INTRODUCTION

Quality in distance education has been researchers’ and critics’ major concern. The increase in access to digital and online technologies represents not only convenience, opportunities, and flexibility, but also a new challenge for educational institutions. To ensure quality in distance education, a plethora of buzz words have appeared in the realm of distance education: course design, support services, and interaction, as well as administrative practices that can encourage students to fulfill their educational goals. Among the many factors that contribute to the quality of distance education, researchers have suggested that the importance of communication tools stands out from other aspects of the distance learning experience (Diebal, McInnis, & Edge, 1998; Ferrari, 2002; Gibson, 1998; Rangecroft, Gilroy, Tricker, & Long, 2002; Steffensen, 2003; Zhao, 2003). Nowadays, due to the nature of innovative technology, a distance education course without communication tools such as discussion groups will be considered incomplete. Students will miss the “live” human interaction that can enhance the quality of distance education. Moore (2002, p. 69) argues that quality is accomplished in part by promoting interaction “with instructors, classmates, the interface, and through vicarious interaction.” Further, Moore (1989) identified three kinds of interaction in distance education and provided detailed explanations: learner-content, learner-instructor, and learner-learner. Learner-content interaction indicates that construction of knowledge occurs when the learner interacts with the course content and changes in one’s understanding occur when the new knowledge is integrated with preexisting knowledge. Learner-instructor interaction reinforces the learner-content interaction using engagement and dialogue exchange to promote the teaching/learning process with examples, discussion, and so forth. Learner-learner interaction is vital in distance education if participation in class discussions is to take place (as cited in Wickersham & Dooley, 2006, p. 186). Among communication tools such as e-mail and chat rooms, discussion groups are considered an effective tool that allow students to interact with other students and with the instructor. There is no doubt that discussion groups will enhance quality in distance education. Why are researchers interested in the relationship between discussion groups and quality in distance education? This is because they wish to measure learners’ critical thinking skills. It is commonly argued that relevant/robust discussion among discussion groups can lead to learners’ critical reflection. It is Westerners’ belief that it is in relationship with others that we learn. How has this belief been deeply rooted in people’s minds? Some background information will help explain this.

BACKGROUND

Researchers (Irani & Telg, 2001, 2002; King, 1999; Spotts, 1999; Telg, 1995) have emphasized that adequate distance educational instructional design should be provided to those developing distance education courses to sustain a quality program. Instructional design principles were widely studied in the 1950s and 1960s in the United States. Gagne (1985) indicates that factors that collectively influence learning are called the conditions of learning. He further suggests that some of these conditions pertain to the stimuli that are external to the learner. Discussion groups can be considered external stimuli that can ultimately influence learning. According to Gagne, Briggs, and Wagner (1992), good principles of instructional design refer to controllable instructional events. The designer of instruction, and also the teacher, can readily devise situations that include these principles such as contiguity, repetition, and reinforcement (Gagne et al., 1992, p. 8). Gagne et al. (1992) argues that the events of instruction involve the following kinds of activities in roughly this order, relating to the learning process:

1. Stimulation to gain attention to ensure the reception of stimuli
2. Informing learners of the learning objective, to establish appropriate expectancies
Discussion Groups

3. Reminding learners of previously learned content for retrieval
4. Clear and distinctive presentation of material to ensure selective perception
5. Guidance of learning by suitable semantic encoding
6. Eliciting performance, involving response generation
7. Providing feedback about performance
8. Assessing the performance, involving additional response feedback occasions
9. Arranging variety of practice to aid future retrieval and transfer (pp. 11-12).

Discussion groups are considered one of the important events of instruction. It is expected that teachers will control these in order to achieve quality in distance education. To fail to initiate meaningful discussion in distance education is to fail to understand principles of instructional design. Based on principles of instructional design, there is a plethora of techniques that instructors should follow in order to facilitate discussion groups.

