DOCTORAL FACULTY TEACHING ONLINE: A QUALITATIVE UNDERSTANDING OF METHODS TO IMPROVE ONLINE TEACHING

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ABSTRACT

Digital learning practices and methodologies have become common practice in the 21st century. Sixteen doctoral students participated in a qualitative survey to address how online instructors can improve their online pedagogy. This study’s purpose was to understand online learners’ perceptions about effective and challenging online student collaboration practices. Findings included: (a) online methods that foster student collaboration, (b) collaborative and meaningful online projects, and (c) online collaboration challenges. This article concludes with recommendations for practice.

Keywords: Distance learning, doctoral education, online education, student collaboration

INTRODUCTION

Universities nationwide are beginning to rethink their digital learning practices and methodologies to meet 21st century student-driven demands and provide access to more students. In the Chronicle for Higher Education (University of Central Florida, 2017), the University of Central Florida (UCF) is highlighted as an exemplar of just this with more than 50,000 of their students learning online. Interestingly enough, the majority of these students are logging in within a 25-mile radius of the campus, with the minority of the students accessing online instruction from across the country or state. UCF’s 2016-2017 student data indicate approximately 81% of UCF’s 61,000 students are utilizing digital learning and graduating sooner. An external review conducted to evaluate the UCF online model found that blended-learning courses reduced the achievement gap in minority students and resulted in higher grades (by percent receiving an A, B, or C), showed lower withdrawal rates, and received higher student evaluations in comparison to face-to-face classes.

Thus, investing in faculty training to build the skills and capacity for teaching effectively online is a key component of student success and results in improved outcomes for 15,000 annual graduates from underrepresented groups alone. UCF faculty receive 80 hours of training with instructional designers to build an online course and an additional 35 hours of training for those who want to teach online to ensure online courses are providing the same rigor and meaning for students.

Similar to the growing demand in Central Florida, completing graduate-level degrees online has become the preference for many students and common practice in universities throughout the nation (Aragon, Johnson, & Shaik, 2002). The majority of universities in California have established several options for working practitioners to complete master’s level degrees online. Because consumers want to attain ongoing degrees online, a new doctoral-level online program in educational leadership was created for students in Fall 2016 and welcomed the first cohort of 21 students selected from throughout California. The Collaborative
Online Doctoral in Educational Leadership (CODEL) program is a joint Educational Doctorate (EdD) program offered by Fresno State University and California State University Channel Islands. The CODEL program is designed to serve leaders devoted to social justice in and through education. This doctoral program is the first of its kind offered online in the California State University (CSU) system and was adjusted based on ongoing input from the first cohort of students.

Since online learning has become a popular option for graduate students, it is critical for professors teaching online to utilize effective methodologies for student learning. In order to understand what methodologies are meaningful and foster collaboration among students, surveying the students in their first year in an online doctoral program will help provide insight for professors teaching online at any level. The purpose of this study was to understand online learners’ perceptions of effective and challenging online student collaboration practices. To address the purpose, the research question of this study was: What are effective and challenging online student collaboration practices?

**REVIEW OF THE LITERATURE**

The literature review focused on analysis of recent dissertations on two topics. The first was research related to online teaching, particularly features of good programs that create a sense of community and belonging for students. The second focused on research related to perceptions, experiences, and challenges of graduate students in online courses and/or programs.

*Research on Online Teaching*

Research on online teaching focuses on characteristics of great online programs and the creation of a sense of community online. One characteristic of great online programs, which is what all online students want their program to be, is accounting for the diverse ways of learning (Keetch, 2014; Tonsing-Meyer, 2012). An online course must be as accessible to students with disabilities and diverse learning needs as it is to the average student. Keetch (2014) talks about various things that need to be taken into account to reach diverse learners. First, faculty need to design courses that address visual learning, which means creating and using videos, transcripts, recordings, and photographs. Second, some students are more auditory than visual, and faculty must create materials with voice files so students not only read material but also hear it. When creating videos, it is important to make sure the voice that accompanies videos is of high quality and audible on various computer platforms. Finally, there are kinetic learners (Keetch, 2014; Tonsing-Meyer, 2012) and in a face-to-face classroom, faculty deploy breaks and physical activities to refresh students; the same must be done in an online environment. This may mean something as simple as using short videos where students can take breaks in between to stand up and stretch.

