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Research article

The Relevance of Interactivity in Distance Learning Environment

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Abstract

This article is an excerpt from a previous research. The study was a qualitative case study and the purpose was to explore the need for program development in a distance learning environment in the United States as a whole and to identify strategies for using best practices established in U.S.-based distance education programs as a basis for developing a model for other systems.

To preserve anonymity of the cases and participants involved in the study, all names were changed to pseudonyms. The schools are identified as follows: Private School A (PSA), Private School B (PSB) and Online Public School (OPS). Private School A participants are designated with the names John, Janet, Teresa, Jerry, Elizabeth, Mathew, Cynthia, Ben and Stacy. Private School B participants are designated as Boris and Jonathan, and the OPS participants are named Andrew and Samantha. The study findings can inform institutions where quality education is needed to better prepare under-served school populations for higher education and for further contribution to the development and prosperity of that nation.

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Introduction

The impact of technology in the educational world cannot be underestimated (Monolescu, Schifter & Greenwood, 2004, Nsiah, 2011). It has been credited with reducing the educational gap between developed and developing nations through distance education (Breen, 2006). Learners around the world are demanding anytime and anywhere forms of education, and learning institutions are responding to that demand by implementing various forms of digitally-based education (Schrum & Hong, 2002).

Distance education is not a new concept, but in recent years, it has assumed markedly new forms and greater prominence. Now, it is one of the fastest growing forms of education and is becoming more a part of mainstream education through courses taught by Internet or videoconferencing (Ashby, 2002; Nsiah, 2011). In a very short period of time, academic institutions have been provided vastly expanded opportunities to provide a flexible and more open learning environment for students, and this trend continues as the technology continually improves (McIsaac & Gunawardena, 1996). In view of this, the need to explore the relevance of interactivity in distance learning environment is expedient. The following interview question provided the basis for data collection for this research:

- IQ 1: How do students interface with your delivery program? For example, how do they receive class materials, interact with classmates, respond to instructor, submit assignments, etc.?

In line with the above questions, categories related to interaction and socialization were identified and are discussed in the following sections. These categories emerged from the interview questions and are the result of building a logical chain of evidence through pattern-of-commonality identification in line with the research question (Creswell, 2007; Davies, 2007).

Interaction

The importance of interactivity is highly recognized in distance education (Billings, Connors, & Skiba, 2001; Boyle & Wambach, 2001; Conway, Easton, & Schmidt, 2005; Dennen, Darabi, & Smith, 2007; King & Doerfert, 2000; Moore & Kearsley, 1996; Muirhead, 2001a, 2001b; Tuovinen, 2000; Sims, 2003). Quality distance education is dependent upon the interaction and participation of the learners (Kruh & Murphy, 1990). Discenza et al. (2002) suggested that there must be teacher-student, student-teacher, and student-student interaction throughout the course in order for effective instruction to be a likely outcome.

All three cases involved in this study, even though each differed from the other, acknowledged the importance of interactivity in their various programs. All cases mentioned common tools they use for interactions,

such as e-mail, text messaging, instant messaging, telephone, scanner, webinars, Elluminate (a collaborative system used for conducting class synchronously), etc. Each of these strategies provides students and teachers with flexible approaches to interaction that address both instructional and interpersonal needs. Teresa, administrator/instructor at PSA, explained the kind of tools they were using for interactions and how they used them:

> *We use the CMS, the content management software. That's where we have online blogs. We have discussion boards. It's like a virtual locker where the students get to turn in their work. And there's a lot of interaction that can take place in that environment, as far as teachers using the tools that are available to them. In addition to that, we have the on camera sessions which allow the students to interact with students and teachers as well. They do a lot of group presentations where students present together. They'll do a lot of skits and activities like that. Then we also have online chat features like yahoo messenger which is a free chat program that's available. The local facilitator monitors to make sure students aren't just goofing around all of the time and not doing their work. The students make friends very quickly that way, as they do a lot of interaction through that.*

Boris, initiator/director for PSB, explained the interactive nature of their program as follows:

> *As far as receiving class materials, interacting and responding, with the exception of the sciences, the beginning of the year we would send out a package of materials that they would use for science that they would do science experiments with. But with the exception of that, and their books, all materials are electronic that we used. They responded to the instructors electronically with the exception of some tests. Some tests would require scanning or faxing, but most of it was electronic. There's a lot of information that goes back and forth via email, but scanning is certainly a requirement of each site—that they have a scanner that they can scan things. And mathematics is certainly an area where having the ability to scan and send documents, because of the mathematical symbols, is certainly a requirement to be able to get information back and forth.*

Jonathan, PSB teacher, reflected on how interaction took place in their program, an explanation which mostly concurred with Boris' explanation:

> *Students submitted their assignments via e-mail. At the beginning of the year we would package up all their books, and we would ship them to them. We charged them for the books, and if they returned the books, we would give them a discounted rate for wear and tear.*

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Andrews, vice president for OPS, explained the student interface built into their academic program:

> *Everything is done primarily through their computer in terms of connection, but we do have students who use a lot of e-mails, texting, voicemails, phone, and so forth with their teachers. Teachers also have a number of tools that are available to them. So let's imagine that a teacher has five students that are struggling. She might say —Why don't the five of us get onto a webinar, or an Elluminate? And she'll go over a concept with a group if she needs to do so.*
>
> *We have students who work together in teams for projects. We offer clubs, events, and things like Shakespeare festivals online for students. We also have events around the state where teachers will go if the students would like to meet their teacher. If the teacher happens to live near them, they can have some face-to-face interactions. Students do see a picture of the teacher, so they do know what the teacher looks like. And many parents also send pictures of the students to the teacher so the teacher knows what the student looks like.*

