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Asynchronous Electronic Feedback for Faculty Peer Review: Formative Feedback That Makes a Difference

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ABSTRACT

This case study at Embry-Riddle Aeronautical University - Daytona Beach campus (ERAU-DB) describes the process of facilitating a faculty peer observation model that uses asynchronous electronic feedback through the Teaching Partners program offered by the Center for Teaching and Learning Excellence (CTLE). This practical, hybrid model of peer observation builds on practices found in current models and uses digital recording and web-based software to encourage faculty feedback that will positively impact their pedagogical practice. The results of this study suggest to truly cultivate a dialogue between faculty and/or education developer in the process, the goals should be clearly stated, the reflection should be clearly defined using the current research when possible, and the process should be modeled in practice. This comparative analysis also suggests that the hybrid model of evaluation, coupled with the implementation of video asynchronous electronic commenting system, resulted in increased faculty reflection and impacted classroom instruction.

INTRODUCTION

This chapter is written for faculty developers and administrators interested in creating and facilitating a faculty peer observation model that uses asynchronous electronic feedback. This practical, hybrid model of peer observation builds on practices found in current models—such as micro-teaching, faculty peer observation for evaluation, and external faculty review for pedagogical development—to create a formative developmental model. It uses digital recording and web-based software to encourage faculty feedback that will positively impact their pedagogical practice.

This chapter outlines a case study at Embry-Riddle Aeronautical University - Daytona Beach campus (ERAU-DB) and describes the process of instituting technology through the Teaching Partners program offered by the Center for Teaching and Learning Excellence (CTLE). While ERAU-DB departments already have a formal process for faculty to complete evaluations, these reviews are typically designed to evaluate performance for the purposes of tenure and promotion. With this limitation in mind, CTLE developed and facilitated the Teaching Partners program to encourage faculty self-reflection and pedagogical development. This program implemented a "true hybrid" model of evaluation (Yiend, Weller, and Kinchen, 2014) that included peer faculty members and a faculty developer. Unlike traditional, department-guided observations, the Teaching Partners program is not included as part of the faculty member's promotion and tenure materials. Using web-based software as a method for providing feedback provided an opportunity for faculty developers to asynchronously observe courses on a larger scale and provide directed pedagogical feedback in new ways to produce formative rather than summative feedback.

Chism (2007, p. 5) distinguishes “formative evaluations,” where teachers are provided with “information that they can use to improve their teaching,” which may be offered confidentially and can be 'informal, ongoing, and wide-ranging'” from “summative evaluations,” which are used to make personnel decisions, such as hiring, promotion, tenure, and merit pay. Instructors often find a formative process more useful than a performative evaluation (Cross, 1986 as cited in Chickering & Gamson, 1987). Keig and Wagoner (1995) added that the collaborative peer review was a process by which faculty learn how to teach more effectively, to practice new pedagogy, and to receive feedback and coaching. Therefore, when developing this Teaching Partners Program, the process and types of evaluations were significant considerations.

BACKGROUND

The focus on peer observation in the Teaching Partners program at ERAU’s-DB campus is not new to American universities. Peer observation of teaching has become increasingly common place in the university setting as institutions carefully examine the effectiveness of their educational systems (Byrne et al., 2010). Peer observation offers many benefits, including developing pedagogical knowledge and understanding, enhancing specific skills, and developing confidence in teaching (Bell 2005). Smith (2014) notes that when peer review is done well it is “a critically reflective, complex, and multifaceted, collaborative, and developmental approach to improving instructional excellence” (p. 94).

While Blackmore (2005) broadly identifies peer review as a method for assessing performances to help faculty peers improve so that good practice can be identified and shared, Peel’s (2005) review of the literature on peer observation of teaching suggested that it is used for two main purposes: development or performance management. More concretely, Gosling (2002) (see Table 1) identified three distinct models of peer review (1) Evaluation model (or

management model) – involving senior staff observing; (2) Developmental model – involving educational developers, expert teachers, or learning and teaching practitioners in the observation process; (3) Peer review model – where teachers observe teachers. The model's described above have distinct purposes, processes, and modes of feedback. The evaluative model is more summative in nature, the peer review more formative, and the developmental model includes outside experts or observers and may include both aspects of summative and formative feedback. Since Gosling's delineation, other researchers have described more detailed hybrid models (described later), which would include our Teaching Partners program. Typically, the peer-observation process includes one observer and one observed faculty member. The observer may be a supervisor, a disciplinary peer, an interdisciplinary peer, or an external observer like a faculty developer. Generally, the process includes an agreed upon instrument or rubric that will be used during the observation, a pre-meeting to discuss objectives of the observation, and a debrief to discuss the feedback of the observation.

