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## Explorations in Online Learning using Adobe Connect

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**Abstract.** This preliminary research was focused on pre-service, early childhood educators that took part in online class meetings using the Adobe Connect video conferencing platform. Student feedback was collected related to synchronous class meetings. Adobe Connect was used in two different ways to connect students who attended two distant campus locations. One format included using Adobe Connect to join students in classrooms at two locations. The second format included using the same platform that allowed students to log in to an online class meeting from any location. The initial feedback indicates that many students had positive responses to the online class meetings especially related to convenience, but some students did not feel the interactions during the classroom to classroom meetings supported strong connections with each other and the instructor.

**Keywords:** pre-service teachers; video conferencing; online class meetings; early childhood education; Adobe Connect

### Introduction

As a faculty member of the Early Childhood Education program at a regional campus for a large state university, there are numerous challenges to consider related to the successful implementation and continuation of the degree. The expectation for all programs is to maintain and expand degree offerings through increased enrollment. The Early Childhood program was not encouraged to offer totally online course offerings due to the conflict with pedagogy and best practices for teaching undergraduate students in this field. With little ability to increase enrollment or offer totally online programs, the focus became how to use technology to connect two small regional programs. The technology available allowed researchers the ability to test the potential of innovative and distinctive learning formats. Research from the New Media Consortium (2009) emphasizes that technological advances has increased our ability to provide unique learning formats and has allowed new learning opportunities. Web-

based learning which included the delivery of some content online through Webcourses has been an integral part of our program offerings, but class meetings were still considered an essential aspect of the learning in the program. This initial research is an evaluation of using Adobe Connect to join two separate campuses for class meetings as well as to provide online class meetings where students could attend online from anywhere.

## **Literature Review**

### **Online Learning**

Challenges for education institutions outlined by the New Media Consortium (2009) include the fact that students are different from 20 or 30 years ago and that educators need to support different and unique ways of teaching and learning. "Institutions need to adapt to current student needs and identify new learning models that are engaging to younger generations" (New Media Consortium, p. 6). Educational institutions are currently involved in many avenues of course delivery.

Motamedi (2001) describes distance education as the delivery of course instruction in formats where teachers and learners are in different places and potentially complete work at different times. One of the first forms of distance learning took place via correspondence courses. Online learning is now broadly described as using various electronic methods of teaching, providing professional development or other educational program. The popularity of online learning is apparent and one that has become more visible in higher education. Fletcher, Tobias and Wisher (2007) use the term Advanced Distributed Learning which objectives include making learning available anytime, anywhere. Zhen, Garthwait and Pratt (2008) speak of online course management applications which relate to teaching and learning in the online environment. It "includes the use of formal and informal course management systems to organize and support student learning online with dynamic and flexible communication and interactions" (p. 2). From previous research, Motamedi (2001) cited one of the most explains that the most common delivery method in distance education are print based delivery which is supplemented with video or audiotape. Using online learning formats is an avenue of helping students learn content. This is one reason why Web conferencing software is growing in popularity in the field of higher education (Reushle & Loch, 2008). One of the features of web-based conferencing is the asynchronous or time delayed interactions. Research has shown that instruction through 'distance education' can be effective but the "methodologies and technologies must be appropriate to the instructional tasks" (Motamedi, 2001, p. 386).

Advances in technology have created the ability to connect in various ways with students in the online format. Gedera (2014) found that "students experiences of learning with the virtual classroom were associated with the affordances and limitations of this technology" (p. 97). Although technology has made great advances, classrooms and teachers need to have access to a high level of

technology in order to meet the needs of students and to connect. The level of the technology can be a factor in student learning and preference.

An additional consideration is relationship building and students connections that typically occur in face to face classroom settings. In a review of research, Falloon (2011) indicates that learners who are involved in online and distance learning can feel isolated and disconnected. This can further lead to lower performance levels. Kaufmann and Frisby (2013) expresses concern about the lack of interpersonal contact in online classes. Finding ways to help students to build relationships and connect with others is vital. Including community building components should be considered in online formats. Along the same lines as relationships is the issue of interactions. The overall research is not clear on the most effective methods to support interactions in the online format. Falloon (2011) indicated that students view the online classroom as a totally new environment. This includes new ways to interact as well as new rules and procedures to learn. Time and experience in the new format was suggested to help learners.

