¹ The term ‘virtual classroom’ is trademarked to the New Jersey Institute of Technology. See Hiltz (1994: xvii-xviii).

² The University of Natal was merged with the University of Durban-Westville campus in 2004 to become the University of KwaZulu-Natal under the new democratic White Paper on transformation and reform of higher education institutions in South Africa.

Rationale of the virtual classroom and its uses

According to Ron Krabill (2001), the originator and facilitator of the collaborative module between the two universities, the idea came to him while teaching a class in New York on the Southern African media:

I realized that most Americans tend to make one of two assumptions about media consumption in the rest of the world. They either assume everywhere is as saturated by television, radio and the Internet as is the U.S., or they assume that other nations are completely underdeveloped and electronic media therefore plays no role whatsoever. The beauty of teaching a course like this online is that people who would never have the opportunity to meet face-to-face, coming from literally the other side of the globe, will get the chance to discuss issues of growing importance in our increasingly electronically-mediated world (Krabill, 2001, online discussion).³

Hiltz (1994: xvii) uses the term “virtual classroom” in two senses; firstly, she uses it to refer to a computer software programme called the “Virtual Classroom™” that was designed and originated at the New Jersey Institute of Technology in the mid- to late- 1980s. Secondly, Hiltz (1994: xvii) defines this software in terms of its usage as an evaluative (or assessment) tool. She states that this “computer software electronically links the Virtual Classroom student to his or her professors and classmates.” The virtual classroom is the main feature of an online learning environment and the term is used descriptively in this chapter, to refer to the learning process that becomes dislocated from any specific physical space and in any specific time zone. In a traditional classroom, with its desks, chairs, blackboard and face-to-face contact, teacher and learners are present in ‘real time’ and in the same physical space. In the virtual classroom, there is no physical togetherness or presence in “real time” although there is a commitment on the part of the online participants to make the virtual classroom a ‘real’ experience. In the virtual classroom, space and time are suspended in “virtual reality.”

According to Hiltz (1994:5), the term “*virtual*” is used in computer science, “to refer to something whose existence is simulated with software rather than actually existing in hardware or some other physical form” (italics in original text).

³ Online taught courses is not a new phenomenon in the USA which began offering full-courses in HE in the mid-1990s (see Hiltz, 1994, Alavi, 1991, Bork, 1981 and 1985, and Collins, 1982), but online inter-university collaborations between nations is a growing phenomenon. A first successful collaboration between NSOU and a SA university, UKZN was held the year before in 2000 (see Kriger 2001, E-mail communiqué).

In other words, the *traditional classroom setting* that presented a physical space in which learners and the teacher gathers at a specific time, is substituted or replaced, in an online environment, by electronic computer mediated link ups (i.e. computer terminals that create virtual networks). The computer becomes a tool for realizing the means of mediated communication that allows for online learning and teaching. In a virtual classroom, the learners (students) and facilitator (teacher) communicate and interact through mediated communication that can occur at any time and from any place. The requirement however is computer technology. It means that all communication during online learning and teaching takes place via computer terminals creating networks of association –the digital classroom– and using the appropriate software specifically designed for this purpose. The communication process is similar to what we now identify as communication that takes place over the Internet.

However spontaneous and flexible the online process may seem, each learner still has to commit his/her time to ‘coming’ to class, reading the posted discussion threads, doing the required and recommended research, following up on assignments, and actively engaging in acquiring new knowledge based on the module. Palloff and Pratt (2001) in fact believe that more participation and interaction is demanded of the online student than the student present in a physical classroom because when one ‘comes’ to the online class, one needs to contribute something to alert others of one’s presence. One’s contributions are, furthermore, part of the assessment and learning processes.

The rationale for creating a mediated classroom experience and an online learning environment is explained by Hiltz (1994:3):

Colleges and universities in the United States face tremendous challenges in the 1990s. The majority of students will not be 18-21-year-olds who can afford to devote their time to living on a campus and taking courses. The majority will have families and jobs, and will be either commuters or distance education students. The need to provide access to higher education for working adults is also widely recognized in Europe, where institutions such as the British and Danish Open Universities have provided opportunities for tens of thousands of distance learners.