Another characteristic of a great online program is to provide students the opportunity for higher-order thinking (Kentnor, 2015), which is defined as “critical, reflective, metacognitive, creative, and logical thinking” (King, Goodson, & Rohani, 1998, p. 1). To promote higher-order thinking, faculty teaching online must use strategies that challenge the learner and provide explanations throughout the learning process. This requires online engagement, interactions, and discussions by students and faculty, which are aspects of face-to-face teaching that some believe make this type of teaching superior to online teaching. Infusing higher-order thinking in online education can be challenging to faculty because online students are all different, have different motivations for taking online courses, and may not want to be engaged or challenged. Infusing higher-order thinking can also be as simple as creating and monitoring a discussion board on a critical topic where students and faculty have the opportunity and requirement to read and reflect on each other’s work and ideas and respond (Canney, 2015).

Additionally, great online programs have faculty who continually evaluate student learning in a formative, summative, and timely manner (Keetch, 2014). It is easy for faculty teaching online not to provide the same level of feedback as they would to students in their face-to-face classes, but the majority of online students see feedback as a key factor in determining their perception of quality. Timely feedback is also difficult because faculty sometimes do not have the same deadlines as they do in their face-to-face classrooms and they do not see students every week to serve as a reminder to provide feedback. In order for online
programs to reach the same quality as face-to-face programs, it is necessary for faculty to have policies and deadlines for when they are going to respond to students.

For online programs and faculty to create a sense of community online they must design courses that allow for multiple ways for students to interact socially or academically with each other (Borel, 2013). The higher education literature talks about sense of community as being important for student success of, usually using the term sense of belonging (see Hurtado & Carter, 1997). Scholars who write about sense of community in online environments use the term humanizing pedagogy (see Barclay, 2001; Weiss, 2000). Keetch (2014) writes that in order for online students to have a sense of community, there must be multiple layers of support, such as having a mentor and an academic advisor: help with technological, financial aid, and enrollment issues; support from peers; and library/online resources support (Alston, 2014; Borel, 2013; Kentnor, 2015; Poe-Greskamp, 2010). These levels of support must also be coordinated by a program coordinator or director. It is only when students have support to address potential challenges can they feel the sense-of-community that is important to creating great online programs.

Research on Online Graduate Students

Research on graduate students taking online classes focuses on their perceptions of the program, their thoughts on what makes good online teaching, and the challenges they face. Many online students feel they do not get the type and level of support students in a traditional face-to-face program receive (Evans, 2013). Online students want opportunities to interact with their peers and professors, but these are often limited because many live in different regions of the country and getting together is not always feasible. Students often complain among each other about the lack of interaction with their professors, but there are also many students that apply to online programs because they will not have to interact with people and can sit at home to get their degree. Mahmood, Mahmood, and Malik (2012) found that when online students receive the appropriate level of support, they can be as satisfied with their program as students in face-to-face programs. Student satisfaction with faculty is also high when they have constant and sufficient communication with and access to their professors (Canney, 2015; Poe-Greskamp, 2010).

Ahmed (2011) found that students often think it is not the program structure or how it is delivered that makes good online teaching but that online student satisfaction is simply that faculty are well-prepared to teach online (Ahmed, 2011). This means faculty must have an above average understanding of technology and understand the tools and platforms being used to deliver their course. Faculty must also know how to troubleshoot problems or know who to call to solve problems such as poor Internet connectivity, bad speaker performance, and viewing videos across multiple technologies (e.g., iPhones, iPads).

Students must also feel that their online program is an environment that is collaborative and interactive (Borel, 2013; Erdem, 2009; Tosing-Meyer, 2012). Borel’s (2013) research on collaborative and learning environments supports the idea that the learning experience is enhanced in these types of environments. Collaborative and interactive environments require technologies, such as videoconferencing, where students can join discussions synchronously. Group activities infused in online classrooms, such as synchronous group work or online discussion groups, can also facilitate the creation of collaborative and interactive environments that enable students to have positive perceptions of their online program and experience (Ahmed, 2011; Borel, 2013; Murphy, Mahoney, Chen, Mendoza-Diaz, & Yang, 2005).

