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Virtual Community of Practice: Connecting Online Adjunct Faculty

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There is an increasing trend in higher education to hire adjunct faculty to teach online courses. While faculty at a traditional campus location can meet to collaborate with their peers, globally dispersed faculty, specifically adjuncts, who are teaching online may not be afforded this opportunity. To respond to this concern, the researchers conducted a grant-funded mixed-method study. The researchers created a Virtual Community of Practice (VCoP) to determine whether participation increased sense of belonging among online adjunct faculty. Findings revealed an increase in connection among peers. The results from this study are noteworthy, and research in this area should continue.

The landscape of higher education is changing to include more online offerings and more adjunct faculty. The current trend shows an increase in adjunct faculty teaching online courses at institutions across the country (Magda, Poulin, & Clinefelter, 2015), with many of them possibly never visiting their university’s campus. According to the U.S. Department of Education, National Center for Education Statistics (2015), part-time
faculty comprise nearly half of the faculty rosters at higher education institutions. These adjunct faculty may work remotely and/or on the ground at various campus locations. Faculty who teach in the online environment play an imperative role in the growth and sustainability of online education.

Although an ever-increasing number of adjuncts are teaching online, they may not have the opportunity to engage in professional development to support best teaching practices in an online environment. The absence of professional development for them could result in compromised educational quality (Benton & Li, 2015; Nordin & Anthony, 2014). Faculty development is an essential part of institutional effectiveness for all faculty, and it is imperative to the success of an institution and its students (Reilly, Vandenhouwen, Gallagher-Lepak, & Ralston-Berg, 2012). Moreover, teaching in the online environment requires a skill set that differs from the pedagogical strategies traditionally used in face-to-face classrooms (Samuel, 2015).

The challenges of engaging students who are not physically present can be compounded by feelings of isolation and alienation (Dolan, 2011; Samuel, 2015). Teaching from a distance can limit access to campus resources, full-time faculty, and other adjuncts, seemingly disconnecting adjuncts from their institutions and colleagues (Benton & Li, 2015; Dailey-Hebert, Norris, Mandernach, & Donnelly-Sallee, 2014). In addition, it can be challenging for adjunct faculty to attend campus meetings or professional development opportunities due to their locations, full-time work obligations, and/or scheduling conflicts, which can negatively impact their sense of belonging (Dolan, 2011). Although these feelings of isolation and alienation can be particularly severe for adjunct faculty members, full-time faculty members can experience similar challenges. For example, results from a study conducted by Terosky and Heasley (2015) found that full-time and adjunct faculty members working in online learning environments experienced a low sense of community and requested faculty development to address this need. To respond to this situation, institutions should provide professional development opportunities that will aid in connecting their online faculty to the institution, their specific college, and their departments (Dailey-Hebert et al., 2014). This is particularly important given that online teaching and learning continues to influence all areas in higher education (Dykman & Davis, 2008; Magda et al., 2015). To foster a sense of community for globally dispersed online adjunct faculty members who are unable to visit a campus location, the creation and implementation of a virtual space for them to collaborate, communicate, and share ideas can assist in meeting this goal (Nordin & Anthony, 2014).
Faculty Learning Communities

One key element to consider with online adjunct faculty development is increasing their sense of affiliation with the institution as well as their sense of community with peers (Benton & Li, 2015; Nordin & Anthony, 2014). A faculty learning community (FLC) is a collaborative, community-building experience focused on improving teaching and learning practice (Cox, 2001). Similarly, communities of practice (CoPs) are groups of people who share a concern or a passion for something they do and who interact regularly to learn how to do it better (Wenger-Trailner & Wenger-Trailner, 2015). There are several similarities between a FLC and a CoP. According to Cox and McDonald (2017), both FLCs and CoPs can be topic- or cohort-based and initiated by a center for teaching and learning. They also recommend having approximately 8-10 participants per session.