In South Africa, and in Africa, in general, we also face our own unique societal challenges and educational problems, particularly where the average school-leaving person attempts to enter immediate employment and support a family rather than seek to further his/her education. According to the *Dakar for Action, Education for all: Meeting our Collective Commitments* (2000) report and policy paper, compiled as an outcome to the World Education Forum meeting in Dakar in 2000, “[g]irls represent 56 per cent of the estimated 41 million school-age children who

are out of school. Gender parity is highest in Southern Africa, where many countries have attained near universal primary education and high adult literacy,” (Regional Conference on Education for All for Sub-Saharan Africa, 6-10 December 1999). In general, however, the figures and statistics throughout Africa are relatively high for non-school attendance, and this is not necessarily prevalent to gender. Can technology be used to help?

The USAID Center reports, as of 2005, forty-percent of school-aged children in Africa do not attend primary school. There are 46million school-aged African children that have never stepped into a classroom (see World Education Forum 2000, 2009 and NEPAD’s E-School programme 2005, 2006). The application of technology in our societies cannot be the overall solution to the kinds of problems in education especially in Third World contexts, but we must at least begin to use and experiment with the tools and means at our hands. If this works for us, it is good, if it does not, then we must look again for other means and tools at our disposal. The NEPAD (New Partnership for Africa’s Development) E-School programme arose partly as a response and a commitment to bridging the electronic and technological divide between Africa and the rest of the world. It seeks to provide primary and secondary schools throughout Africa with ICT equipment (i.e. computers) and skills. There are at least fourteen countries listed on the NEPAD E-school online site that are involved in the project. These include Algeria, Burkina Faso, Cameroon, Egypt, Gabon, Ghana, Lesotho, Mali, Mauritius, Mozambique, Nigeria, Rwanda, Senegal, South Africa, and Uganda. (See NEPAD E-schools Initiative Concept Framework Document: www.eafricacommission.org). This paper attempts to impart ideas about the practicalities and the potential use of online learning at higher education institutions⁴ in Africa, but it does not propose to offer a blueprint that can be transferred to different contexts and experiences.

⁴ A differentiation must be made between ‘contact’ HE institutions and Open Distance Learning (ODL) HE institutions: the author works at an ODL and therefore has a keen interest in ‘knowing’ about online teaching, but the module that she participated in, in 2001, was a collaboration between two contact teaching universities in SA and USA, respectively. The NSOU is a subsidiary of NYU and may be recognized as an ‘online contact university’. The assumption is that most of NSOU students are registered and taking courses at NYU.

*Inside the online virtual classroom learning and teaching environment:
content and process*

The online learners who were present in the virtual classroom and who registered for the *Comparative media scapes in Southern Africa and in the USA* module were from a typical “First World” context and from an atypical⁵ “Third World” context. Despite this, they shared several common experiences. The learners overall had a middle-class, Westernised educational background in their respective countries. They shared similar interests (as presented in the online “Introductions” at the start of the module), and they possessed similar levels of language proficiency and aptitude in using a computer. They were also students who had already spent at least two full years at a residential university before registering for this online module and this is how they heard about the module, through their respective universities. Therefore, there was a solid basis and basic infrastructure in place, to construct the virtual classroom. Furthermore, the South African higher education (HE) system, in general, because of its colonial past, largely was modelled after Western-style (i.e., Anglo-American) education. These shared similarities assisted the online communication amongst the group of participants, but as discovered, even though these characteristics are not requirements for successful online collaboration, they added to its success.

To access the computer programme and participate in the virtual classroom module, the learner has to register and pay fees at the institutions collaborating in the educational experiment. The system administrator then assigns a “login name” and a password to each registered student, to protect who may access their online work and grants them access to the module.⁶ On screen, when logging on, there is a base-menu or main menu. When the user (i.e., the online student) highlights and clicks with his/her cursor on any one of the options listed on the menu screen, drop-down menu displays on the uploaded visual screen thus giving the student a further set of choices. The software programme design is highly sophisticated for the task of swapping or “togglng” between screens.