TABLE 1

The tension between peer observation as a summative, top-down process used for judgement on performance, or peer observation as a formative bottom-up process for informal development (Peel, 2005) is a challenge. The summative process has become a staple in many departmental reviews as one important aspect that informs management decisions. In higher education, peer review of teaching remains a significant part of tenure and promotion process (Cross, 1986) and is often an important part of faculty evaluation at any level (Boyd, 1989). While faculty are not typically trained as teachers (Gearhart, 2012; Addy and Blanchard, 2010), they are expected to improve in their teaching pedagogy, understand how their students learn and demonstrate that knowledge, and develop strong classroom management, practice, knowledge,

and skills. Further, faculty are often evaluated on such criteria. The problem with the summative process is that it rarely leads to any improvement or reflection of one's teaching pedagogy (Iqbal, 2013). Iqbal (2013) explains faculty typically do not invest in the process of summative peer review as they would in the formative process.

Conversely, the formative peer review process is described by Ashford et. al., (2003), as a primarily "Feedback seeking" one. In a formative feedback process, faculty are motivated to voluntarily seek feedback for their own improvement (Chism, 2007; Ashford et al., 2003; Kieg & Waggoner, 1994). Bell (2005) defines peer observation of teaching as a "collaborative, developmental activity in which professionals offer mutual support by observing each other teach; explaining and discussing what was observed; sharing ideas about teaching; gathering student feedback on teaching effectiveness; reflecting on understandings, feelings, actions and feedback and trying out new ideas" (p. 3). In her definition, both collaborative and developmental activities are explored, which was key in directing our hybrid model. Keig and Waggoner (1994) identified seven specific characteristics of formative peer review programs:

1. Not for remediation, but instead good teachers who want to get better,
2. Are voluntary
3. Involve trusted and respected collaborative colleagues
4. Are reciprocal
5. Agree on the method and evaluative process
6. Involve a thorough process
7. And keeps the process separate from personnel decision making

Arreola (2007) notes that even if the formative process is mandatory, the process should be primarily driven and guided by the faculty member's personal goals, by feedback from students and/or colleagues, and/or by a desire to address problems in a specific course or academic context. The key is that it is not a part of the official faculty member's performance review process. Typically, disciplinary colleagues complete this process. Faculty are particularly

well qualified to critique their colleagues' teaching when the objective is to improve quality of instruction because they are able to assess several aspects of teaching better than students, academic administrators, and other constituencies of the academic community (Keig, 2000). Disciplinary peers are likely to be viewed by faculty members as more relevant and directly transferable to their teaching practice (Jenkins, 1996; Chism, 1999), and they are better positioned to comment on matters such as content expertise, instructional design, and methods of assessment (Chism 2007).

When considering feedback, Gosling (2013) discussed peer-supported review (P-SR), offering a precise definitional distinction between feedback and dialogue that happens amongst the faculty peers in a formative process. Gosling argues it (1) is not necessarily focused on the observation of teaching sessions (2) allows for collaborative dialogue between peers rather one giving "feedback" to the other and (3) is non-judgmental (though nevertheless based on a discussion of evaluative judgements). This framework is relatively "unbureaucratic and non-managerial, which encourages critical reflection, peer scrutiny…and which supports individuals and groups to engage in inquiry into their teaching and its impact on student learning (p. 29). The key features of this kind of feedback are that it:

- promotes reciprocal learning
- recognizes professional autonomy of all parties
- is based on dialogue, or more simply conversation
- is non-judgmental
- focuses on changing or developing professional practice
- incorporates enquiry or investigation.

Ultimately, this process moves from a directive, top down approach to a more dialogic one, where peers work side-by-side to improve their teaching.

In their 2006 study, Hatzipanagos and Lygo-Baker examined the views of inexperienced higher education teaching staff who had had their teaching observed by members of an

educational development team. This development model case study found that the "'educational developers as observers' model provides evidence that it 'works' with new lecturers who were acknowledged as likely to be more receptive to notions of personal development" (p. 429). Further, they noted that the lack of disciplinary knowledge did not have a negative effect on the comments or their reception.

Some faculty members may prefer having expert feedback in addition to peer feedback due to concerns that their peers might be too inexperienced to provide valuable feedback (Bell & Mladenovic, 2008). In this case, there are some hybrid models that have been developed and studied. One of the first iterations was developed by Keig and Waggoner (1995) where they describe collaborative peer review as

> a process in which faculty work together to assess each other's teaching and to assist one another in efforts to improve it. The process should include opportunities for faculty to learn how to teach more effectively, to practice new teaching techniques and approaches, to get regular feedback on their classroom performance, and to receive coaching from colleagues and consultants. (p. 52)

The peer review process was focused on formative feedback and improving teaching practice; while the feedback mainly focused on peers, it opened the door for consultants to be involved and to offer formative feedback.

Bell's (2001) evaluation of a peer observation model involved an educational developer within a triangular process of peer feedback. It was originally developed as an Introduction to Tertiary Teaching course (ITT) where two colleagues completed a series of observations, wrote a reflection, and received feedback on the reflection from a faculty developer. In this process, the faculty developer was to "challenge and support the participant's own analysis and theory

building by providing positive feedback and critical questioning of any assumptions, unsupported theories or less than effective practices" (p. 31). In "Peer observation of teaching: The interaction between peer review and developmental models of practice," Yiend, Weller, and Kinchen (2014) put into place a true hybrid model. In their case study, they highlighted the significance of having both disciplinary peer observers and an outside educational developer or teaching expert observer to provide an instructor critical feedback. Based on the results of their study, they argued a hybrid observational model may be a more effective model to facilitate reflective practice. Teaching Partners at ERAU built upon this hybrid model by adding video recordings.

