Using Cloud Based Technology to Connect Candidates, Teachers and Supervisors to Improve Practice

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Abstract: *This pilot project investigated the benefits derived from teacher education candidates' sharing videos of their teaching for interactive review through web-based technology. Results indicate that candidates were able to move beyond the initial discomfort of watching themselves teach to reflecting on ways they could improve their practice.*

Keywords: *Interactive Teacher Review; Reflective Teachibng*

Background

The study focused on elementary teacher education and music teacher education candidates at a large university in the Southwestern United States. As part of the teacher education program candidates were asked to video record a segment of their teaching during one of their field experiences and then upload the video to share with their peers and university faculty for interactive review. The Acclaim program was used for the purpose of uploading, organizing and sharing the candidates' videos with others. The researchers sought to investigate candidates' reactions to watching themselves teach.

Purpose of the Study

The purpose of this study was to determine the benefits, if any, to improve the teacher education preparation program through the use of web-based technology for uploading videos of teaching. The teacher education program under consideration ensures that program components are based on essential knowledge, established and current research findings, and sound professional practice. To that end, university faculty constantly seek purposeful ways to improve components of programs to prepare teachers. In an ongoing effort for continued improvement in the teacher education program the teacher education faculty consider program revisions annually that will result in relevant experiences for all teacher education candidates.

Review of Literature

Learning to teach requires mastering a formidable set of complicated events in authentic classroom situations (Hart Research Associates, 2010). Teacher preparation programs can be improved through increased opportunities for candidates to practice new knowledge and skills

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through situated learning (Levine, 2009, Layton, 2015). This situated learning should include extensive and intensive supervision of clinical work (Boyd, et. al, 2008). Coaching candidates during their clinical work can be facilitated through digital media and can be shared and discussed even when the candidate and the supervisor are not in the same place. Partnerships with school districts can facilitate university off-site supervision of teacher education candidates' through collaboration with experienced on-site mentors. Teacher candidate professional development is enhanced when working with experienced site-based facilitators and classroom coaches (Quinn, L., Paretti, L, & McCarthy, J., 2016). Technology plus timely feedback and discussion have the potential to create a space for reflection on practice. The process of constantly analyzing, questioning and critiquing one's assumptions and performance as a teacher has been thoroughly discussed by Dewey (1933), Schön (1983), van Manen (1977), Mezirow (1990), and Zeichner and Liston (1996).

Dan Pink's 2009 Ted talk on the "Puzzle of Motivation" discusses learning through performance and enjoyment. When we can view ourselves in action with supporting dialogue from others, learning can occur. Such learning is intentional when it is focused and collaborative. By placing teacher education candidates in control of their own practice and by encouraging them to share their practice with their peers and university supervisors it is anticipated that the candidates themselves will create greater opportunities to reflect on their growth as teachers. The authors believe that with the technology-rich connectedness available to educators and students today it is possible that viewing and discussing one's teaching practice with others can support candidate professional development.

Methodology

Participants included 20 elementary student teacher candidates and 14 music student teacher candidates who have been trained in the use of the Acclaim program. This program makes the recording, uploading and organizing of video content easy for teacher educators and candidates and allows them to highlight specific moments around video content. Acclaim's built-in annotation and collaboration tools naturally facilitate assessment and evaluations while encouraging feedback and peer-to-peer activities. Participants were asked to record a lesson once every two weeks throughout the fall semester. A questionnaire was used to collect data on the use of the Acclaim program and what effect video-taping lessons and uploading them for interactive review might have on improving practice. The following survey questions were used.

- What did you discover about your teacher voice? (How did you sound? Were you articulate?
- Was the material (or were the directions) presented clearly?
- How did the students respond? Did they seem to be engaged?
- Did you ask and answer questions effectively?
- What did you learn about your movement in the classroom?
- What specifics did you discover about your delivery of the lesson?
- Was your reflection on your videos positive or negative? How and Why?
- In what ways do you think this video process could improve your practice as a teacher?
- How difficult or easy was it to record yourself and what type of device did you use?
- Describe the ease or difficulty you had in uploading your videos.

Results

Participants included four elementary student teachers, 23 music practicum candidates, eight music student teachers, and three graduate licensure music candidates. All participants used the Acclaim program. Participants responded to a Qualtrics questionnaire and were asked to record two or three lessons they taught during the semester.

Candidate comments from the survey indicate a self-awareness of their teaching practices and while many provided comments that were in the category of what Lui and Zeichner (2008) have termed as "sunshining," others responses indicated a reflection on performance that could lead to improvement in practice. For example, "I discovered that my teaching voice needs to be more confident and needs to be more clear when I describe things." or "Sometimes I took too long to explain things, or didn't phrase things very well, which sometimes made it confusing for students." In regards to student engagement: "The students overall seemed to be engaged, but there are students who start losing focus and start daydreaming. There are also students who will start talking, which could be attributed to my pacing." and "My delivery of the lesson needs to be more engaging." "I have improved a lot in my pacing. On my first few lessons I would spend too much time talking and spend too much time on one thing, which made the students restless. I am focusing on smaller things for shorter amounts of time now and it is helping." "My pacing should be faster and I should spend less time with each student."
Regarding questioning techniques: "I personally felt like my language could have been more succinct. I think that would have helped with how the students responded." and " I think I could ask the students more questions so they are thinking more and not waiting for me to give them the answer."

Viewing the video was also a learning experience: "It is great to see myself teaching because you don't realize what can be fixed until you see it for yourself. " and "I think it (the video process) could help me because I'm able to see and catch things that I wouldn't if I was trying to remember. I feel like a video can't lie" and "This video process helps me to view myself from an objective standpoint. The microphone reveals students who talk out of turn and other aspects which I might not notice in the moment." "Taking videos of myself teaching is and will continue to help me see what I can improve about my teaching strategies. When I am up there teaching it is easy to miss things that I do that may detract from the lesson. I can view myself from the perspective of the students when I take videos of myself." "It can help me to see myself from an outside perspective, how well (or not well) I am able to compose myself, and it will also help me to see what my habits may be so that I can stop them (fidgeting, and looking only to specific people)."

And for some candidates, reflection on videos of their own teaching became extended to watching other candidates teach.

"It felt the same as when I am being observed in person, but with a little more control over what can be taped. It was a good project to have, though I would have liked to see more than the handful of people that posted their videos so I can see/learn more about the different styles of teaching that people can have." Viewing peers' teaching performance in the classroom is something that happens all too seldom in teacher education and in teaching. This project made it possible for teacher education candidates to learn about teaching from the performance of their peers.

Conclusion

Teachers seldom have the opportunity to learn from one another in collaborative learning communities during their daily schedules. Sharing actual teaching experiences with one another through a visual format such as Acclaim may encourage teacher candidates to establish a behavior of collaborative practice to improve their teaching practices. Additionally, as traditional routes to teaching are subsumed by alternate routes to licensure, candidates will be entering classrooms as teachers of record with less opportunity to practice the art and science of teaching and with fewer opportunities for coaching from mentor teachers and university supervisors. If the use of web-based technology encourages a greater frequency of review and reflection on practices with feedback from peers and mentor teachers, teacher preparation programs would be enhanced by including them in their repertoire.

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