TECHNIQUES IN FACILITATING DISCUSSION GROUPS

Some of the generic challenges associated with developing discussion in distance education are as follows: instructors’ and students’ technical skills, constraints on writing skills, reticence, and access to technology (Hammond, 1997). Hammond (1997) also found that adding structure may reduce flexibility and the sense of being “distant” may contribute delays in participation. From their study from their online class, Chase, MacFadyen, Reeder, and Roche (2002) identified nine emergent themes:

1. An online culture developed reflecting the values of the developer of the Web environment. That culture was maintained by the guidelines created and by the facilitators and participants.
2. Formal and informal participation was affected in the online environment and distinct communication pattern differences were apparent between the two.
3. Individuals varied with their level of comfort in online discourse.
4. Individuals created their own online identity.
5. Technical issues and formatting influenced communication.
6. Participant expectations of the course, the instructor, and the medium influenced the environment.
7. Facilitator expectations also affected the learning environment.
8. Differences in communication related to the use of academic discourse vs. the telling of stories or narratives were observed and created variation in participation in online debate.
9. Explicit and implicit assumptions about time were evident.

Based on the common issues, challenges, and principles of instructional design, meaningful discussion that leads to students’ critical reflection can be arranged. Instructors need to take into consideration levels of communication. Levels of communication include lower levels of communication and higher levels of communication. Some researchers (Sorensen & Baylen, 2004) call the lower levels of communication initiating and supporting and higher levels of communicating challenging, summarizing, and monitoring. Sorensen and Baylen (2004) argue that higher-level communication may facilitate not only an in-depth discussion of issues but also promote metacognition, that is, thinking about thinking, which is a critical thinking skill.

To facilitate discussion groups, it is not a bad idea to apply Bloom’s (1956) taxonomy by asking the right kinds of questions based on levels of communication needed. Bloom (1956) identified six levels within the cognitive domain, from the simple recall or recognition of facts, at the lowest level, through increasingly more complex and abstract mental levels, to the highest order which is classified as evaluation. Verb examples that represent intellectual activity on each level are listed:

1. Knowledge: Arrange, define, duplicate, label, list, memorize, name, order, recognize, relate, recall, repeat, reproduce, state.
2. Comprehension: Classify, describe, discuss, explain, express, identify, indicate, locate, recognize, report, restate, review, select, translate.
3. Application: Apply, choose, demonstrate, dramatize, employ, illustrate, interpret, operate, practice, schedule, sketch, solve, use, write.
Related Content

Engineering Education for All: Increasing Access to Engineering Education for Men and Women across the World through Distance Learning
[www.igi-global.com/article/engineering-education-for-all/176612?camid=4v1a](www.igi-global.com/article/engineering-education-for-all/176612?camid=4v1a)

Course Design and Project Evaluation of a Network Management Course Implemented in On-Campus and Online Classes
[www.igi-global.com/article/course-design-and-project-evaluation-of-a-network-management-course-implemented-in-on-campus-and-online-classes/201115?camid=4v1a](www.igi-global.com/article/course-design-and-project-evaluation-of-a-network-management-course-implemented-in-on-campus-and-online-classes/201115?camid=4v1a)

Agile Management of a Mobile Application Development Project for Surgeon Workflows
Andrew A. Tawfik, Jeffery L. Belden and Joi L. Moore (2013). *Teaching Cases Collection* (pp. 252-273).
[www.igi-global.com/chapter/agile-management-mobile-application-development/78462?camid=4v1a](www.igi-global.com/chapter/agile-management-mobile-application-development/78462?camid=4v1a)

The Learning Satisfaction, Attitudes, and Grades of E-Tutees Receiving Online English Tutoring
[www.igi-global.com/article/the-learning-satisfaction-attitudes-and-grades-of-e-tutees-receiving-online-english-tutoring/127035?camid=4v1a](www.igi-global.com/article/the-learning-satisfaction-attitudes-and-grades-of-e-tutees-receiving-online-english-tutoring/127035?camid=4v1a)