Samantha, e-solution manager at OPS, explained their learning management system and how it aids interactions in their program:

> *The interface takes place in the learning management system. Students log in, and all of their course material is in the learning management system. Everything is there for them. Within the courses, sometimes they are linked out to the Internet for additional material. Sometimes within the course there'll be streaming video. There are also graphics, Java, Flash, etc. There are all kinds of different activities, but almost everything is within the course itself. There are very few physical class materials. Sometimes, when there are materials, we send those materials through the mail. For example, sometimes there are science kits that are sent to students, but most everything, for most courses, are within the course. Sometimes students have to purchase or borrow a novel from a library or go out and rent a video. They interact with their classmates via discussion boards, and we also use a webinar system called Elluminate.*

Though the names of the products varied, all interviewees placed emphasis on varying interactive technologies as critical to success in the distance environment. Commonly, tools used by the various programs for interaction included e-mail, text messaging, instant messaging, telephone, scanner, webinar, Elluminate, etc. Each of these strategies provides students and teachers with flexible approaches to interaction that address both instructional and interpersonal needs. In addition to interaction, socialization and service learning are discussed as a sub theme, for knowledge is also found in the social and service learning environment.

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Social constructivists have argued that knowledge is not initially found within the individual but within a person‘s social and cultural surroundings. As a result of an individual‘s interactions with others within the social context, knowledge then becomes internalized on an individual basis (Lambert & Clyde, 2003). The challenge in the distance learning environment is providing those social and cultural surroundings to a dispersed population. Socialization is a well-established criteria known to be vital in the construction of knowledge.

Caviness (2007) and others also emphasized the importance of service or practice in real life educational applications. Service, as suggested by Caviness, ―is a valuable part of holistic education‖ and ―service-related activities maintain instructional integrity. Caviness believed that ―constantly taking in without reaching out to benefit the surrounding community promotes entropy more than vitality, and this entropy ―can diffuse human potential (p. 23). Within this context, there was interest in knowing to what extent social and service activities were part of the studied programs. The data revealed that all three cases promoted service learning in their programs, though each accomplished this task in different ways.

Beside running synchronous classes that enabled the students to see each other and to have live interactions, PSA planned retreats twice every year. These events gave students further opportunity to come together, socialize and interact. At these retreats, PSA offered service opportunities such as community improvement and caring for or assisting people in nursing homes and hospitals. With this focus, John, a teacher at PSA, noted, ―*they give back to the community. The services they render form part of their training, for they get to know each other,to interact, and to learn in the process*.‖ John further described how PSA used a community service exercise to promote learning:

> *On one occasion students visited a certain historical site in the Mid-West and did some cleaning in the building. Articles now considered to be junk had been kept for between 60 to 70 years. The students trashed the junk from the building. In the process of serving the community in this way, they learned the history behind the building, which was linked to their faith and the establishment of their school.*

In agreement with participants at PSA, Boris explained how socialization and service learning were embedded in PSB‘s program:

> *We utilized our own social networking software called First Class. This allowed the students to always be able to chat, email, and contact other students within the confines of our own safe network. We encouraged students to be in contact with each other on a 24/7 basis. We also scheduled regional events quarterly and service events yearly in which we got the entire program together to socialize and do service learning. Additionally, for service learning we took on Internet-based service learning projects that could be done electronically. These included responding to people who had questions about [Christianity] and sending e-cards to people who needed*

encouragement. We also assigned individual service-learning projects for students to take on their own.

With regards to socialization and service learning in their program, the issues of socio-cultural learning were also addressed by Samantha, e-solution manager for OPS, who remarked,

We really try to provide students with a couple of collaborative assignments within each course. We also have the discussion threads so they can talk to one another about academic topics within the course. Some teachers even set up outside blogs and wikis for students to share and collaborate. Our student clubs are another place where students can socialize. Our home school students often belong to their own clubs and groups that the parents put together or that they find.

All three institutions acknowledged the importance of service learning, and all made provisions for socialization and service learning in their various programs. PSA offered service learning opportunities such as community improvement and caring for or assisting nursing home and hospital residents. PSB offered socialization and service learning through a social networking software called First Class which allowed students to chat and email one another. They also scheduled quarterly regional events and yearly service events. Internet-based service learning projects were also offered. OPS provided service learning by giving collaborative assignments. They also had discussion threads where students could interact with one another and made use of blogs, wikis, and student clubs for socialization and service learning. While PSA and PSB used field trips for service learning, OPS relied largely on Internet-based programs and features for service socialization and service learning.

Conclusion

All subjects placed emphasis on varying interactive technologies as critical to success in the distance environment. Tools commonly used by the various programs for interaction included e-mail, text messaging, instant messaging, telephone, scanner, webinar, and Elluminate. Each of these tools provided students and teachers with flexible approaches to interaction as they addressed instructional and interpersonal needs. Service learning was recognized by all three institutions as important, and each made provisions for socialization and service learning in their various programs. The value of service learning lies in its ability to provide students an opportunity to socialize within a semi-structured environment while working toward a common goal. This serves the dual purpose of both socializing and educating the students, and it provides an occasion for students to donate their time to beneficial causes and learn about citizenship and personal responsibility.

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