Using Zoom, Cloud Based Video Web Conferencing System: to Enhance a Distance Education Course and/or Program

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Abstract: Cloud based applications are starting to gain a great deal of attention because of their capabilities and ease of use for the end user. One example of this is an application titled Zoom, Cloud Based Video Web Conferencing System. The Cloud Based Video System could change how higher education faculty, staff members and student body communicate, collaborate and interact with each other. One example of this occurred at Nova Southeastern University (NSU), Abraham S. Fischler School of Education (FSE) in the fall of 2014. Instructional Technology and Distance Education (ITDE) doctoral students, used the application during their 16-week term. This brief paper reports on their experiences from the perspective of one of the ITDE doctoral students. Information is also provided on how other educational institutions can use the cloud based application in their own setting to enhance a distance education program and/or course.

Introduction

Nova Southeastern University (NSU), located in the southern part of Florida, offers several of its undergraduate and graduate programs at a distance. Simonson, et al., (2012) defines Distance Education “as institution-based, formal education where the learning group is separated and where Interactive Telecommunications Systems are used to connect learners, resources, and instructors” (p.32). The private, not for profit institution of higher learning has nearly 40,000 students who are enrolled either full time or part-time in various undergraduate and graduate programs (Collegestats.org). Many of the programs at the Abraham S. Fischler School of Education (FSE) are completely online and/or offered as a hybrid/blended option. Simonson, et al, (2012) defined “a blended or hybrid course that combines online and face-to-face delivery, thus, 30% to 79% of the course’s content is delivered online” (p.5). Because of the setup of these programs at the university, students are familiar with communicating and collaborating at a distance using a Course Management System such as Blackboard Course Management System (CMS). According to Tonsmann (2014), “Blackboard Collaborate provides a good alternative to traditional face-to-face and online offerings. It requires from students the same time commitment as face-to-face classes, but gives flexibility to remote students to connect from wherever they may be” (p.62). In addition, Blackboard provides instructors with a vehicle to track students’ progress and provide feedback and responses to students in a timely manner (Tonsmann, 2014).

Zoom: Cloud-based Computing and the Distance Education Classroom

The Instructional Technology and Distance Education (ITDE) Doctoral Students who were enrolled in (EDD 8112) Professional Practice in Instructional Technology and Distance Education (ITDE), as an elective course were introduced to the application during the fall semester of 2014. The professor used Blackboard Collaborate Web Conferencing software in previous graduate courses. However, he wanted to experiment with Zoom, Cloud Based Video Conferencing System for the fall term. To the best of his knowledge, Zoom had not been used in any ITDE graduate courses at Nova. In addition, Zoom Cloud Based Video Conferencing System, provided additional cameras vs. Blackboard Collaborate. The professor, lived in Florida and the ITDE doctoral students lived in Alabama, Georgia, Florida, Ohio and Wisconsin. Meeting online is something graduate students are used to doing, however, what was new for this particular group of ITDE doctoral students was using a Cloud-Based Video Meeting System that allows each of them to see each other as if they were sitting across the table from one other. With Zoom, Cloud Based Video Web Conferencing System, participants are able to communicate and interact with each other synchronously. Synchronous technologies allow users to communicate with each other at the same time, as if you are sitting right next to the person. Schlosser and Simonson (2009) defined synchronous as, “communication in
which interaction between sender and receiver takes place simultaneously (e.g. telephone or teleconferencing)” (p.222). With this particular application users can conduct a meeting with audio and video and have screen sharing capabilities (Zoom, 2014). According to Chen, Liu and Gallagher (2012), institutions of higher learning are starting to examine the possibilities of using Cloud Computing for instructional purposes. “Cloud computing is a computing model that provides modern on demand services for management and users of large shared resources including storage, computations and communications” (Chen et al., 2012, p.315). One of the advantages of cloud computing is that it provides the user with an opportunity to transfer data with limited amount of hardware and software that might be required in a non-cloud setting (Paul and Dangwal, 2014). Some of the features of Zoom, Cloud Based Video Web Conferencing System, include participants being able to have team meetings with or without video. Participants can also share screen documents with group participants such as a Microsoft PowerPoint Presentations or Microsoft Word Document (Zoom, 2015). Learners can also participate, even if they do not have a web camera, by using an avatar to represent them while they are participating in a meeting. A microphone is needed to use the audio feature of Zoom. Participants can also communicate via the chat feature that is embedded in the program.

Some Features of Zoom

Zoom can be used for collaboration, team meetings, and to assist individuals with sharing documents via their desktop by sharing their screen. Other features of Zoom vary per the user price plan, but in general the user can have interaction with others using HD quality voice and HD video capabilities, Whiteboard presentation, screen sharing, and having individuals participate via phone. Another feature of Zoom is that it can be incorporated into a school’s Learning Management System (LMS) such as Blackboard, Module, Desire2Learn (D2L) (Zoom, 2015). Communicating using an application, such as Zoom, can be cost effective and another advantage of the application is that it is easy to use. For example, if the instructor/professor creates a room and then sends out an electronic mail (e-mail), invitation to student participants, in order for the student to participate, the student needs to follow the prompts provided in the electronic mail (e-mail). Before you know it, he/she will be in a room with their classmates and the instructor. The application has a variety of plans and price ranges which vary depending on the plan selected as well as the number of participants that will be participating in the room. Rooms can be held to meet up to a hundred individuals. Plans are available for educational institutions, business cooperation and healthcare professionals. According to the website, more than 1,000 schools (i.e. pre-kindergarten colleges and universities) are currently using the application in their educational setting (Zoom, 2014).