## **The Use of Video Conferencing**

Motamedi (2001) describes the ability to connect anywhere in the world through technology for people at work and in school settings. Web conferencing and video conferencing are becoming increasingly popular to support teaching and learning at higher education institutions (Reushle & Loch, 2008, Motamedi, 2001). Video conferencing is described as back and forth communication across distances that can include video, audio and possible data transmission. Video conferencing can be delivered to various locations including homes, office and schools. Park and Bonk (2007) indicate that advances in technology have impacted using video conferencing more feasible in synchronous learning formats. Motamedi (2001) further explains that methodologies used in video conferencing should be appropriate to the instructional goals outlined and that learners should be at the center of the process. He outlines some factors for "successful use of videoconferencing including the number of students at each site, instructor's teaching style, degree of interactivity used, motivation of students, and positive attitude of participants and preparation of the instructor"(p. 390).

## **Methodology**

The purpose of this study was to evaluate the use of Adobe Connect as a class meeting platform. Specifically,

- What are student's perceptions of instruction in the *Classroom to Classroom format* for class meetings?
- What are student perceptions of instruction in the *online class meetings*?

Survey methodology was used to assess important considerations for using video conferencing as a course delivery format for class meetings. The participants in this research were Early Childhood Education undergraduate students taking courses in the ECE program in a large university in the southeast. Students were enrolled in courses at two regional campus locations for the university. Approximately 40 students were invited to participate in this research by completing an anonymous survey linked in two early childhood courses over two different semesters (Fall, Spring). The questionnaire was linked to an email sent to all students in the participating courses. Students would follow a link provided to a secure website where they took the survey.

In the Fall term, 16 students took courses that integrated the use of online class meetings. Nine students completed the survey (n=9), all student participants were female with an age range of 22-46 years old. Two students work full time and 7 students work part time while attending classes in the Early Childhood program. This group of students drove from 25-60 miles to attend classes at the regional campus during the semester.

In the Spring term, 27 students took courses that integrated the use of Adobe Connect in two different formats. Adobe Connect was used to facilitate classroom to classroom meetings across two campuses and Adobe Connect was used to conduct online class meetings where students could attend from home. Seven students completed the survey (n=7). All participants were female with an age range of 21-28 years old. Three students worked full time, three students worked part time and one student did not answer. This group of students drove 5-90 miles to attend classes at the regional campus during the semester.

### **Adobe Connect Platform**

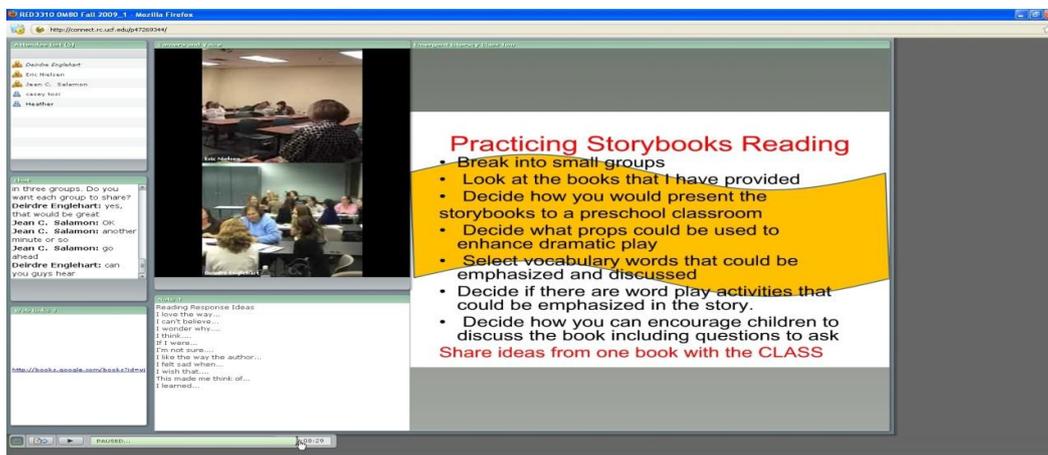
During this initial research, early childhood education students attended classes with the use of Adobe Connect. This system was not specifically designed for classroom use, but included video, audio, chat, and survey tools. Powerpoint presentations could be uploaded prior to the class meetings and the instructor had the ability to bring up documents on the local computer. Also, videos could be linked or downloaded into the system. Each student was given the web address to log in when class meetings were held. Also, once inside the Adobe Connect system, students could be divided into smaller groups and enter a breakout room for collaborative activities.