Teaching Partners

Teaching Partners is a peer observation program developed by ERAU-DB CTLE that offers an opportunity for faculty colleagues to observe each other's classes and receive constructive feedback concerning their instruction from their both their faculty peers and a faculty developer from CTLE. The program has two goals: 1) to encourage self-reflective teaching and 2) to facilitate faculty implementation of new teaching pedagogies. Teaching Partners is a formative voluntary program; it is not tied to any college or department and is not used in the faculty formal annual evaluation process.

Teaching Partners began in 2015, and the faculty developer strictly acted as an intermediator by matching self-selected faculty into partners for the observation process. CTLE provided some instruments for the observation; however, faculty were not required to use them. After faculty peers observed their partner's classroom, they discussed the findings. At the end of the program, each faculty member wrote a reflection that was required at the end of the program. The process was very similar the following year. The only difference in the 2016 cohort was that

the faculty developer from CTLE, the Associate Director of CTLE, would also sit in on the observation if s/he were invited.

In 2017, CTLE revamped the process and increased the requirements for participation: faculty were required to meet once before the observation to discuss their objectives, to be recorded during their teaching presentation, to comment asynchronously on their partner's recorded class, and write 2 separate reflections. Self-selected faculty identified their own partners with CTLE only matching those faculty members who could not identify a partner. It is well established that faculty colleagues are well qualified to develop criteria and evaluate teaching performance on their peers (Hart, 1987; Millis 1989, 1994). In this case, however, the Associate Director of CTLE facilitated a pre-observation meeting where faculty identified goals for the program, the class to be observed, and the logistics. The questions asked included

1. What are your goals for the observation?
2. What are your goals for the class?
3. What is your plan for the class session?
4. What strategies will you employ to make the session relevant and engaging to students? Why these strategies?

For the observation, the faculty developer Associate Director video recorded the class. Some faculty partners chose to sit in the class and physically observe his/her colleague, though it was not required. All observers could either complete open-ended notes or use of an evaluation instrument that was like their home department's peer observation forms. While this added a level of complexity in that participants were not all required to complete the same thing to prepare for the video review, it did allow for more flexibility to meet all the faculty needs in this voluntary, formative process. It should also be noted that regardless of whether or not a faculty member sat in on his/her partner's class, all observation commentary would be integrated into the video observation notes.

The faculty developer Associate Director uploaded the video to Swivl. Swivl is an online software initially designed to assist K-12 teachers in making concrete observations of their classroom. CTLE used the software to offer the Teaching Partners participants a simple way to identify opportunities where a faculty member might improve or develop his/her pedagogy. Faculty who used PowerPoints, or other presentation slides, were able to upload those and sync them with the video. The recorded faculty member's interaction with the class, and the corresponding slide-show, played in a split screen for the observer. When an observer wanted to make a comment, the video paused and a time-stamp was created. This allowed the observer and the observed to directly reference a specific moment in time during the class in their feedback.

Fishman et al. (2003) noted that it remains unclear what teachers learn from instructional development, but a number of studies have reported that video-based teacher professional development is beneficial, promising positive learning and professional development for participating teachers (Koc, Peker, & Osmanoglu, 2009; Trip & Rich, 2012). Further video recording allowed the observed faculty member an opportunity to more consciously, reflect on their teaching practice. Lastly, since the video was web-based, faculty had the flexibility to engage with the material, submit comments, and interact with each other at their leisure. It should also be noted that all observational notes would be recorded via Swivl—regardless of whether a faculty member was present for the teaching demonstration. Faculty were then given the opportunity and the time to individually reflect on the overall experience.

After the observed faculty member received feedback from both their peer and the faculty developer, they were asked to compose a narrative statement that answered three questions:

- What are your perspectives of the overall Teaching Partners process?
- What did you learn from receiving feedback?
- What did you learn by giving feedback?

The program requirements ended with another final narrative, produced several weeks after the initial observation, in which the observers discussed how this experience impacted their teaching pedagogy. Unlike the original Teaching Partners program, all participants completed the same reflective questions to document their insights into the process, their teaching, and their practice.

Peer Review with Video

ERAU's -DB Teaching Partners program incorporated technology into their hybrid model because of all the emerging areas of technology, video has been one of the most widely used tools for teaching and learning (Zhang, Lundeberg, Koehler, & Eberhardt, 2011). Using video to observe teaching is nothing new, especially in the K-12 and teacher preparation programs. One of the earliest forms of teaching preparation was micro-teaching, which has been used since the 1960's for both pre-service and in-service teachers. Generally, the stages of micro teaching consist of pre-observation, observation-note taking, analysis-strategy, viewing the tapes, and self-evaluation of teacher candidate stages. A recent review of the literature has shown that digital video is being used as a major component of teacher education and professional development worldwide and across disciplines (Gaudin & Chaliès, 2015). One of the main reasons for this use might be due to the video's capacity, as Brophy (2004) recognizes, to capture the complexity and immediacy of teaching with a richness that approximates that experienced by observers actually present in the classroom.