⁵ Some social theorists consider South Africa as an atypical Third World society because of the level of economic, political, and social development it has achieved particularly after 1994 when it became a young liberal democracy (following four decades of apartheid rule). Fourie (2002) describes it as a Third World within a First World and vice versa.

⁶ The name of the software programme is the “Prometheus software programme” that was developed at the George Washington University, in Washington D.C.

One can go in and out of different screens in the menu and drop-down menus and complete various tasks instantly, such as posting an online assignment, checking to see who is online at the time of logging in to the virtual classroom, and chatting with online peers online. One can also reply to previously posted discussions before one finally chooses to log out of the class online. In some ways, this can be more time consuming than attending regular, face-to-face, and scheduled classes at specific times with slots of 45 minutes to an hour! However, there is more flexibility and freedom of choice in terms of how one chooses to manage one's time online.

The function of the "drop-down menus"

On the screen, in the online classroom, when one chooses a particular option from the main menu, one finds/opens a further drop-down menu (e.g., shown in Figure 1 below). The online student has the option to browse and read postings online by choosing from the menus until they can no longer open or expand the selected option from the menu. The following drop-down menu, in *Figure 1*, appears on one's screen when one highlights an option on the main menu using the cursor. The example given below in choosing an option from the main menu is the "Syllabus." In *Figure 1*, one can see the on-screen layout of the syllabus for the module, and the total number of postings by all of the participants under specific discussion threads (i.e., topics). For example, there were 34 online postings under the "Introductions" thread. One can also see the date and time of the last participant's posted message in a particular discussion thread.⁷

⁷ These web pages (Figures 1 and 2) were downloaded from the original online web pages of the New School Online virtual classroom during the researcher's participation in the module. These were then printed and scanned in order to obtain computer-friendly copies.

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The screenshot shows a web interface for a course syllabus. At the top, there is a navigation bar with 'Top' on the left and 'Page 1 of 1' on the right. Below this is a header section with the NSOU logo and the word 'Syllabus' in large text. A search icon and a user profile icon are also visible. The main content area is titled 'Discussions' and also shows 'Page 1 of 1'. A 'TOPIC LISTING' button is present. The content is organized into sections: 'General Discussion', '1. Mediaescapes', '2. Student Projects in Progress', and '3. Evaluations'. Each section has a 'TOPICS' sub-section. The 'General Discussion' section lists several topics with their respective 'TOTAL' counts and 'LAST' update times. The '1. Mediaescapes' section lists three topics with their 'TOTAL' counts and 'LAST' update times. The '2. Student Projects in Progress' and '3. Evaluations' sections are currently empty.

	TOTAL	LAST
General Discussion		
TOPICS		
>> Introductions (Posted by: Ron Krabill on 8/2)	34	Oct-19-01 0:02 AM
>> Course Structure & Logistics (Posted by: Ron Krabill on 8/2)	10	Oct-18-01 1:45 PM
>> Back of the Room (Posted by: Ron Krabill on 8/2)	2	Oct-17-01 5:57 PM
>> Historical and Cultural Backgrounds and Contexts (Posted by: Ron Krabill on 8/2)	3	Oct-18-01 0:16 AM
>> Revised Course Outline (Posted by: Ron Krabill on 10/18)	1	Oct-18-01 1:48 PM
1. Mediaescapes		
TOPICS	TOTAL	LAST
>> Mass Media and the World Trade Center (Posted by: Ron Krabill on 9/25)	23	Oct-19-01 0:35 AM
>> General Media Theory (Posted by: Ron Krabill on 10/16)	3	Oct-18-01 5:14 PM
>> Comparative Media Penetration and Access (Posted by: Ron Krabill on 10/18)	2	Oct-18-01 6:05 PM
2. Student Projects in Progress		
TOPICS	TOTAL	LAST
3. Evaluations		
TOPICS	TOTAL	LAST