The project included the use of Adobe Connect to facilitate online class meetings. The class meetings took two separate formats: classroom to classroom and online class meetings from home. The classroom to classroom meetings used Adobe Connect to facilitate the connection between two separate campus locations and classrooms for class meetings (see Picture 1 & 2). The online class meetings from home allowed students to interact and construct their understandings together in their own home (see Picture 3). The use of video and audio were prominent between the classroom to classroom meetings. For the online class meetings, students could see the instructor, but students did not use the video features so they could see each other. These unique formats allowed

students to connect on a new level of learning and supports an engaging platform for a new generation of learners. The New Media consortium (2009) emphasized the need for universities to consider how technology can be used to connect and collaborate with learners of the future.

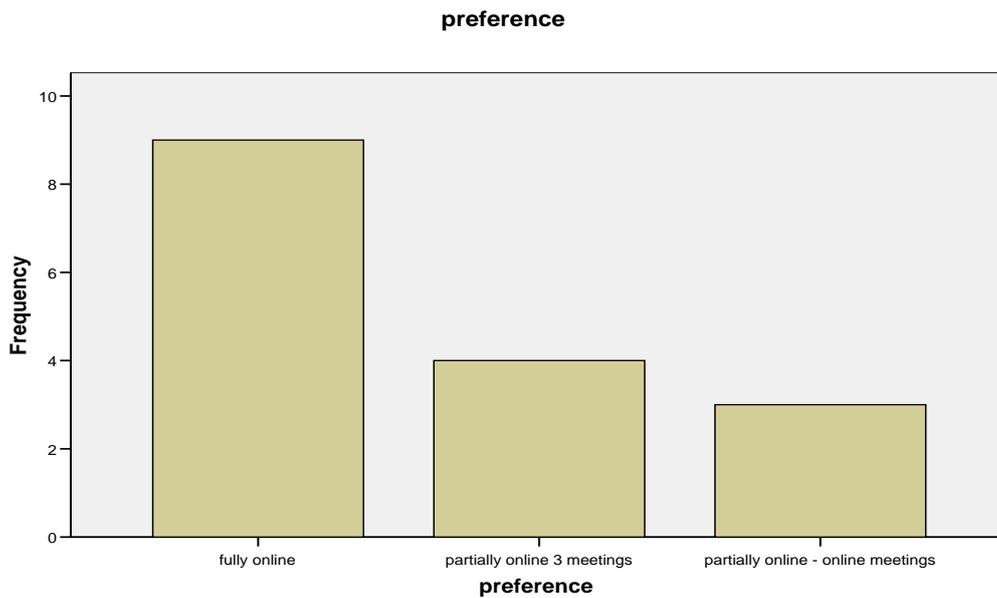


Picture 1: Classroom to Classroom meeting using Adobe Connect



Picture 2: Classroom to Classroom Adobe Connect meeting





**Figure 1: Overall Course Preferences**

### **Interactions in the Course**

Students in group 1 (Fall) only participated in online class meetings from home. They were asked to determine if the interactions with the teacher were better, worse or similar to face to face interactions in the classroom. The results showed that most students had neutral feelings about the interactions with the teacher indicating they were similar to face to face interactions. Related to interactions with other students, 62.5% indicated the interactions were similar with 25% of students saying they were better and 12.5% of students indicating interactions were worse than in a regular classroom. The last area that was related to overall ability to conduct the class meeting online are 75% of students felt the meeting was similar with 12.5% indicating it was better online and 12.5% indicating it was much worse. See Figure 2.