Nagro and Cornelius (2013) defined video analysis as "a teacher teaching a lesson that is videotaped and then the teacher watches the video for the purpose of analyzing and reflecting on their own teaching performance" (p. 320). According to their historical review, video analysis was used as a learning tool for higher education in three ways: (a) Teachers were video-recorded

while teaching, (b) the video was viewed to reflect or analyze, and (c) teachers made changes in their instruction to enhance student learning (Nagro & Cornelius, 2013).

In their literature review, Funkkink et al. (2011) found that video feedback was designed to improve the interaction skills of a broad group of professionals, including faculty. They found that video feedback is effective for improving professionals' key interaction skills because it helps to improve verbal and non-verbal aspects of communication. Further, videos enabled teacher educators to engage teacher candidates in meaningful discussions based on shared viewing and reviewing of the same classroom experience (Santagata & Guarino, 2011). Funkkink et al., (2011) concisely described the significance of this type of shared viewing and subsequent feedback saying, "This is important because instruction, practice, and feedback are intrinsically linked in this format. The instruction operationally defines a specific skill and shows participants precisely what the target behavior is in a concrete, practical situation" (p. 79). For example, consider Hougan et al. (2018) who found that, from the pre-service teachers' perspective, the pairing of video and commentary helped them unpack the complexities of decision-making that accomplished teachers engage in when they plan, teach, and reflect on practice. More specifically, Rosaen, Carlisle, Mihocko, Melnick, and Johnson's (2013) study explored teachers' responses to a video-based, multimedia professional development program. Teachers recorded their reading instruction on video, analyzed each other's reading instruction, and then received an experts' guidance. As this study points out, one of the more promising approaches to improving teachers' understanding and use of effective literacy practices would be to "offer them opportunities to study other teachers' reading lessons, with guidance in their analysis of features that contribute to overall quality" (p. 171). Interestingly, in Tripp and Rich's

(2012) study, they found that teachers "continually talked about trusting video analysis feedback more than previous feedback methods they had used" (p. 738).

Video analysis tools are emerging as an increasingly viable option to facilitate teacher reflection. Consequently, there has been an increase in research studies focused on the benefits of using video to reflect on teaching (Maclean & White, 2007). Halter (2006) and Sherin and van Es (2005) noticed that the focus of teachers' reflections changed when they used video analysis. The teachers in Halter (2006) completed a reflection guide as they viewed their videos. The teachers' reflections shifted from a focus on pedagogy to both pedagogy and classroom interactions. Beyond the timeliness of the feedback and the ability to be specific in responses, Tripp and Rich (2012) concluded that using video to assist individual faculty reflection was beneficial. They noted that "After using video to reflect, teachers were able to: (a) identify gaps between their beliefs about good teaching and their actual teaching practices, (b) articulate their tacit assumptions and purposes about teaching and learning, (c) notice things about their teaching that they did not remember, (d) focus their reflections on multiple aspects of classroom teaching, and (e) assess the strengths and weaknesses of their teaching" (p. 729). In 2012, Hamilton could not find scholarship focused on university instructors' use of video as a means of reflective practice, and after recording herself and reflecting on the process, astutely analyzed her own experience of using video by describing their usefulness in this way: "This is not to say that these videos "prove" that I am a good teacher; in fact, they don't definitively prove much of anything. Rather, they offer evidence of ways in which I enacted pedagogy in which I believe (p. 15).

Returning to Gosling's model of peer observation (2002), Evaluation, Developmental, or Peer are three general categories that peer review typically fall into. Most often, the use of video feedback models appear to be developmental or formative in nature. There were a few studies

that highlighted video review as a hybrid of developmental and peer categories. In their literature review, Gaudin and Chailes (2015) observed that according to most studies, video viewing is used to expose preservice and in-service teachers to a wide variety of professional practices and to stimulate their professional reflection. For example, Wu and Kao (2008) describe a web-based interface to support training for in-service and pre-service teachers which was significant in creating a dialogue when reviewing video-taped courses. The study was peer observation and feedback only. A hybrid model, MYTEACHINGPARTNER at the University of Virginia, for pre-service and in-service teachers encourages both development and peer feedback while also including a video component in the process. The V-APR program at Embry-Riddle Aeronautical University described a faculty development learning community where faculty members in a single discipline worked with a faculty developer and used video recordings of classes to provide feedback on teaching, ultimately reflecting on process (Davids, Pembridge, & Allam 2015).