Another component of online programs that make students content is when they have adequate mentoring (Columbaro, 2015) and e-mentoring (Hamilton & Scandura, 2003; Single & Muller, 2001). Mentoring at the graduate level can have a profound effect on the professional identity and career plans of students (Austin, 2002), but e-mentoring, defined as a relationship where approximately 75% of the interaction is through digital means (i.e., email, text, teleconference, etc.), is essential for graduate students in online programs (Hamilton & Scandura, 2003; Single & Muller, 2001). It is e-mentoring that provides students with accessibility to their faculty and opportunities to collaborate on projects (Hamilton & Scandura, 2003). Through e-mentoring, students and faculty can develop not only professional academic relationships but also the social relationships that can benefit students in the same fashion as
traditional mentoring. Social relationships can be more difficult to develop through e-mentoring, but when they occur, students and faculty both benefit and gain personal satisfaction with the online teaching (Carter, 2012; Jorissen, 2012).

There are key challenges students face online. Jones (2014) addressed problems with technology, such as a lack of connectivity or knowledge of the tools available to humanize the online classroom. Face-to-face classroom teaching also faces problems with technology, but they are more pronounced in the online classroom because technology is essential for the online environment (Bonvillian & Singer, 2013; Wang, Chen, & Levy, 2010). Students also express dissatisfaction with the online tools they use, particularly chat rooms, audio-video conferencing, and social networking communication, but the main source of dissatisfaction with their tools stems from the technical issues they experience when using these tools (Ahmed, 2011).

Borel (2013) and Wyman (2012) addressed the issue of loneliness and isolation in the online classroom, which are reasons students drop out of online programs. When students do not drop out, loneliness and isolation do affect their academic performance (Roscoe, 2012). Similar to face-to-face programs, it is the dissertation stage in online programs at which students feel the greatest amount of loneliness and isolation (Kluever, 1997).

Other reasons for student dissatisfaction included their feeling that online group learning activities were too artificial (Jones, 2014), online interactions were not as meaningful when compared to their face-to-face experiences (Alston, 2014; Garrison & Cleveland-Innes, 2005), and the student-faculty relationships lacked depth (Tonsing-Meyer, 2012). But when faculty design courses with student interaction in mind and build interaction into the structure of the course, students can have a positive experience (Garrison & Cleveland-Innes, 2005).

METHODS

A qualitative survey was constructed and used to examine student perceptions of effective online student collaboration methodologies. The phenomenological approach was used because it helps researchers gather rich information by investigating participant experiences (Moran, 2000). The researchers also addressed ethical considerations that are important in a phenomenological approach, such as going through the human subjects review process, protecting confidentiality and anonymity, and never knowing the names of our qualitative survey participants to prevent developing a bias against them (Walker, 2007).

Surveying in qualitative research is not the most common practice. Typically, semistructured interviews and observations are utilized to describe behaviors in an identified population. In alignment with Jansen’s (2010) definition of why qualitative survey should be considered a valid research design for “determining the diversity of some topic of interest within a given population” (para. 6), the researchers agree that this method best yields the anonymous perceptions of the identified population, thus identifying variation in a population rather than frequency or means of responses.

In the case of this study, CODEL Cohort 1 students were asked about their experience with their first year in the online doctoral program. Town Hall meetings designed around the inquiry questions were held annually for CODEL current students to gather information about their experiences in the program. Students were provided with the questions well before the Town Hall meeting and invited to add other questions. Town Hall meetings were designed to obtain feedback from students about how well they believe the doctoral program is meeting stated program outcomes. The inquiry questions include questions submitted by the students but at minimum they include:

• How has the program enhanced/changed your abilities and skills as an educational leader?
• How has the program changed the way you think about your role as an educational leader?
• How could the program be changed/enhanced to meet your goals in being educational leaders?
• Is the curriculum you have experienced in the program relevant to the practice of educational leadership in your setting?
• Are the courses aligned to facilitate your learning leadership skills and practices?
• What program changes would you recommend to strengthen the program and to align the program with your goals of being an
As a result of the initial CODEL Cohort 1 Town Hall meeting, a question was raised about effective online teaching methodologies and pedagogy. A majority of the CODEL Cohort 1 students voiced concern about the anonymity of providing feedback in person regarding this topic and suggested using an anonymous online survey option specific to their online learning experience in their first year in the program. The researchers wanted to utilize these data and the feedback gathered from the doctoral-level students to understand and improve the processes of delivering and allowing for collaboration in an online platform.

