Interaction in the Online Classroom

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**Introduction**

Technology has become a way of life in the twenty-first century. It is amazing what one can accomplish using technology. It wasn’t all that long ago that the only educational setting was that of the traditional classroom. Today, millions of people are obtaining certifications or degrees via online learning programs. These programs offer convenience and flexibility for the learners. They institute the anytime, anywhere perspective that entices today's learners. "Research has shown that online courses that lack substantive and meaningful interaction, coupled with a sense of presence..., contribute to a sense of isolation, unsatisfying learning experiences, and high dropout rates" (York, Yang, & Dark, 2007, p. 41). If this is the case, it is crucial to investigate the importance of interaction in an online environment, how to increase this interaction, and what benefits or affects interaction has on learning outcomes.

**Importance of Interaction**

Interaction between learner-learner, learner-instructor, or learner-content is a vital component of web-based learning. According to York, et.al, interaction is one of the primary goals of online education because it is connected to learning and the motivation to learn (2007, p. 41). Regardless of the setting - traditional classroom or an online program, interaction is a key factor in effective learning. Research conducted by Cao, Crews, Lin, Burgoon, and Nunamaker indicates that "interaction with instructors and other students, either face-to-face or through an electronic medium, is a consistent and reliable predictor of positive learning outcomes (both achievement and satisfaction) in distance education programs, especially in asynchronous ones" (2008, p. 53). They also indicate that learners view a lack of interaction as a detriment to their learning
process. Interaction with instructors is important when looking for prompt feedback, guidance, and motivational and emotional support. Dr. Haomin Wang uses the software Elluminate for virtual office hours in his online classes. He stated students tend to use Elluminate when they "desire immediate feedback." He also states “one prominent feature of Elluminate is the application sharing which allows users to share the same application in real time and is especially effective for walking through user interface, visual data, and trouble shooting.” All these factors can greatly impact learning outcomes.

Motivation is a significant factor of interaction. It is important to consider both types of communications – synchronous and asynchronous - when trying to keep students motivated. There are some key aspects that can be considered when using synchronous communications that can help learners stay motivated. If students are given visual cues, this can focus their attention on the material instead of “star-gazing.” According to Hofmann, images should be chosen carefully and should not have dark backgrounds. The use of text should be kept to a minimum. Keeping these considerations in mind can maintain a learner’s attention to detail. Also learners need to be able to hear the instructor. With a clear and dominant voice, learners are willing to listen and stay focused. By checking in with students by calling names or requiring input makes students have to pay attention and contribute to the class. This makes learners responsible for their learning as well as informs the teacher who understands and who does not. In a synchronous environment, students can interact with each other or with a project often to keep them busy and on task. Students also can ask and answer questions in a chat room to represent what they have learned (2004, p.20).
The key is to keep the students moving and engaged just as a face to face classroom would be. If students are engaged and know that they will be required to share their ideas or participate in a project or activity, they then will stay motivated and on task. However, Hutchinson cautions that a large number of ideas posted at one time may actually hinder motivation. A really good idea may be overlooked and not receive attention or feedback it deserved causing that learner to perceive that what he/she has to say does not matter. Others may be apprehensive about how other learners may view and criticize their ideas (2007, p. 364). Overall maintaining motivation requires instructors to have a healthy support structure in place, develop a good rapport with the learners, and provide feedback to each of the learners.

Communication is always a fundamental aspect of acquiring knowledge, but is considered very beneficial in a web-based course. Through asynchronous communication students are able to post ideas and discoveries for others and be able to add or respond to other’s information. In a study on the measure of learning by how students communicated through a discussion board by Hew and Cheung, they found that 94% of the messages expressed “sharing/comparing of information” with the other a mixture of stating what they found and other inconsistent ideas (2003, p. 52). Through this study, Hew and Cheung believe that “interaction and co-construction of knowledge are closely related with each other.” Having a discussion that has little interaction between learners does not mean that the discussion was a failure. Students could have learned new ideas and concepts by simply reading postings. On the other hand, in Hew and Cheung’s report, they stated that “students reported increased attentiveness to written contributions in asynchronous discussion environment over
verbal exchanges in face-to-face classrooms (2003, pg. 249). With the high order thinking skills required in asynchronous communication and the extended time to reflect on ideas and responses, students are able to acquire knowledge from many different views and input. It has been proven that the higher the interaction the higher the acquired knowledge (Hew & Cheung, 2003).