Figure 1: Drop-down menu from the main menu: "Syllabus"

The student has the further option, from this sub-menu, to highlight and choose (by clicking with the cursor) any of the options listed under this thread or

menu. A further example appears below, by highlighting and choosing the “Course Structure & Logistics” option in the list:

New School Online University Page 1 of 4

TOPIC LISTING
1 - 10 of 10 ALL LAST

TOPIC = Course structure & logistics

From: Ron Krabill **Response:** 1
Date: August 2, 2001 at 11:16 AM

Course Structure and Logistics

By now you should have read the syllabus, and you probably have some questions which arise out of it. In order to keep our conversations focused, I'm creating this item in which to deal with all logistical questions regarding the course. Anytime during our time together, feel free to post any questions you may have regarding assignments, grading, timelines, etc., here. That way other items which are dealing with theoretical topics can stay focused on those topics.

Here are some questions which have already come up...

Books and Reading Materials

The only book we'll be reading together as a class is Levinson's *Digital McLuhan*, listed in the syllabus. We'll be reading it over approximately the first quarter of the class, and it will then provide a common framework for us to move forward into other topics.

In case you think that means there won't be much reading, however, you should know that you will be asked to bring in your own readings to share with others on each topic. If you'd like to contribute your analysis of a printed book which deals with the topic at hand, please include the full reference and a synopsis in your own words. Even better are references to other websites with papers or readings, with a link to the site embedded in the text. For instance, the home page for Cultural and Media Studies at Natal has several excellent media-related articles which you can read directly on the web.

Course Structure

As the syllabus states, you will be required to log on a minimum number of times each week -- three to be exact. What that means is that at least three times per week you should read all the new postings on the website, and contribute at least one comment to the discussion. In addition, you should contribute a reference to another site or a printed book at least three times every two weeks.

This may sound a bit contrived or forced; I'll admit it sounds that way to me. HOWEVER, the online environment of this class opens new opportunities which we need to learn to use well, and the old adage that practice makes perfect rings quite true. Only by practicing electronic communication will we be able to:

- learn to use this form of communication efficiently and clearly, and
- understand the ways this form of communication impact us as individuals and collectively

What this structure means is that you will need to anticipate spending a lot of time on the web during the next thirteen weeks. It will be an intensive process, but remember that the asynchronous nature of the course means you can build web-time in for yourself in strategic ways. If for some reason you will be unable to access the web for five days or more, contact me in advance so we can negotiate a way to keep you up to speed.

From: Ron Krabill **Response:** 2
Date: August 3, 2001 at 10:57 AM

If you have any questions about the logistics and course structure above, in the syllabus, or anything else, please post them here. If you would like to contact me individually via e-mail, feel free to do so; however, in

.../thread.cfm?user_key=52800&whois=000D84D7-F46F-1BCF-B866830202BC0000&t2001-10-19

Figure 2 : On-screen “Course Structure and Logistics” page selected from the drop-down sub-menu

Figure 2 above, shows the content posted under the specific discussion thread, “Course Structure and Logistics.” The process for participating in and accessing the virtual classroom is by visiting the module website, reading, highlighting, choosing, and, again, reading. In *Figures 1* and *2*, one sees how the computer software programme drives the module.

“Direct contact learning” versus “mediated and online learning”

Olson and Bruner (1987) speak of learning through *experience* and learning through *media* (own italics). In the first form of experiential learning, learning is a direct activity drawn from our own, but limited, interactions in the world of things, processes and people. In the second form, knowledge (and learning) is a mediated process derived from outside of our own initiated actions but also limited to the extent of being secondary to our direct experience. For instance, learning by watching a television programme or reading a manual on fashion design is mediated, whereas learning by doing is experiential (experience). These two examples highlight how learning takes place in the virtual classroom: one is not first learning by doing, one is learning through reading, watching, observing before doing. What Olson and Bruner (1987:226) point out is that the two forms, experience, and media, are complementary, and that it is possible for the mediated experience of learning to substitute for direct experience.