Observation: Zoom in a Distance Education Course

During the graduate course, at Nova Southeastern University (NSU), the professor used Zoom to share classmates’ introductory Microsoft PowerPoint presentations with the entire class. Other Zoom class sessions provided opportunities for students to listen, communicate and interact with a graduate of Nova Southeastern University (NSU), who is also a retired technology teacher and current Adjunct Professor at Nova Southeastern University (NSU), an Associate Dean, College of Education at a University in Iowa and a Professor, Author and Endowed Chair, College of Education at a University in Illinois. During each of these sessions, students were able to communicate with the guest speakers, who were also scholars and experts and asked questions even though they were miles apart. During the last class session, each ITDE doctoral student in the course participated in the conversation. ITDE doctoral students were able to share the results of their final paper via Zoom and by using some kind of presentation software such as Microsoft PowerPoint. The information that was shared pertained to three career pathways in the Instructional Technology and Distance Education (ITDE) arena, such as Virtual Careers in K-12, Instructional Technology and Distance Education Jobs in Higher Education and being an Independent Instructional Technology Consultant. Each group had to discuss the range of jobs available, required qualifications, typical duties, responsibilities, status of the job market, how one learns of job openings, nature of the application/interview process, and likelihood of the future of the field for their assignment. In addition, one class member from each group uploaded and navigated the slides as the other group members spoke during the presentation.

Zoom: The Constructivist Approach & Possibilities in the Classroom

The premise of constructivist learning pertains to students being involved in their educational journey and drawing a connection between the material that is being presented and their own personal experiences (Brooks and Brooks, 1993). The theoretical perspective supports learning that offers opportunities for teachers to be coaches and
function more as a facilitator—the “guide on the side” notion (Tiene and Ingram, 2001). There is a shift in the educator’s role. The teacher is no longer considered the sole source of information, their purpose is to direct, suggest, and encourage the student as learning occurs (Tiene and Ingram, 2001). Significant elements of the constructivist approach to learning provide chances for learners to solve problems, perform tasks, and learn new material in a way that makes sense to them. Tiene and Ingram (2001) stated that “New technologies can provide the materials to explore, the tools with which to create, and the means with which to communicate. These can facilitate constructivist efforts in the classroom” (p.35). Using Zoom, a Cloud Based Web Conferencing System, and working from the constructivist paradigm, one can encourage some of the fundamental elements and principles of constructivism learning, such as multiple perspectives, teachers as coaches, learner control, exploration, scaffolding, authentic activities, alternative viewpoints, problem solving, knowledge construction and collaboration. For example, students can use Zoom to work together on a group project in order to collaborate on an assignment, students can also use Zoom to brainstorm about ideas and can use the application to share a multimedia project whether it is a Web Blog, Website, Podcast, Microsoft PowerPoint Presentation and/or Prezi Presentation. Other ways Zoom can be used in the distance education setting that is totally online, hybrid or blended classroom include:

- Using the application at a distance to meet with the class as if the class were meeting face-to-face.
- Inviting an expert or scholar to participate and talk to the class and/or group at a distance.
- Using the tool to have virtual office hours. Office hours are often provided in higher education but this same kind of concept can be used in the K-12 environment.
- Meeting with colleagues across the school district and/or across the country for a team meeting, discuss a project, lesson and/or future idea for a presentation related to a conference and/or symposium.
- Meeting with an advisor to work on a research paper, thesis or dissertation.
- Communicating/collaborating one-on-one with students during non-classroom times to assist students with assignments and projects.

Conclusion

Smaldino, Lowther, and Russell (2012) stated that with the help of technology, individuals can communicate with each other in and outside the classroom. “Video-conferencing with software such as Skype allows students from two or more locations to see and hear each other during discussions” (Smaldino et al., 2012, p.77). The activities that were observed during the 16 week graduate course, at Nova Southeastern University (NSU), provided the ITDE doctoral students with an environment that allowed them to create a meaningful project, be engaged in their educational experience, and deliver information that will be informative and beneficial to their peers. In addition, ITDE doctoral students were able to interact with various scholars and experts in their field of study. The professor, in this case, also demonstrated an environment that revealed to the ITDE doctoral students how to facilitate and moderate activities and still provide useful educational content. Based on the observation, it was evident the ITDE doctoral students found the lessons and activities associated with the course such as researching, sharing of information, communicating with experts in the field and creating projects, a valuable educational experience, that was thought-provoking, interactive and engaging. Using a 21st century application such as Zoom, Cloud Based Video Web Conferencing System, this distance education course, demonstrated the best of both worlds of teacher-centered and learner-centered approaches.
References


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