This methods section includes: (a) a description of the online doctoral program, (b) population and participants, (c) sampling, (d) data collection, (e) data analysis, (f) qualitative validity and reliability, and (g) limitations.

Description of the Online Doctoral Program

The Collaborative Online Doctorate in Educational Leadership (CODEL) is an intensive, 60-unit online program designed for full-time educators earning their doctorates. CODEL, the joint doctoral program between CSU Channel Islands and Fresno State University, is the program from which we collected our data.

Students taking six to nine units per semester can anticipate completing the program in three years. Doctoral students take the first nine core courses (27 units) as a cohort and for the first four semesters, the students in a particular cohort participate in all their courses together. These core courses are followed by 21 units of specialization courses, culminating in the 12-unit dissertation. The educational doctorate (EdD) is the highest degree attainable for educational practitioners and is known as a terminal degree. Because of this, it is important that students have the highest expectations of themselves as learners and students in a higher-level academic environment. It is the doctoral student’s responsibility to communicate effectively with faculty and dissertation chairs exercise the highest integrity in all aspects of their work, and work towards their degree in a timely fashion.

Population and Participants

From CODEL cohort 1, 16 students participated in the survey. This gave us an 80% response rate (20 total students in the cohort). Ten of the participants were in the higher education strand and six were in the P–12 strand. The cohort takes all core courses together, but specialization courses may differ based on whether they are in the higher education or P–12 strand. Out of the 16 students, 13 were female and three were male. Eleven were White, four Latina/o, and one Asian American. Average age of the students was 35–40 years old. All six of the students in the P–12 strand had an average of 5–8 years of administrative experience prior to enrolling in CODEL. Nine out of ten students in the higher education strand had an average of 4–6 years administrative experience prior to enrolling in CODEL. Potential participants who were part of CODEL Cohort 1 were identified and an email was sent to them describing the study and requesting their participation.

Sampling

Purposeful sampling was utilized consisting of students participating in the CSU Channel Islands and Fresno State University joint doctoral program called CODEL. Purposeful sampling is commonly utilized in qualitative studies to help the researcher form generalizations from individual cases, in this case CODEL 1 (see sample populations in Sandelowski, 2000).

All students from CODEL Cohort 1 were asked to participate in this study after completing their first year of online instruction. Our students were the best to participate in this survey because they all had one year of experience with our online doctoral program and all of them had similar successes and challenges with our online instruction.

Data Collection

We obtained institutional review board approval was for the research survey utilized in this study. All participants were provided and accepted the conditions under the informed consent form prior to beginning the survey. Online student learners as part of the CODEL Cohort 1 group (n = 16) were surveyed to explore their perceptions of effective student collaboration strategies. The open-ended survey included four questions giving the participants an opportunity to share what they perceived as effective and ineffective strategies as they worked collaboratively with their virtual classmates. Participants were asked to answer each question and provide a short explanation to support...
their answers before moving on to the next item. Anonymity was explained.

Data Analysis

Inductive Analysis was utilized to attach meaning to the transcriptions (Hatch, 2002). General explanatory statements for each of the survey questions were developed based on this form of analysis (Hatch, 2002). The questions on the open-ended survey asked the participants about their online student collaboration experiences:

- What methods of online teaching practices have fostered online student collaboration?
- What types of online collaboration projects have been meaningful?
- What are some online teaching practices that have made student online collaboration challenging?
- What advice would you give to online instructors to improve online student collaboration practices?

The data process included reading each of the participant responses to these questions and coding trends that emerged for each of the questions.