Drawing on education theorist, John Dewey’s account of the relationship between knowledge and experience and experiential learning as a part of the pedagogic process, Olson and Bruner (1987:227) emphasise the point that attempts at educational reform should focus more on the role of *process* rather than content (own italics). What this in turn alludes to is the significance of ‘delivery’ that is, in how learners learn. Delivery in turn alludes to activity or action rather than simply content-focussed learning (i.e. the syllabi). In other words, a student’s own input in their learning is more significant than the actual content that is provided to them. It stands to reason, that if no effort is made on the part of a student to attend class, read books, do assignments, visit the library, etcetera, he/she will not “learn,” no matter how interesting is the content of a module –designed for him/her. That student needs to “engage” with content in order for it to hold any significance for him/her. Participation as opposed to merely receiving information and experience rather than passive observation are often elements ignored in the acquisition of knowledge and in the education process. “Participation” and “experience” are in fact procedural rather than content based.

Direct experience itself, whether through participation or delivery (both of which involve action/activity) is, according to Olson and Bruner, “misleading” as a term. They state: “all knowledge is mediated through activity, and the resulting knowledge is not independent of the nature of those activities.” For Olson and

Bruner (1987:228) “knowledge of objects and events that results from experience, and the structure of activities involved in [that] experience,” may bring us closer to understanding (and to deconstructing) direct learning experience and mediated learning in acquiring knowledge.⁸

Application and critical evaluation of the online module process

The application of Olson’s and Bruner’s (1987) argument to the ‘online learning experience’ enhances understanding and critical assessment of that experience as both, a ‘direct’ and ‘mediated’ learning process. What evidences a synchronicity between this dual-learning (direct versus mediated learning) is in the online facilitation of acquiring knowledge – i.e. the content towards which activity is aimed at producing or grasping, and the form that this content takes becomes secondary to the process involved in processing and understanding it. To re-state an earlier point, the critical focus for some educationalists is process-based rather than content-based.

In the case study of online learning, the process of drawing upon the activities and participation of disparate learners brought together under similar conditions within a virtual classroom experience is as significant as, if not more so, than the actual content resulting from that module. After all, in assessing such a module, most analysts might look at the content and ignore the actual process. The skills and ability thus derived from doing the module is the actual learning process and (bonus in) acquiring experiential knowledge. I will attempt to unpack this claim below, but first, a word on the actual structuring of the module which formed the basis for the virtual classroom experience.

The online module offered in 2001 was a credit-bearing part of coursework for the American and the South African students that participated in it. The module was pitched at the graduate level (third year level) at a higher education institution (HEI) in New York, but applicants at the postgraduate (Honours or 4th year) level only in SA was invited to register for it. At the outset, I already observed a differentiation made between the educational experiences and abilities amongst the online participants from South Africa and from New York in who may apply. However, the aim of the module was meant, in part, to bridge the divides between ‘North’ and ‘South’ and to collaborate through online sharing about learned experiences of media in different social contexts.

⁸ While this may appear as a circular argument because the process of understanding is limited to experience and learning, instead it reveals a dialectical process similar to that identified in Hegelian philosophy (see Mautner 2000).

In Africa, access to telecommunications and technology, information and skill vary considerably. The paper instead weighs up the pros and cons of online learning for the African university and it draws on the experiences of the author having participated in an online module in relation to the other participants. It makes observations from the 'reflexive space' created by online learning and considers the 'effects' and outcomes of the 'NSOU-UKZN' inter-university collaboration and online learning experience. The reality is however that the participants in the virtual classroom of 2001 are not necessarily a representative group of learners in all online- and the findings might not be generalised across various other contexts and experiences without researching logistics and such.

Online learning and the information and network society

Virtual and online (i.e. internet-based) learning is a reality as we enter the so-called 'network society' of the 21st century. Castells (1996), Poster (1994), and Webster (2004) all talk about an information society superseding the industrial society. The network society, as such, is a 'post-industrial' society (Webster 2004, cf. Poster 1994) based on its focus away from mainly industrial development to information development (Castells 1996), and it is 'global' in reach mainly because of the intervention and use of information and communications technology (ICT) (see Castells 1997 and 1998, also Cohen and Kennedy 2004).