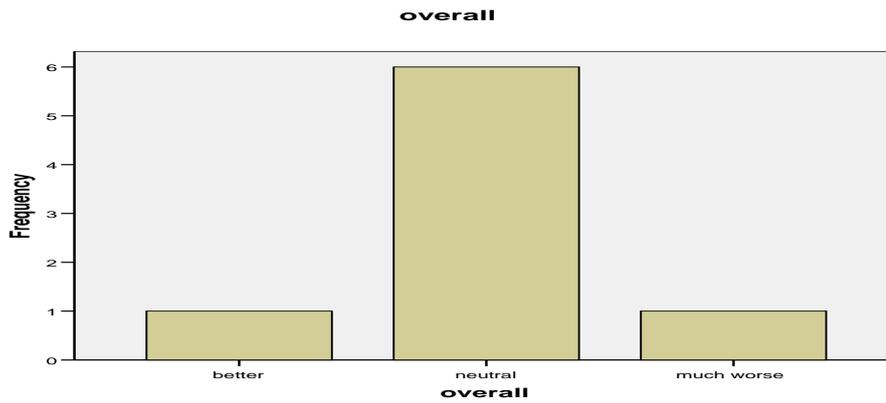


Figure 2: Interactions in the Course

Students in group 2 (Spring) did not distinguish the classroom to classroom interactions using Adobe Connect with the Online class meetings using the Adobe Connect in the survey. The results from them indicate overall negative feelings related to the use of the Adobe system. For interactions with the teacher only 16.7% of students indicated the interactions were similar, 33.3% indicated the interactions were worse and 50% indicate they were much worse. The next area addressed the interactions with other students; 14.3% found the interactions similar, 42.9% found the interactions worse and 42.9% found them to be much worse. The last area was the overall ability to conduct the class meetings online with 16.7% feelings the meetings were worse and 83.3% indicating they were much worse. See Figure 3.

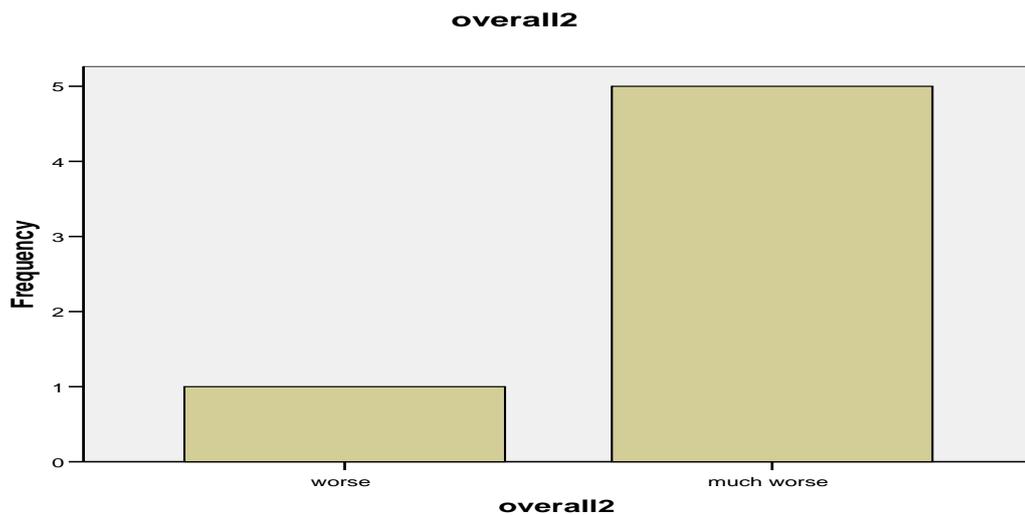


Figure 3: Online Meetings

Students in group 2 (Spring) were also invited to provide comments along with their ratings. One question they addressed was, "How did the online meeting compare to the face to face (between campus meetings)? Did you feel more connected in one format over the other? (Short Answer)" The following comments help to clarify the feelings related to the use of Adobe Connect during class to class meetings and online meetings from home.

- I think on-line was just as good as sitting in the class.
- I prefer the online meetings. It is more convenient with a working schedule and I felt just as connected.
- I think I felt more connected in the online class as we could write to you if we had questions. I did not feel connected in the face to face classes as we were in two different places.
- I liked the face to face meetings better. Only because I am not very good with technology and had home distractions as well.

The comments from students indicated that 65% of them preferred the online meetings from home, 26% preferred the face to face meetings while 9% were still undecided.

### **Advantages and Disadvantages of Adobe Connect**

Further analysis of student comment indicated the following advantages and disadvantages for the Classroom to Classroom meetings using Adobe Connect. (See Table 1) and the advantages and disadvantages for the Online class meetings from home using Adobe Connect. (See Table 2).

**Table 1 - Perceived Advantages and Disadvantages for Class to Class Meetings**

<b>Advantages</b>	<b>Disadvantages</b>
<ul style="list-style-type: none"> <li>• saves time and money</li> <li>• connect with students from other campuses</li> </ul>	<ul style="list-style-type: none"> <li>• technical problems</li> <li>• less connected to instructor if you are on the opposite classroom</li> <li>• downtime during activities</li> </ul>

**Table 2 - Perceived Advantages and Disadvantages for ONLINE Meetings**

Advantages	Disadvantages
<ul style="list-style-type: none"> <li>• work from home/easier to attend</li> <li>• group work more efficient</li> <li>• saves time and money</li> <li>• connect with students from other campuses</li> </ul>	<ul style="list-style-type: none"> <li>• technical problems</li> <li>• less hands-on</li> <li>• no time for note-taking</li> <li>• difficult typing to share ideas</li> </ul>