Faculty Reflection

Dewey (1933) identified the need for teachers to reflect on their practices in order to act deliberately and intentionally. As Burbank and Kauchak (2003) more recently observed, reflection is an essential element of teaching and professional development. Defining reflection, Shulman (1987) said it is a teacher's reviewing a teaching experience, reconstructing it, considering opportunities or alternatives to the experience, and ultimately learning from it. Similarly, Brookfeld (1995) depicts reflection as “stance and dance.” Being open to changing one’s teaching practice is the stance, and the dance is experimenting and modifying practice. Larivee (2000) was more concrete in her definition saying critical reflection “…involves a deep exploration process that exposes unexamined beliefs, assumptions, and expectations and makes visible our personal reflexive loops…Reflective practitioners challenge assumptions and

question existing practices, thereby continuously accessing new lens to view their practice and alter their perspectives" (p. 296). These definitions recognize the significance of holistically considering one's teaching pedagogy and practice, in order to achieve the ultimate goal of becoming a better instructor, thereby improving student learning.

Research supports the criticality of reflective practice in professional development programs for college faculty (Wlodarsky, 2005; Wlodarsky & Walters, 2006). Maureen Bell (2001) argued that both peer and developmental peer review processes encourage critical reflection and bring about transformative pedagogy and practice. In their study, Hatzipanagos and Lygo-Baker (2006) observed that "teaching observations undertaken by educational developers can be developmental and encourage critical reflection" (p. 430). In their comparison of peer observation feedback prior and after a faculty developmental observation, Yeind et al. (2014) found a "marked rise" in the reflective evaluation comments. They suggested that, "If the goal of teaching observation is to prompt and enhance reflective practice, this suggests an important role for developmental observers in facilitating this (peer observation hybrid) …" (p. 479). In a concurring sentiment, Hatzipanagos and Lygo-Baker (2006) found that the educational developers in their study were perceived as having legitimacy to observe and, by providing timely feedback in a supportive manner, had a positive impact. While Davids, Pembridge, and Allams' (2015) study included a true hybrid model with both faculty and faculty developers commenting via video annotations on recorded classes, it was more of a community peer review within a specific department. In this study, 9 faculty members reviewed multiple colleagues' courses and videos over an extended period of time and the faculty developer was brought in near the end of the process to add his/her perspective on the recorded classrooms.

Methodology

This chapter presents a case study. Typically, in the case study, the researcher investigates "a contemporary phenomenon within its real-life context… (Yin, 1994, p.13). Yin (2009) states that the case study has a distinct advantage over other methods when a "how" question is being asked about a "contemporary set of events" of which the "researcher has little or no control over" (Chapter One). In this study, the researchers were interested in how effective asynchronous electronic feedback would be for the Teaching Partners program. More specifically, the researchers were interested in how well electronic feedback would facilitate CTLE in achieving its two goals: 1) to encourage self-reflective teaching and 2) to facilitate faculty implementation of new teaching pedagogies.

Theoretical

Constructivist theory provided the theoretical framework for this study. In the broadest sense, constructivism explains how learning takes place; learning is the process of constructing a conceptual framework (Cobern, 1993). Constructivism involves a meaningful negotiation and interpretation of one's reality that is influenced by one's prior knowledge (Cobern, 1993). Faculty have had many experiences in and out of their classrooms which influenced their constructed reality concerning peer review. Teaching Partners asked faculty to share material in new ways and construct, through a dialogue between peer and faculty developer, new knowledge and insight concerning their teaching. Further, to deconstruct and identify how they perceive and use peer assessment and their own teaching experience, they must be given an opportunity to reflect and consider those influences.

Site

ERAU-DB is a 4-year, private not for profit institution that serves over 5,000 undergraduate and graduate students in the Colleges of Aviation, Arts and Sciences, Business,

and Engineering, with approximately 350 full-time and 150 adjunct faculty. The researchers were not involved in the 2015 or 2016 cohort. In 2017, one researcher assisted in facilitating the logistics and partnered with 6 faculty in the program. The second researcher was a participant in the program.

Participants

We had 12 faculty participants in 2017's cohort, 9 male, 3 female. Experience levels ranged from full-time instructors teaching for the first time at ERAU to senior faculty who have taught for over 20 years. Faculty participants were from a diverse range of disciplines including Business, Physics, Humanities and Communication, and Math. Participants were awarded a small stipend to participate in this pilot program since it added complexity in both the addition of technology and the process of observation, response, and reflection. All names and other identifying information, like discipline or courses taught, have been redacted for this study.

Data

Data were collected from faculty developers in both pre and post-observation debrief notes. Video recordings of faculty courses were reviewed, and the attached comments from both the faculty members and faculty developers were collected. The faculty reflections from 2015 (n=31) and 2016 (n=11) were compared to those in 2017 (n=12).

Coding and Analysis

Coding was completed using NVIVO qualitative software. The first coding process used descriptive coding. Descriptive coding assigns basic labels to data to provide inventory of their topics (Saldaña, 2009). As coding commenced, multiple sub-codes were developed. Themes emerged from the reflections including insights on the technology, the quality of the feedback, the observation process, and the implementation of teaching strategies. The significance of these

trends becomes evident when compared to the 2015 and 2016 Teaching Partners programs, which did not require the implementation of technology or the pre and post observation meetings.