The data analysis was done using NVIVO 11, a qualitative data analysis program used for coding, indexing, searching, and developing theory from qualitative data. The program helps organize data in a hierarchical, tree-like form, which, in turn, provided the ability to connect concepts and make relationships between themes and subthemes in the data. All the data were input into NVIVO 11 and coded for the common themes presented in the findings section.

Qualitative Validity and Reliability

There were three identified factors that affected the qualitative validity and reliability in this study: (a) lack of rapport, (b) researcher interaction and role, and (c) transferability. First, rapport between students and researchers was minimal. One of the researchers was a past facilitator for this online doctoral program and some students may have continued to see her as an administrator and may not have fully trusted her with full disclosure. In addition, the second researcher was one of their core course instructors for the program, which also may have impacted rapport and full disclosure from students. Second, the researchers’ interaction and their role the online program presented some conflict. For example, the researchers had dual roles as researchers and as administrators and faculty, which may have had an impact on how students responded. Lastly, transferability may be an issue because every online doctoral program is different and technological support for every program is different.

Limitations

There were four limitations identified by the researchers in this study: (a) a lack of group homogeneity, (b) insufficient sample size, (c) inappropriate timing, and (d) a lack of triangulation. Regarding the lack of group homogeneity, there were different levels of expertise (e.g., P–12 and Higher Education) and competence and comfort levels with technology within the group. Second, the samples size was also not sufficient. The population of this study was comprised of a small sample size, making generalizability challenging. There were also recruitment limitations in this study. For example, there was only one group of students who met the criteria to participate in this study: The first cohort in this online program. Third, the timing of this survey was after an emotional, open town hall session, which may have caused additional stress and negative reactions from the participants. Lastly, lack of triangulation was also an identified limitation. The researchers only relied on one source of data and they did not compare these data to other undergraduate and graduate level online programs.

FINDINGS

The findings were divided based on the three qualitative survey questions that were designed specifically to answer the research question:

- What methods of online teaching practices have fostered online student collaboration?
- What types of online collaboration projects have been meaningful?
- What are some online teaching practices that have made student online collaboration challenging?

Methods of Teaching Online that Foster Online Student Collaboration

We identified three major themes: (a) working in groups (noted by 11 participants, or 68.8%), (b) technological tools (noted by 8 participants, or 50%), and (c) quality discussions (noted by 6 participants, or 37.5%). First, students voiced that
working in groups supported collaboration in their learning. One student put it best, “most meaningful is the weekly collaborative groups where we are assigned topics and graded on the collabor[oration].” Group work, while difficult to implement in online programs and online environments, is very important, particularly in doctoral programs where discussion, collaboration, and networking are key to success.

Another student stated, “I have really enjoyed the assignments that require us to work in groups. So far it has worked out well. Though it sometimes feels as though people have already established their own groups.” While online doctoral programs must implement technologies that maximize group work, it is also important that these groups are formed by faculty and monitored to minimize the creation of cliques and subgroups.

The second theme was the use of technological tools, such as applications. While faculty are content, methods, and theory experts, if they are teaching online and are also not experts in the use of technological tools, and they can lose credibility with students who often enter the classroom with this training. Students mentioned tools that can help them better connect with each other and their faculty, such as Zoom, a video conferencing tool (www.zoom.us), or something as simple as Facebook. One student stated, “Zoom meetings, group work, and residency brought us together. We created our own Facebook group that we keep in touch on or ask for help.” At least three students commented on the importance of Zoom for collaboration. In one example, a student said that, “[w]hen zoom sessions are made available regularly, and student participation is expected, online collaboration between cohort members has been easily accessible.

Lastly, discussion boards were essential for students to share and comment on each other’s work in a structured setting at their own time. According to Blackboard:

*Online discussions provide unique benefits. Because students can take time to ponder before they post ideas, you may see more thoughtful conversations play out. You can observe as students demonstrate their grasp of the material and correct misconceptions. You can extend your office hours and reach students more often during the week so that learning is continuous . . . With online discussions, course members can replicate the robust discussions that take place in the traditional classroom. Blackboard (2017)*

One student stated, “[d]iscussion board postings also have allowed us to check in . . .” While Zoom was important for web conferences, discussion boards were just as important to share and comment on written work. “[D]iscussion boards] really allowed me to process the material,” stated another student. The need and importance of discussion boards was mentioned by at least half the students that completed the qualitative survey.