## Discussion

"Teacher educators continually strive for college classroom teaching techniques that are effective and dynamic" (Wursta, Brown-DuPaul and Segatti, 2004). The use of Adobe Connect for conducting *online class meetings* is one technique that provides a unique format for course delivery. Although there are some obstacles to overcome related to Adobe Connect from this initial research, the online class meeting format seemed to be the most popular for students. The students felt that they did learn in this format and it was comparable to face to face class meetings. "A successful online learning environment will not just happen. It needs to be built, managed, and nurtured." (Reushle, 2006, p. 5). This statement emphasizes the need to examine how the online learning environment can support students in their learning and in this instance, how obstacles suggested by students can be overcome to move forward with this technology. The techniques that can make online learning feasible for students should be examined. Gedera (2014) used technology that allowed students to easily communicate through audio and video and found that these features were supportive in the virtual classroom.

One interesting finding from the survey and added comments was that students generally felt more connected in the online meetings than in the classroom to classroom meetings. Reushle (2006) emphasized the learning community in her research stating, "The online environment supports learning as a community activity. Dialogue or discourse (learners to learners; learners to facilitators) is vital to sustaining the learning community and maintaining a sense of connected, human presence" (p. 3). Falloon (2011) emphasized that students may have difficulties transitioning to an virtual learning environment in relation to interactions and communication. The physical, visual presence of the instructor was also noted by Motamedi (2001) as a benefit in online video conferencing. In the classroom to classroom interactions, when students were not in the host classroom, they indicated they did not feel as connected and able to interact with the instructor. When students attended the class meetings online, they had a

closer view of the instructor and seemed to feel more connected that way. Further explorations related to this topic will be considered in future classroom to classroom interactions using Adobe Connect to find out how to bridge the gap that students felt in order to connect more readily with the instructor. Other benefits or advantages named by Motamedi (2001) that were emphasized by students in this research were that the online meetings provided access to students who were farther away from campus locations. This helped to reduce their travel time and money for gas and still allowed for an interactive learning experience.

Technology was named a disadvantage of using Adobe Connect in both formats: classroom to classroom and during online class meetings from home. Gedera (2014) indicated that although students found the virtual classroom a positive experience, there was concern from students about unexpected technical difficulties. In this research the classroom-to-classroom meetings had technology problems because of the lack of experience in the IT staff with the new technology, lack of funding for needed equipment, identified and corrected network problems, and problems with existing equipment. Also, that classroom-to-classroom meetings may not be the preferred mode of delivery with the Adobe Connect platform. Motamedi (2001) described technology as an issue for video conferencing and included the following areas of concern: network breakdowns, inferior audio/video signals and complicated audio/video equipment which can cause delays. Further investigations into why students at home had technological difficulty should also be investigated. It may be worthwhile to ascertain the minimum computer/hardware requirements that support the use of Adobe Connect.

### **Study Limitations and Conclusion**

This study is limited by the number of students who participated and responded to the surveys. It is also limited in the amount of actual class meetings that were held in the classroom to classroom format and the online format. Further limitations would include the instructor's learning curve related to the use of the Adobe Connect system and her ability to implement instructional practices aligned with typical classroom practices. Falloon (2011) emphasized the need for more research to identify best practices for online and virtual classrooms. Although there are some positive indications about this format, more research should be conducted.

These unique teaching formats supported by the use of Adobe Connect have the potential to allow students to connect on a new level of learning. They support an engaging platform for a new generation of learners. The New Media consortium (2009) emphasized the need for universities to consider how technology can be used to connect and collaborate with learners of the future. Park and Bonk (2007) conclude that "Instructors need to provide students with effective learning approaches for time-pressed live learning and encourage

students to share, experiment and reflect on new strategies" (p. 260). Falloon (2011) also emphasizes the need for instructors to embed learning structures for students to help them transition to this type of learning. Further research on the use of Adobe Connect and other video conferencing technologies would be appropriate to continue to learn about its effectiveness as a tool for education students and to allow students to share their experiences of learning in this synchronous environment. Additionally, it is recommended that the instructors continue to learn about Adobe Connect and its ability to facilitate online class meetings including how to address concerns voiced by students related to the classroom to classroom meetings.

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