The following discussion offers a comparative analysis of two case studies, which compares the first group's observations and reflections to those of second group. Goodrick (2014) defines a comparative case study as "the analysis and synthesis of similarities, differences, and patterns across two or more cases that share a common goal." Such a study requires the examination of "key evaluation questions" (KEQ) which allows researchers to determine what must be evaluated (Goodrick, 2014). For this analysis, the key evaluation questions directly correlated with CTLE's Teaching Partners objectives to improve faculty instruction and facilitate reflection. Thus, our KEQs were:

1. Does the Teaching Partners program encourage self-reflective teaching?
2. Are faculty implementing new teaching strategies as a result of the Teaching Partners Program?

As Goodrick (2014), a comparative analysis is particularly useful when the case has been "implemented across multiple contexts" and that context is necessary for understanding the program's success—as was the case with the Teaching Partners program.

FINDINGS & DISCUSSION

When comparing the original 2015-16 data to the 2017 data, the researchers found the following trends:

a. Form Determines Function**:** department forms limit the observers' reflection on the process, resulting in more summative than formative feedback.
b. Technology as Transformative Practice: video recordings facilitated more mindful reflection about classroom management
c. Technology as Useful Practice**:** video recordings garnered more specific commentary in greater numbers
d. Anchored Teaching Methods: peer observations resulted in implementation of concrete teaching methods

e. Dialogue versus Feedback: asynchronously commenting created a great deal of feedback but very little dialogue.

Form Determines Function

The results from 2015 and 2016 show that when it comes to producing quality feedback, form matters. CTLE's suggested, but not required, evaluation forms specifically asked participants to discuss what they learned from the observation and how they planned to implement this new knowledge in the classroom. Rather than use CTLE's suggested criteria, of the 2015-2016 cohorts, six faculty members used their specific department's evaluative criteria. Each department's evaluation form focused on different aspects of class performance, but they all shared two noteworthy similarities: none of them asked the observer to reflect on their observation or to consider the ways they might implement their peer's teaching strategy.

Not surprisingly, these participants made no mention of how this experience influenced their own pedagogical practices. Worse yet, other faculty members merely produced brief narratives, sometimes in fragmented lists, about what they witnessed with little evaluative qualities at all. The use of department forms, and the littering of "buzzwords"—such as scaffolding and peer-teaching, with little comment on what those words mean, or what they look like in practice—suggested that this traditional, face-to-face peer observation did have the potential to reinforce "existing practice, passive compliance, [and be] perceived as bureaucratic" (Gosling, 2002). The observers that completed the CTLE form, however, typically produced more reflective narratives and discussed plans to make semester-long changes, like learning students names or producing clearer visuals. Their reflections referenced loftier goals, such as creating a more enjoyable or dynamic atmosphere. While these initial responses clearly indicate some reflection about one's own practices, they seem to lack the dialogic quality that characterizes formative feedback.

Despite their summative nature, most of the participants found the evaluative responses, and the feedback from peers, to be valuable. Of the twenty-four positive comments from the 2015-2016 cohort, twelve described the program as either "excellent," "helpful," "valuable" or "unique"; five stated that they would participate again; four requested even more opportunities and similar programs—including one participant who insisted he would repeat the program without further compensation. These remarks suggest that, like most instructors, ERAU faculty see an intrinsic, pedagogical value in peer review, even if they use it for promotional purposes—as may have been the case with those that relied solely on their department's evaluation form. Despite this positive feedback, the second round of Teaching Partners only had 12 participants (nearly half of the original group), six of which had participated in the previous academic year's program but had not explicitly stated that they would repeat the program.

Technology as Transformative Practice

Faculty reflections confirmed Larrivee's (2000) argument that critical reflection can result in teachers "slowing down and considering their reasoning process to become more aware of how they perceive and react to students" and "bringing to the surface some of their unconscious ways of responding to students" (p. 298). Two participants mentioned that the video recording initially added a layer of anxiety to the class observation, but they ultimately praised the practice—as did many of their peers. While this anxiety may have discouraged some from participating, Larrivee (2000) indicates that discomfort is necessary for improving teaching because it can lead to the transformative "emergence of new possibilities" (p. 304). These possibilities occur when teachers "break through familiar cycles" and experience a "sense of uncertainty," which opens the door "to a personal deeper understanding, leading to a shift in ways of thinking and perceiving" (p. 304).