**Collaborative and Meaningful Online Projects**

Regarding collaborative and meaningful online projects students pointed to two areas: (a) group presentations (noted by 6 participants, or 37.5%) and (b) group writing assignments (noted by 7 participants, or 43.8%). First, when asked about what constituted meaningful online assignments, several students mentioned “[g]roup presentation[s].” They enjoyed having the opportunity to collaborate and present their findings together. They either were introduced to tools to help them do this, or they found their own collaboration tools.

Second, group writing assignments also arose as a meaningful form of assignment. They were mentioned by several students. One student stated, “[w]riting a paper together using Google Docs or commenting on each other’s papers; recorded group meetings. . . .” as a highlight in the online experience. Dekeyser and Watson (2006) described Google Docs as an online tool utilized to enhance online collaboration, and it is highly utilized by our students to work on the same document at the same time, and provide comments, feedback, and edits.

Third, while presentations and assignments are part of projects, in some courses students have entire projects that span the entire class. It is these projects, with the use of online tools, that students mentioned as meaningful on several occasions. One student captured the message best by stating, “I have really enjoyed working case studies with members of my cohort. For the most part it has been relatively easy to do and helped me to deepen my learning.”

“I find that being online is not as scary with all the technology we have. I don’t feel alone and
I feel like the instructors I have had have made it feel like a classroom,” stated one student. It is clear that although these students applied to this online doctoral program, they do miss and desire the in-person connections with their peers. It is the presentations, assignments, and projects that help bring the students closer together, build community, and create the sense-of-belonging that is important in a doctoral program.

**Online Collaboration Challenges**

Students identified three challenges to online collaboration, including a lack of: (a) peer collaboration (noted by 7 students, or 43.8%), (b) technical skills (noted by 7 students, or 43.8%), and (c) course design knowledge (noted by 6 participants, or 37.5%). First, regarding the lack of peer collaboration, one student stated that when the task at hand is “[n]ot collaborative” in nature, it lessens the quality of their online experience. Another student said, “[n]ot sure that online has been anything other than convenience,” due to the lack of collaboration that was felt among peers. While every cohort, and every cohort member, does have a personality that adds or takes away from the quality of the collaboration and interaction, it is also important in an online program that faculty build collaboration into the structure and design of their classes.

Second, lack of technical skills arose as a challenge. The majority of the students had input about professors needing more technical skills to effectively teach online. A statement that captures the theme among the students was, “[t]echnology failures, confusing layout of Blackboard or Canvas. . . .” Repeatedly students, mentioned the confusing nature of the layout of the course and difficulty following along with the instructions of online assignments.

Similarly, a lack of course design knowledge was also a common challenge mentioned by the students. One student stated that sometimes there are “multiple steps to follow . . . also sometimes the steps in one section do not always match the steps in another section on the same requirement.” And “sometimes this was a bit confusing and we had to clarify with the professor.”

**RECOMMENDATIONS**

Our nine recommendations for online teaching practice are split into recommendations for online program administrators and recommendations for faculty teaching in online programs.

**Recommendations for Online Program Administrators**

Online program administrators may want to consider the following five recommendations based on the information gathered from this study:

a. invest in technologies that facilitate online group work,

b. invest in professional development focused on improved course design,

c. collect feedback from students on a regular basis regarding their experience with the online program,

d. evaluate the program outcomes on a regular basis to ensure quality and meaningful instruction is taking place online for the students, and

e. establish a collaborative culture for faculty to share online methodologies and collaborate to meet program expectations and student achievement outcomes.

**Invest in technologies that facilitate online group work.** The administrator may consider a variety of technologies based on student and faculty input. Similar to this study, having access to the technology may not be the only challenge. Often the challenge lies in how faculty utilize the technology in their online courses to enhance online group work or online collaboration.

**Invest in professional development focused on improved course design.** As mentioned prior, students stressed the importance of an organized and clear online course design. It is important to invest in professional development that address best practices in course design on an ongoing basis. Some of this work can be done through faculty retreats, but it is important to invest in a person who specializes in course design and is hired to work with faculty.