While there are several similarities between a FLC and a CoP, there are differences as well. For instance, in a traditional FLC, the facilitator acts as a full-participant in the experience and serves as a model for behavior. There is also an impact assessment expectation. This assessment reviews member development, engagement of the FLC components, and student learning (Cox & McDonald, 2017). Participation in a FLC can be facilitated by an application process. In addition, the meeting structure is determined by the members alongside the facilitator. This differs from a CoP, where the facilitator is not necessarily a full participant. In a CoP, the role of a facilitator typically involves organizing the experience, offering support, and documenting the group’s understandings and learning (Wenger-Trailner & Wenger-Trailner, 2015). Furthermore, in a CoP there is no assessment expectation, unless it is a funded experience. Additionally, participation in a CoP is by invitation. Furthermore, the meeting structure follows the three elements of a CoP, which are creating community, sharing practice, and building domain knowledge (Cox & McDonald, 2017). Regardless of structure, these communities provide a safe and supportive space for faculty to share resources and ideas, explore and question their understandings, as well as solve challenges (Wenger-Trailner & Wenger-Trailner, 2015).

Although current research shows that face-to-face FLCs promote faculty engagement (McKenna, Johnson, Yoder, Guerra, & Pimmel, 2016) and encourage faculty members to access instructional support (Nordin & Anthony, 2014), the use of these principles in virtual professional development settings, and specifically with adjunct faculty, remains underexplored. Creating an asynchronous experience for online adjuncts leverages the flexibility of online education, eliminating the need for the
Faculty to be in the same location, which allows for interaction at their convenience (McKenna et al., 2016). While most faculty learning communities are typically offered face-to-face, the researchers designed a virtual, asynchronous offering to meet the needs of their adjunct faculty. The purpose of this Professional and Organizational Development Network [in Higher Education (POD) grant-funded research study was to determine if participation in a Virtual Community of Practice (VCoP) would increase sense of belonging among online adjunct faculty. This research project followed the FLC-CoP model, which utilizes components of both structures. Through this VCoP, online adjunct faculty collaborated with their colleagues, shared their own experiences, and explored best practices in online teaching. The research question for this project was this: Does participation in a VCoP increase sense of belonging?

Background

The researchers’ institution, Embry-Riddle Aeronautical University, includes two residential campuses located in Daytona Beach, Florida, and Prescott, Arizona, that serve traditional students. The university also has a global presence with the Worldwide campus that serves primarily military and non-traditional students through online and face-to-face courses at over 142 satellite locations around the world. The academic programs at the Worldwide campus are managed by three colleges: the College of Aeronautics, the College of Business, and the College of Arts and Sciences. At the Worldwide campus, full-time faculty teach only a fraction of the course sections, with the majority taught by globally dispersed adjunct faculty. In 2017, approximately 1,700 adjunct faculty members taught 86% of the total courses offered at the campus. The majority of these globally dispersed adjunct faculty teach online; however, adjuncts can also teach face-to-face at one of the institution’s satellite locations. Many of the adjunct faculty are subject-matter experts who are currently active in their fields. Although some of these faculty members may have online teaching experience, others may not.

In order to be eligible to teach Embry-Riddle Aeronautical University-Worldwide (ERAU-W) courses, all faculty must complete online, facilitator-led faculty development, through the Center for Teaching and Learning Excellence (CTLE-W). The CTLE-W team includes a Director, a Research Specialist, and two Faculty Development Instructors. Because CTLE-W supports globally dispersed faculty, there is not a physical center for faculty to meet and collaborate like those available at a traditional campus location. In addition to the required faculty development
courses, the CTLE-W department offers a number of optional professional development opportunities including monthly webinars and quarterly special sessions. Furthermore, monthly office hours are held so faculty can check-in with CTLE-W staff and peers. In addition, faculty can schedule one-on-one, just-in-time consultations whenever needed. Faculty also have access to a monthly newsletter that includes helpful teaching tips. CTLE-W also manages an internal resource site that serves as a virtual center, providing a variety of pedagogical resources, including asynchronous discussions and helpful teaching tools. Although there are multiple faculty development opportunities available to all faculty, CTLE-W recognized the need to develop an offering designed specifically for online adjunct faculty members. To combat perceived feelings of isolation and disconnectedness of online adjunct faculty, CTLE-W created a VCoP. This VCoP utilized and adapted principles of traditional faculty learning communities.