**How to Increase Interaction**

As a new class begins learners are anxious about what the course is going to be like. It is important for learners to feel comfortable with their instructor and the course. According to Busch & Johnson in a study of how teachers adjusted from a face to face classroom to a web-based classroom, the teachers found that it was important to keep current the goals of the course and be clear on what students are expected to do. They also said that they need to give feedback and make sure the needs of the learners are considered (2005, p.30). There are many synchronous and asynchronous communications that can be incorporated to make a learner feel comfortable and help them succeed in the course. Having announcements posted on a board or webpage can keep learners current with changes and new information in the course. Another asynchronous activity for learners to start off with is creating a Photostory and posting it on a discussion board. This gives the class participants a perception of each other and their professor. They can then put a face with a name. This is something Dr. Mark Geary does in his online courses. He finds that students often respond more in-depth in this basic assignment than they do on other assignments, but in the end, it increases their comfort level with one another leading them to respond better on the forum discussions.
Another way of getting to know classmates is having an online video conference right away and having everyone introduce themselves. This provides an opportunity for a teacher to explain in "real-time" what the objectives and expectations are. Virtual HS started requiring every teacher to begin the semester by calling each student to make an introduction and to check for any questions. Since most students use their cell phones as mini computers, this could be an excellent way to integrate that type of technology into the learning environment. Cell phones could also be used to have students contact another student he or she doesn't already know (Geary, 2008). Any of these ways can be easily incorporated into a course to make the student feel welcomed, comfortable, and directed.

Based on Hrastinski's research, "Haythornthwaite argued that three types of exchange were important in building and sustaining participation in a learning community" (2008, p. 500). First, learners need to share information to make them feel comfortable allowing them to ask questions when necessary. The second exchange would be task support. This is vital when collaborating on a project with other learners. The final exchange would be the social support. This is an advantageous way to encourage collaborative learning. "It provides an environment where communication is encouraged; e.g., anecdotes and personal experiences encourage trust, which foster receptive and creative learning environments" (Hrastinski, 2008, p. 500). Learners need to feel a sense of community. Instructors need to provide a climate that will promote professional learning and collaboration by creating communications that maintain a sense of safety. The idea is to have learners share with one another, but this is very difficult if those involved are not comfortable with each other (York, et.al., 2007, p. 43).
Dr. Haomin Wang also stated that the use of Elluminate "can help make the participants feel "closer" geographically and psychologically." All three types of exchanges need to be considered to make the course as successful as possible.

In Hrastinski’s study, synchronous communication was shown to affect participation in online discussions in a positive way when used as a compliment to asynchronous communication (2008, p. 505). Students often times choose online learning due to its anywhere, anytime perspective, so requiring several synchronous meetings may discourage and frustrate them. However, using a real time meeting once or twice a semester may benefit the students. Hrastinski found that "the discussions were more focused on task and social support when compared to asynchronous discussion" (2008, p. 505). Synchronous discussions may be a better way to support personal participation which creates motivation and increased agreement on meaning.

Another aspect to consider is what guidelines the instructor has for the discussion boards. If the instructor is the only one initiating the discussion through posting questions, the level of interaction may not be as high. To increase interaction, learners should facilitate or post questions for discussion. This demonstrates that each person is a valuable participant in the discussion setting. The types of questions being asked by the instructor or other participants are also important to the level of interaction as well as to the result of learning outcomes. The use of different types of questions can encourage the critical thinking skills each instructor hopes to reach. Questions that ask for more evidence or clarification, open-ended questions, hypothetical questions, cause and effect questions, and summary and synthesis questions all promote critical thinking. The responses to these types of questions can
also facilitate good responses from participants encouraging collaboration (York, et.al, 2007, p. 45).

**Affects and Benefits of Interaction**

Studies show that asynchronous communication is more appropriate for reflection and more in-depth discussions. It provides an opportunity for learners to process information and reflect upon it prior to posting a comment. Other participants are not expecting an immediate response (Hrastinski, 2008, 500). It is a well known fact that asynchronous communication leads to using critical thinking skills. Hutchinson notes that these higher order thinking skills can be achieved when "the act of encoding ideas in textual format and communicating them to others forces cognitive processing and a resulting clarity" (2007, p. 359). A study that analyzed the interaction of NextEd contained three different types of interaction (teacher to student, student to student, student to content). There was a synchronous and asynchronous activity performed. What was found was that there was a higher response of interaction through the asynchronous activity than the synchronous activity between both student to teacher and student to student. (Chen, Cote, & Keppell, 2005)

Dr. Mark Geary finds that using synchronous tools such as Adobe Connect or Elluminate lets learners connect to a live presentation with the ability to ask question via chat. This type of set up does not interrupt the speaker, but allows them to personalize their presentation. Chat creates a less intrusive way of asking questions, and can often times engage students more than they would be in a face-to-face setting. It also informs the teacher of any questions or a need for clarification. Both programs and many more can be easily implemented and are beneficial for an online class.
Conclusion

Interaction is important in both a face to face classroom and online classroom. When teachers incorporate asynchronous and synchronous communications into activities that require students to exchange views and work together, the acquired knowledge is much higher. It is important to take in factors that can increase motivation and interaction when setting up an activity or course. Asynchronous communication can promote higher critical thinking skills than synchronous communication, as well as initiate more interaction with quieter students. Synchronous communication can aid in communication, a sense of community, and clarify concepts with instant feedback.

Online learning is here to stay, and it is important to try and make it as successful as possible. With the studies shown, it has proven that both types of communications are beneficial and complement each other in increasing the interaction between teacher to student, student to student, and student to content. When interaction is increased due to these communications, then acquired knowledge and successful learning is accomplished.
Bibliography