**Collect feedback from students on a regular basis regarding their experience with the online program.** Offer a variety of opportunities for students to provide honest and authentic feedback. One suggestion would be to have program administration check in with faculty a couple of times throughout the semester and ask about support and assistance in their course design, at least for the first two to three years of initiating an online program. Another suggestion is to
have a once-a-semester in-person meeting (i.e., a town hall) where students can provide feedback. Administrators need to be sure to respond and address this feedback in a timely manner.

**Evaluate the program outcomes on a regular basis to ensure quality and meaningful instruction is taking place online for the students.** Administrators need to make the overall outcomes of the program clear and ensure that there is alignment in meeting these goals. Alignments need to occur between doctoral programs and their certification bodies, such as accrediting bodies.

**Establish a collaborative culture for faculty to share online methodologies and collaborate to meet program expectations and student achievement outcomes.** The administration needs to facilitate faculty-to-faculty interaction so that best practices around online methodologies are shared. In online programs, faculty do not necessarily collaborate without this structured interaction, and administrators can serve the program well by facilitating this interaction. Faculty retreats need time for faculty to interact socially but also share best practices in a structured setting.

**Recommendations for Faculty Teaching in Online Programs**

a. Our four key recommendations for faculty teaching in online programs include:

b. requiring virtual office hours,

c. providing feedback to online work,

d. participating in training in online tools and course design.

e. requiring online student collaboration,

**Providing virtual office hours.** This was one way several students noted as helpful for online collaboration purposes. For example, a student stated, “[r]esponse time is key, virtual office hours, allowing for group collaboration when appropriate.” Faculty can use tools like Zoom to conduct office hours, but if the discussion is around a topic that other students can benefit from, such as discussing the literature review, faculty can record and title these sessions and post them online for other students to view.

**Requiring online student collaboration.** It is important that faculty require online collaboration with a specific structure and expectation of participation by all to improve student online collaboration. We recommend requiring students to collaborate weekly online with a meaningful purpose and outcome. Although, some students may complain about scheduling challenges, the required group assignments lead to great discussions, deeper understanding, and interactions that are critical to online learning. This allows for an effective infusion of the group-work element into online activities and assignments.

**Providing feedback to online work.** It was repeatedly mentioned by students that it is important that faculty provide feedback for online work in a timely fashion. We highly recommend that Zoom sessions and discussion boards be made easy to access and available on a regular basis for ongoing feedback opportunities from faculty and peers. Discussion board postings allow for students to check in with one another and provide specific feedback to each other. Busy work assignments should be avoided when using discussion boards, but they can be used as an online tool for relevant and meaningful online feedback opportunities. Infusing discussion boards and/or other online tools that allow for sharing and feedback of written or other produced work has been mentioned as being the most recommended by students learning online. Create opportunities to provide both group-level and student-level faculty feedback on an ongoing basis for assignments and projects.

**Participating in training in online tools and course design.** Faculty teaching online should consider investing their time into ongoing professional development opportunities to master online tools and course design. Lacking competency with the online tools related to online learning will negatively impact faculty credibility and take away meaning for the students. Utilize all relevant training and support opportunities for creating a clear and well-organized course design. Update the course design based on student and colleague input to ensure simplicity of navigating through the course. Investing in this training will minimize the confusion and anxiety of the students as they participate in the course, and it will allow for them to focus on the content rather than the technical challenges of access to the course.

**DISCUSSION**

Craig (2015) reported that “. . . for-profits like University of Phoenix [have] grown rapidly . . . by making higher education more accessible. . . .” (para. 4). By accessibility, Craig is talking about
online education and online programs offered by colleges and universities across the country. In many instances, this growth comes from new programs, at both the undergraduate and graduate levels, that often mirror a similar face-to-face program. Even when the online and face-to-face program cost the same, students still prefer the online program due to its convenience. For this reason, and because of their rapid growth and the fact that online programs often mirror face-to-face programs, it is important that online programs be of high quality. Because one aspect of high quality has traditionally been networking and interacting with peers and faculty, it is also important that online programs take this into account. For the above reasons, we hope our research will add to the literature and understanding of how universities can improve their online programs, particularly graduate programs.