The VCoP focused on improving practices in online teaching and learning. Initial activities included reviewing resources about faculty learning communities as well as introductions. This eight-week, open-ended experience allowed adjunct faculty to share their own challenges and successes through weekly discussions organized in Canvas, ERAU-W’s learning management system (LMS). During the VCoP, participants developed and facilitated weekly discussion prompts. Participants were provided with a copy of the book *The Online Teaching Survival Guide: Simple and Practical Pedagogical Tips* (2nd ed.) as an incentive. This book, as well as a variety of other resources related to online teaching and learning, enhanced weekly discussions. Although this experience was created to focus on best practices in online teaching and learning, a variety of other topics were addressed. For example, discussions often included references to educational policy, institutional practice, academic integrity, and online course development. At the conclusion of the VCoP, participants were asked to describe their greatest takeaway in the form of a teaching tip to be shared with their peers on CTLE-W’s virtual resource site. In addition, a pre- and post-survey, which included Likert-scale and open-ended questions, was administered during the first and last weeks of the experience.

**Method**

This study employed a convergent mixed-method design that used both quantitative and qualitative data to analyze results to determine whether participation in a VCoP would increase sense of belonging among online adjunct faculty. A convergent mixed-methods design was appropriate because the quantitative and qualitative data were gathered, analyzed
separately, and then results were compared to determine if the findings confirmed or disconfirmed each other (Creswell, 2014). In a convergent mixed-methods design, it is crucial that both forms of data use similar variables, concepts, or constructs (Creswell, 2014). In the case of this study, the concept of sense of belonging was measured quantitatively as well as qualitatively.

**Sample**

Faculty who were eligible to teach in the online modality were invited via e-mail to participate in this VCoP experience. The researchers reached out to approximately 900 online adjunct faculty members. Randomization of participants was not feasible; however, a convenience sample of online adjunct faculty members was used to ensure as much equality in the groups as possible (Gall, Gall, & Borg, 2007). The sample for this study consisted of 29 online adjunct faculty members with representation from all three academic colleges. In the Fall of 2016, 20 online adjuncts expressed interest in participating in the VCoP. As per the guidelines of FLCs, the researchers created two groups to optimize collaboration. Eighteen adjunct faculty members participated in the Fall. In the Spring of 2017, 12 online adjunct faculty members expressed interest in the VCoP. Eleven participated in the VCoP experience. Of the total participants, from both Fall 2016 and Spring 2017, 28% were from the College of Aeronautics, 31% were from the College of Business, and 41% were from the College of Arts and Science. Forty-five percent \( (n = 13) \) of the participants were male, and 55% \( (n = 16) \) were female. The researchers considered VCoP completers as those who submitted a teaching tip. In the Fall of 2016, 12 of the 18 participants completed the experience. In the Spring of 2017, all 11 participants completed the experience. The Results section includes data for completers only.

While studying the sample of participants, the researchers also noted that 52% of the 29 participants were “veteran” faculty, 27% were “seasoned” faculty, and 21% were “new” faculty. For this study, the researchers defined veteran faculty as participants who had taught 10 or more online courses for ERAU-W, seasoned faculty as participants who had taught between three and 10 online courses for ERAU-W, and new faculty as participants who had taught two or less online courses for ERAU-W as of the end of the VCoP experience. These classifications are applicable only within this study and are not categories utilized by ERAU-W. The researchers recognize that adjunct faculty may teach for multiple institutions. Therefore, participants may have varying levels of experience in
online teaching at other universities. Although unrelated to data collection and analysis, teaching experience at other universities was discussed among participants.

**Procedures**

Prior to the study's implementation, the researchers obtained approval from ERAU’s Institutional Review Board (IRB). This project was approved as an exempt study because there were minimal risks to participants. Recruitment efforts consisted of an e-mail to all adjunct faculty members eligible to teach for ERAU-W in the online modality prior to the implementation of each VCoP group. In the recruitment e-mail, the researchers described the research study and stated that participation was completely voluntary and would not impact their standing with the university. The e-mail contained a copy of the Informed Consent. If interested, participants were asked to sign, scan, and e-mail the Informed Consent form to the CTLE-W Research Specialist. *The Online Teaching Survival Guide: Simple and Practical Pedagogical Tips* (2nd ed.) was mailed to the home address of the participants who gave their consent. Those electing to participate in the VCoP experience were enrolled into the course in the LMS and asked to complete the initial activities and submit the pre-survey during the first week. During the last week of the experience, the post-survey was administered. Throughout the experience, the researchers kept detailed observation notes and held weekly meetings to discuss the VCoP. The researchers’ reflections, observation notes, participant survey results, and artifact data were then compiled for analysis. A discussion of the analysis is detailed in the Results section of this article.