The video recordings facilitated this unsettling process—as one professor found the recording "particularly helpful" because it allowed him "to see what [his] students were doing while [he] was teaching." Another echoed this statement when she wrote, "I think being able to see the recording is invaluable. Not only does it help you remember what happened and see what your colleagues are referring to when reading their feedback, but you can also assess parts of their class (and your own) that may otherwise have gone unnoticed." Several commented on those previously "unnoticed" behavioral moments:

- "I was able to catch mannerisms that I was unaware of before."
- "Seeing myself on camera as part of the classroom capture element of this program. highlighted a nervous tic that I did not realize was so pronounced – over-smiling. I tend to smile broadly to hide nervousness or encourage students, but it could come across as being less thoughtful than I would like."
- "My constant movement around the classroom could be perceived as distracting, and my handwriting could certainly be clearer. I think I could pause more and slow down a bit."

Notably, these faculty comments reveal a shift from the "big picture" pedagogical concerns expressed by the initial participants to a much more "I" focused analysis of their teaching experiences. In the first batch of peer observations, observers focused on their peer's behaviors and whether this behavior constituted effective teaching that would produce student learning. The traditional form of observation runs the risk of confirmation bias where observers merely evaluate their peers according to a pre-established understanding of "good" pedagogical practice. Moving around the classroom and smiling, for example, are often interpreted as creating a positive classroom atmosphere, so much so it seems unlikely a peer would comment on them (in fact, neither peer did). The recording, however, provided a wider frame for analysis, revealing what had previously been "unnoticed" and inviting more reflection about how one's unconscious behaviors or actions can have an impact on student learning.

Moreover, these types of reflective statements allow faculty member to "'unpack' their practices as instinctive teachers and go beyond the assumptions both take for granted in their approaches to teaching" (Kell 2005, p. 10). Perhaps the most unexpected, but significant finding was that female participants seemed more willing to "unpack" their public personae than their male peers. Across the board, women commented on their mannerisms, behavior, and the usefulness of the technology in uncovering this behavior, whereas the male participants merely commented on the usefulness of the technology.

Technology as Useful Practice

Swivl technology also allowed for real-time, specific commentary that ultimately added more value to the feedback. Comments such as "good interaction with students" or "very encouraging" took on more meaning when the instructor could witness this interaction and reflect on what specific elements made it "good" or "encouraging." Without a video to remind them, an observed faculty member may not recall what specific action made them more encouraging than another. These observations strongly support researchers that found that without the hindrance of memory, "written reflections tended to be more focused and accurate than teacher reflections without video" (see Rich and Tripp, 2012, p. 689).

Moreover, the asynchronous electronic format generated more commentary than a traditional, in-person observational narrative. For example, a professor teaching a fifty-minute class provided 19 comments to his peer and received 25 comments about his own teaching. This quantity of feedback exceeds what is typically expected in a face-to-face observation. Even if an observer wanted to, it would be nearly impossible to identify a remarkable moment—at a rate of nearly two a minute—within a traditional observation. Indeed, as one professor noted, "the use of Swivl technology during this process made it much simpler and more convenient than I had

anticipated." Another peer echoed this statement when he wrote, "Swivl technology has this excellent feature: to stop the video to gather my thoughts about how a topic was presented as opposed to jotting down quick notes if I had to do the review in real-time."

Anchored Teaching Methods

Unlike the 2015-2016 Teaching Partners, the 2017 instructors turned abstractions into anchored practices that were informed by the feedback and dialogue shared in the process. This second batch of reflections often resulted in more concrete, pragmatic ideas for improving the observed faculty member's teaching—especially when compared to the observations of the first Teaching Partners. When the original participants discussed implementing any of the teaching strategies they observed, they often created worthwhile, but abstract, goals. For example, they planned to "be more interesting," "create more group activities, "and "incorporate humor." The second round of Teaching Partners, however, mimicked their peer's behavior, using similar assignments and/or content delivery:

- "I normally provide classroom materials in advance, but after observing his class I am convinced that providing class videos and lecturing as less as possible in class and engaging students in activities during the class meetings can be very effective. After all, learning revolves around "thinking and doing."
- "After witnessing her class, I created a similar lesson plan that focused on MLA. This improved their citations significantly."
- "I am using some of the observations: A comprehensive review of all we accomplished in the class and plan for the next – sent out after every class … Finally, I am still trying to talk slower."
- "In short, I found three opportunities to improve my teaching: 1.) slow down… 2.) conclude the class... 3.) provide more guidance."

These comments suggest an applicable take-away from their observations and confirm Sherin & van Es' observation that recordings "improved their ability to use evidence to support their reflection comments" (Sherin & van Es, 2005, 2009). Moreover, as multiple researchers (Sunal et al., 2001; Hendersen et al., 2011) confirm, "when faculty members are given feedback that

both motivates and enables them to improve, they are more likely to make significant changes in their teaching practices" (Gormally, Evans, & Brickman, 2014, p. 188).

Rather than just be inspired by their peer's teaching (which is a wonderful feat in itself), these instructors' put their observation into a practice that extended beyond a daily lesson. As one observer noted, "I've tried to be extra mindful of how I frame the class each day." Another remarked, "The Teaching Partners Program ... changed my practices most notably by creating a situation in which I was hyper-aware of my teaching as a practice. I became more thoughtful of what I do in the classroom, what I'm trying to accomplish, what I want the students to learn, and how my classroom dynamics (lecturing, activities, discussions) encourage learning." The celebration of mindful teaching, especially hyper aware teaching, suggest that these faculty are working towards life-long pedagogical changes. Such change is evident in the following observation: "I have also learned through both giving and receiving feedback that with more communication it should be possible to better sync the chemistry lecture and lab courses." These Teaching Partners are currently testing the result of that fruitful collaboration.