Graduate online programs are growing and will continue to grow. One only needs to look at the faculty job announcements on the Chronicle of Higher Education website to see how teaching online is becoming part of what faculty are asked to do. In 2017, VOA Learning English reported that in 2016 “. . . 28 percent of all U.S. college students took at least one class over the internet . . .” Understanding this growth and need in part fueled the creation of our Education Leadership Online Program, and this growth adds to the competitive landscape for online doctoral programs. By understanding the best practices for online pedagogy and collaboration that are offered in this article, we hope this research is used to help with program improvement to remain on the cutting edge of online teaching.
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Distance learning has a long and rich history. University coursework by paper correspondence has been documented as early as the 1800s (Kenton, 2015). As newer delivery technologies emerged, correspondence school would next move to both radio and television. With the advent of the World Wide Web in the late 1980s (McPherson, 2009) it was natural for distance learning to progress into an online delivery format in the 1990s. And as the Web matured, so too did our ability to create increasingly sophisticated online learning programs. Modern day Learning Management Systems (LMSs) provide for a relatively easy method of entry into online course creation for any institute of higher learning. The LMS provides the course developer, usually the instructor, a simple to use interface in which to combine varied media formats, including video, audio, text, virtual discussions, and increasingly more interactive elements. Primary examples are the open source platforms of Moodle and Canvas, and the more prevalent for-profit platform of Blackboard, (Hill, 2017).

As many as ten years ago Allen and Seaman (2007) reported that among the nation’s largest research institutions, 99% offered at least one online course and more than half offered fully online programs. By 2013, it was estimated that as many as five million students were taking online courses in the United States alone (Norris, Broidnick, Lefrere, Gilmour, & Baer, 2013), and fully online programs continue to emerge (Crawford-Ferre & Wiest, 2012). The U.S. Department of Education (U.S. Department of Education, National Center for Education Statistics, 2016) reported that almost three million students were taking 100% online degrees in 2014, and among those about one third were engaged in graduate-level work.

The growth in online learning programs is nothing less than phenomenal, and there is ample evidence to suggest that either mode of delivery, online or face-to-face, is not a factor in student success or learning (Bowen, Chingsos, Lack, & Nygren, 2014; National Research Council, 2007; Navarro & Shoemaker, 1999). When comparing online to field-based instruction for teachers, Vernon-Dotson, Floyd, Dukes, and Darling (2014) found that “no differences in . . . knowledge and skills were noted” (p. 41). University faculty and administration also recognize that by offering more content online, higher education institutions can both offer quality programs and increase rates of degree completion (Shea & Bidjerano, 2014).

The trend toward online teaching and learning is likely to continue. Some clear advantages may be driving the movement. First and foremost, online learning can be done asynchronously. That is to say, the student can access material on demand, and need not be present on a particular day or at a specific time. The flexibility to learn when desired is furthered by having the flexibility to choose where to learn, such as at home or while travelling, in rural areas where there is great need (Berry, Petrin, Gravelle, & Farmer, 2011; Naranjo, 2018), or in any country in the world. Location is irrelevant as long as a good Internet connection can be found. This flexibility in choosing time and location can also lessen any issues around busy family and work schedules. We call this combined flexibility an “open border classroom” because of the potential to remove physical, social, and political barriers. If online and traditional courses were to have similar learning outcomes, it could be called a draw. However, considering that online courses offer ample open border advantages outside of learning, namely those of accessibility and convenience, higher education institutions are continuing to understand and leverage the online educational opportunities of this innovative program delivery mode.

PURPOSE AND METHODOLOGY

In this descriptive study, we examine the development and structures of three different online programs in the field of teacher education: a master’s degree in teaching in California, a reading endorsement program in Oregon, and a teacher credential program in inclusive special education in Washington State. While each program has unique content and focuses on different kinds of students, they are all similar in that they are relatively new and committed to developing online learning experiences for students.

Our purpose is straightforward. By way of program review and comparison we identify commonalities, both difficulties and successes, in the three new online teacher education programs. The results help inform the field, as institutes of higher education continue to move toward more