**Instrumentation**

This research explored whether participation in the VCoP experience would increase a sense of belonging among online adjunct faculty. As such, the researchers gathered a variety of data. The survey utilized in this study was created by the researchers with assistance from a POD grant mentor. The survey contained Likert-scale as well as open-ended questions. The pre- and post-survey questions were related to the categories of validation, community, and teacher efficacy to quantify a sense of belonging. There were three questions for each category. Unrelated to sense of belonging, the survey also contained two questions related to virtual communities of practice and two related to online teaching practices. In addition, the researchers collected data from various sources, including facilitator
reflections, observation notes, and artifact analysis. Artifacts included discussions and teaching tips. The researchers utilized the quantitative data to validate qualitative results.

Data Analysis

In a convergent mixed-methods design, it can be a challenge to merge data. Typically, the researcher analyzes the quantitative data and qualitative data separately, then brings them together. The approach used in this study was the side-by-side approach. In this approach, the researcher reports the quantitative statistical results and then discusses the qualitative findings, which either confirm or disconfirm the statistical results (Creswell, 2014). A paired sample $t$ test was used to analyze the quantitative data. This statistical test is used to compare the amount of between-groups variance in individual scores with the amount of within-groups variance (Gall et al., 2007). Researchers will often use a paired sample $t$ test in place of doing many $t$ tests, because the number of $t$ tests can increase depending on the number of groups and variables that need analysis. Thematic analysis was used to analyze the qualitative data. The researchers utilized triangulation and thematic analysis to analyze the qualitative results. Typically, qualitative research involves organizing and coding data through thematic analysis to interpret the findings (Creswell, 2014).

Results

To analyze the quantitative data, the researchers ran a paired-samples $t$ test of the pre- and post-Likert survey questions to investigate whether participation in the VCoP increased a sense of belonging among the participants. Analysis of the qualitative data used the triangulation method and thematic analysis to evaluate pre- and post-open-ended survey questions, LMS artifacts, and reflection documents. The study was guided by the following research question: Does participation in a VCoP increase a sense of belonging? The quantitative results in this study were surprising. The researchers anticipated a much lower sense of belonging on the pre-survey. However, results from the pre-survey indicated that participants already felt they were a valued member and contributed to the success of ERAU-W. They also reported regular communication with their support units before participating in the VCoP experience.

The researchers conducted a paired-samples $t$ test using SPSS, a quantitative analysis software program, to compare the pre- and post-surveys for measures of sense of belonging including validation, community,
and teacher efficacy. There were no statistical significant differences in the scores for validation ($M = -0.048; SD = 0.582$) conditions ($t[41] = -0.530; p = 0.599$), community ($M = -0.119; SD = 0.739$) conditions ($t[41] = -1.044; p = 0.303$), or teacher efficacy ($M = -0.024; SD = 0.517$) conditions ($t[41] = -0.298; p = 0.767$). These results suggest that, according to the pre- and post-survey, participation in the VCoP did not increase sense of belonging.

The qualitative results from this research study validated the need for additional opportunities to build relationships and share best teaching practices among online adjunct faculty, thereby igniting a sense of belonging. To ensure triangulation, the researchers analyzed data from pre- and post-open-ended survey questions, LMS artifacts, and facilitator reflection documents. The researchers used thematic analysis to code the data collected from the VCoP experience and then compiled and entered it into NVivo, a qualitative data analysis software, to identify and quantify themes. The common themes that emerged revealed the benefits of participating in this VCoP. The major themes identified were building relationships, sharing, university community, best practices, and learning from others. The researchers also identified the sub-themes of gratitude, isolation, and resource sharing. As shown in Figure 1, the most common identified theme was “build relationships,” with 206 references, and there were an additional 87 references to “gratitude.”

**Discussion**

Research studies have limitations, and several have been identified for this study. In a convergent mixed-methods design, having an unequal sample size can pose a threat to the validity of a study (Creswell, 2014). Moreover, engaging faculty, specifically online adjuncts, in professional development can be challenging (Dolan, 2011; Hoyt, 2012). For instance, in this study, the researchers solicited over 900 online adjunct faculty members, but only 29 participated. Furthermore, of the 23 who completed the entire experience, only 21 submitted the pre- and post-surveys. A smaller sample size is common in qualitative research, while a larger sample size is often necessary for quantitative analysis (Creswell, 2014). In this study, the sample size was appropriate for the qualitative analysis; however, it was not a suitable number to validate the quantitative results. Moreover, the researchers recruited only online adjunct faculty members teaching at ERAU-W. A broader faculty pool may have resulted in a larger sample size. In light of this sample size limitation, results from this study cannot be generalized to the larger online adjunct faculty population.