Dialogue vs. Feedback

Not every participant walked away with a new teaching tool in their tool box, of course; and one participant changed nothing at all: "I do not think I can say my specific practices have changed. That being said," he continued "the process was very beneficial in affording me the opportunity to discuss these practices with individuals who use them in a different context." Another observer also emphasized the dialogic quality of the Teaching Partners Program and encapsulates everything the program set out to achieve: "I really enjoyed the opportunity to more actively engage in a peer evaluation process without the pressures of formal evaluations and then

have a conversation meant only to improve our teaching styles for the benefit of our students and ourselves."

LIMITATIONS & FUTURE RESEARCH CONSIDERATIONS

There are a number of limitations to the current study. While these initial results seem promising, the small sample size of the program makes it difficult to draw far-reaching conclusions. The case study method does recognize the limited generalization (Yin, 1994). This study offers insight into the process and the development of faculty reflection in the case study context, but more research is needed. Also, faculty self-selected for Teaching Partners. It should be noted that those faculty may have certain predispositions toward their teaching and have certain attitudes or hold certain values in their roles as faculty that made them more open to this process. Further, one observation in the process may also impact what is observed and what can be gleaned from that observation. The researchers were specifically looking at the breadth and depth of the reflections, so that issue was minimized.

This study opened a number of lines of inquiry. Although other studies have directly examined the impact of having a faculty developer as a part of the process, the researchers could not find any research where the developer was a partner, on equal footing as the peer observer and having the same responsibilities as the peer observer. Future research may examine the hybrid model with faculty developer as partner. Another potential study includes the significance of the gendered response, as this study showed that female professors tended to focus more on individual mannerisms or behaviors than their male counterparts. This requires more analysis, which may be useful for professional development and peer observation alike. Finally, while the 2017 cohorts had an in-person debrief after where they discussed various comments or thoughts in the video, the researchers had hoped to see more of a dialogue within the videos themselves,

which would allow the observed faculty member to comment and interact on his/her own video in a more substantive way. We believe this may be an interesting examination to look at the process and potential effect on the quality of feedback.

CONCLUSION

When working with faculty from a myriad of disciplines who have had unique peer observation experiences, offering a collaborative, formative program that encourages interaction, dialogue, reflection, and change can be challenging. The results of this study suggest to truly cultivate a dialogue between faculty and/or education developer in the process, the goals should be clearly stated, the reflection should be clearly defined using the current research when possible, and the process should be modelled in practice. Specifically, faculty and educational developers could encourage more interaction through actions like asking direct questions on the video, encouraging outside resources hyperlinked for easy access, and offering personal anecdotes that may instigate further investigation into the topic at hand.

The addition of video recording classes and offering feedback asynchronously also supports the current research. The Swivl technology allowed more flexibility for busy instructors (Tripp & Rich, 2012), which resulted in more feedback (Hougan et al., 2018; Halter, 2006; Sherin & van Es, 2005) and the increased use of concrete teaching methods (Funkkink et al., 2011). The technology, coupled with pre-meetings, evaluative forms, reflection, and post meetings all worked together to provide more formative feedback across the board. Rather than a top-down, summative model of evaluation, this hybrid model facilitated peer-to-peer dialogue with the sole purpose of improving pedagogy.

This comparative analysis suggests that the hybrid model of evaluation, coupled with the implementation of video asynchronous electronic commenting system, resulted in increased

faculty reflection and impacted classroom instruction. The researchers strongly believe that this study supports prior studies (Yeind et al., 2014; Hatzipanagos & Lygo-Baker, 2006; Davids, Pembridge, & Allam, 2015; Rosaen et al., 2013) on the benefits of a developmental and collaborative hybrid model of peer review. This model encourages formative feedback from both disciplinary colleagues and an outside faculty developer or coach to facilitate a well-rounded and thoughtful discussion of both in-class practice and underlying pedagogy.

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KEY TERMS AND DEFINITIONS

Asynchronous feedback: A controlled on-line method that allows observers to take their time and make specific, meaningful feedback to the another person.

Hybrid Model: In Gosling's peer observation model, this combines developmental and peer collaboration designations.

Case Study: An examination of a current phenomenon in context

Comparative Analysis: Comparing two contextual results for the same case study

Constructivism: Constructing new knowledge based on prior knowledge and current experience.

Formative feedback: A form of feedback that is focused not on summative, evaluative comments, but rather a non-evaluative constructive criticism designed to assist in the development or improvement of a skill or practice or encourage a new way of looking at one's teaching.

Peer Observation: A process whereby faculty observe each other teach and offer feedback