What are the implications of this type of information or post-industrial society for so-called Third World or developing countries such as on the African continent? In addition, what are some of the challenges facing African countries as 'high' forms of modern technology interface with and becomes integrated more and more in human life in areas of education, work and communication? These questions, which form the framework of this paper, are addressed with reference to the online learning experience of virtual classroom education introduced above. The pitfalls and strengths or advantages (if any) of virtual and online learning is assessed in the context of poverty, unemployment and skills deficits amongst other things in the developing context in Africa.

The interfacing of these mainly digital technologies with human beings unwittingly alters and changes how one experiences, thinks about and describes one's own place in the world. The interaction between the human person and technology alters and shapes how we think, understand, and reflect on the world of nature, interact with others and produce knowledge. It fundamentally changes knowledge (or *what* we know, understand and *how* we come to 'know' and understand). Sociologist, Anthony Giddens (1984), states that 'how we talk and think about phenomena shapes how we act' (cited in Webster, 2004:3).

The information society is a 'knowledge-based society'

Webster (2002) considers the term, information society, “inappropriate and misleading” (in Webster 2004). When one considers the ever increasing ‘divide’ between developed and developing nations unwittingly created by new ICT’s for instance, one grows less enthusiastic by the ‘information society’ unless, knowledge production takes root within and amongst the poorest of society. In this sense, the basic human right to education must be the foundation, in the Third World, upon which ICT and other ‘novelties’ of technology be ‘sprung’, built, erected. In other words, technology is not the answer and quick solution to ‘development’ in the Third World, but it can be harnessed to become a contributing element.

What is technology but an extension of human capability and action, including thought and potential! The most sophisticated ‘cyborg’-technology for instance, is a copy-cat of the human functioning organism, but it is not an organism in itself lacking the humaneness (i.e. essentially human qualities) of the person such as empathy, emotions, lateral (imaginative) intelligence and complexity. What is ‘information’ but when ‘broken up’ it gives ‘in’ and ‘-formation’. This is suggestive of a process of becoming or of being. Formation suggests a form and content of, for instance, knowledge and humanity.

The information society is therefore a ‘peoples-driven society’ and not technologically driven. Knowledge itself is a construct of people not of technology. Virtual classrooms still require people at the ends of computer ‘hubs and nodes’, operating technology and communicating and learning. The point is to ‘de-mystify’ technology by seeing it for what it is and using it appropriately. Still, those with the acquired skills, training, access, and expertise (knowledge) overtake those lacking these qualities. This is the divide.

International HE collaborations could mean the desire to stimulate an information society (and all things economic and other that go with it) on the one hand, and the unwitting desire to ‘grow’ the ‘global network society’ on the other hand. In both instances is the certainty that there is far more realisation of the interdependencies of both and all types of human societies, First World and Third World, North and South, developed and developing, on each other. The world is, in the words of Marshall McLuhan (1989) a “global village,” even if a very unequal one.

Assessment: the 'practice' (and process) of online learning

This section is broken down or separated into specific acts that specify the mediated and 'direct' (– through own 'doing' of work, e.g. library and online searches for sources and information) learning experience. Olson and Bruner (1987:233-4) separate the acquisition of knowledge and skills and the forms of experience from which these are derived into three sets: "cognitive" (or 'organic' – own term) learning, "categories of behaviour from which information may be extracted" and, "technological realisations." The focus of this paper is on the third or last mentioned method.