Recognizing the challenge of engaging adjunct faculty, the CTLE-W
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Team has implemented a new adjunct faculty outreach initiative. Through this initiative, a member of the CTLE-W team contacts new adjuncts before they teach their first course, regardless of modality (Cottom, Atwell, & Ombres, 2017). Five (17%) of the 29 VCoP participants were contacted as part of this initiative. This led the researchers to wonder if this personalized contact prior to teaching resulted in a greater affinity with the CTLE-W team, thus encouraging them to participate in optional faculty

Figure 1
Themes VCoP Experience

Note. Data obtained from surveys, LMS artifacts, and facilitator documents.
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development offerings, such as the VCoP. It is possible that personalized contact through the new adjunct outreach initiative during the recruitment period led to a higher response rate.

Furthermore, although the qualitative findings were notable, there is clear divergence between the qualitative and quantitative results. This calls for additional exploration of this topic. Due to the grant-funded nature of this research project, a pilot study as well as validation of the pre- and post-survey did not fit within the one-year timeline. Unfortunately, upon analysis, the researchers believe that the scope of the questions provided to participants on the pre- and post-survey limited the quantitative data. Some of the Likert-scale pre- and post-survey questions were vague, which may have led to the lack of statistical significance. For example, participants were asked to agree or disagree with the statement “I communicate with my ERAU-W support team on a regular basis.” The researchers felt this question was unclear because “ERAU-W support team” was not defined. The qualitative analysis results reaffirmed this limitation. However, as this research continues, insights gleaned from this study will be utilized to inform future iterations.

Research has found that although adjuncts are generally happy with their teaching positions, they may not feel connected to the university (Dolan, 2011; Hoyt, 2012). This, along with anecdotal evidence from the researchers’ experience with ERAU-W online adjunct faculty, led us to assume that ERAU-W online adjunct faculty would also report feeling disconnected from the university. This VCoP experience was designed to address this perceived need. Surprisingly, this perceived need was not validated by the pre- and post-survey results for VCoP participants. On the pre-survey, faculty indicated an existing sense of belonging with the university prior to their participation in the VCoP. However, due to the limited sample size, it cannot be concluded that this is true for all ERAU-W online adjuncts. It is possible that optional offerings, such as the VCoP, appeal to those who already have a sense of belonging. In contrast, those who do not feel connected may be less likely to opt-in to optional offerings.

Finally, housing the VCoP within the LMS, which is also used for other faculty development offerings, may have limited the experience. Participants likened the VCoP to a faculty development course, and this may have influenced their interactions. For example, the Faculty Development Instructors were not as involved in the VCoP as they are in the faculty development courses. This may have led to participant confusion, because they have come to expect more guidance from the Faculty Development Instructors. This VCoP was open-ended, and participants were unfamiliar with this format. This was most evident in the Fall 2016 groups. However,
in the Spring 2017 iteration, the selection of faculty leaders helped to alleviate this concern. In addition, this virtual platform required a certain level of technological expertise. These skills varied depending on the instructors’ experiences with the LMS. Participants could only utilize the tools based on their current knowledge. Those with limited knowledge became frustrated, not by the content of the experience, but by the constraints of the tool.

Conclusions

Although there were limitations and challenges in this research study, these findings are important to the field of educational development. Qualitative data revealed that this experience was beneficial to the faculty members’ sense of belonging based on feelings of validation, community, and teacher efficacy. Participants also stated that this experience would improve their teaching practices. The researchers utilized the findings from this study to validate the creation of a Virtual Faculty Learning Community Implementation Framework for utilization by others who wish to offer a similar virtual experience for faculty and staff (Atwell, Cottom, Martino, & Ombres, 2017). In addition, at ERAU-W this research continued in 2018 through another POD grant-funded VCoP. For the creation of this VCoP, the researchers reflected on the aforementioned limitations in an effort to improve the research design, enhance the faculty experience, and update the framework. This subsequent VCoP offering expanded the participant pool to include all faculty members regardless of status or modality. Furthermore, this study will add to the current research supporting virtual faculty learning communities.

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