Online teaching and facilitation requires skills training of staff in this virtual environment. Furthermore, it cannot be assumed that learners will 'catch-on' to this form of delivery and instruction. Online learning requires a level of independence of the learner and a skill in the use of computer software programmes. Firstly, students need to understand the functionality of a keyboard – the basics of computer usage, and they need to learn how to familiarise themselves with the functionality of a specific software programme, for instance how to post assignments online, how to enter into specific 'sections' of content of the online study material, and so on. Fortunately, most online software programmes for instruction and learning purposes are set-up in such a way as to 'lead' or guide the user in a sequence of logical steps. It may boil down to reading 'pop-up' screens that offer various options such as 'post assignment', 'retrieve study material', or 'paste a discussion', all at the click of a button. Errors are also pre-programmed into software such that if an incorrect option is chosen, the screen can reload or restart (see Palloff & Pratt, 2001).

Formative assessment was divided into 50% of the online class work participation (i.e. regular postings, content, and quality of these) and the other 50% from a 5000 word research paper that students had to independently prepare, but post an early draft online for class comment. These comments also were required as part of each student's assessment regarding participation. A mini-research paper on the students' own chosen topics was required to be submitted towards the latter part of the module. Grades were assigned at the end of which an average grade score determined the level of pass a student achieved.

While observing and writing on distance open learning in India, Ramanujam (2002:7) states that "[he] could see a common pattern governing the practice of distance education in many of the developing countries." They all have similar or comparable problems and challenges in their educational programmes and structures. Ramanujam (2002:7) also points to an important fact facing many educational systems in the developing worlds of Asia, Africa and South America,

that participation of the “masses” in educational activities has either been carefully kept out of the mainstream education or given a “second rate education” in the name of second best. These inequalities manifest themselves in many if not all education experiences in countries around the world.

Conclusion and proposals for future research on online (web-based) learning

In summary, a virtual classroom is mediated through computer technology and use of the Internet and it differs from the conventional face-to-face classroom in ‘space’ and time. What the latter means is that learning is more flexible in an online environment where students need not follow a rigid schedule of physical attendance as at a lecture hall or classroom situation. Learning takes place in the location of choice and convenience of individual learners and participation is necessary in order to keep the ‘virtual classroom’ thus created stimulated through regular online postings and discussions. Like a regular classroom, students are still required to do much research and reading in order to make a valuable contribution to the subject matter or online discussions. In fact, the virtual classroom experience may be thought to boost the participation of individual learners more than a regular classroom because individual participants have to make contributory discussions as part of their assessment criteria.

The significance and the relevance of the experience highlighted and discussed above is firstly, the use of a mediatory instrument and medium of instruction – electronic media as opposed to the face-to-face interaction in a ‘real time’ and real life classroom. Secondly, the facilitation and construction of a collective and inter-connectivity of peoples of different geo-political backgrounds and experiences across ‘time and space’ in ‘virtual reality’ (Giddens, 2003; Hiltz, 1994), and thirdly, the achievement of a level of participation, skill and competency rendering the use and integration of new media technologies in education (in this case) a relative success. It would be interesting to compare structured learning, which takes place online with learning that takes place in a real life classroom. Even more interesting would be to compare the interactions in a virtual ‘chat-room’ with the interactions in a virtual classroom: How are the two types of interaction and communication different and similar, for instance?

Hiltz (1994: xv) warns, “[m]any of the problems of contemporary society may be traced to technological innovations. The greenhouse effect, acid rain, polluted oceans, and ‘nuclear winter’ (...)”. She further questions whether the computer’s role in the emergence of the post-industrial society will depend on the social context or on the social choices that we make for its use in our daily lives (Hiltz, 1994: xv-xvi). Hiltz (1994) remains hopeful that the use of computer networks to advance

communicative and interactive learning (educational) opportunities will extend to people of all ages across dispersed communities.

In Africa, with the support of technology such as computers and software packages, that 'link up' people from villages to schools and from homes to university campuses, the possibility for improved learning and social interactions may be realised. Yet, much planning and policy-initiatives need to be in place not so much to regulate the process but to have a clear vision and purpose in mind concerning the well-being and improvement of life for a wide variety of peoples. Inclusion should be one of the main driving forces of computer-mediated learning experiences. Content and course structure and design should be another consideration; will the purpose be to create jobs and employment opportunities or expand creative knowledge for the social improvement and uplifting of life in general, or both.

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