

Increasing Teacher Candidate Responses through the Application of VoiceThread

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Abstract: Free Web technology tool integration into education settings is growing exponentially because the tools promote creativity, collaboration, and communication. It is essential that teachers understand how to generate reflective learning opportunities using Web technologies to create optimal reflective learning environments. The author explored the use of VoiceThread, a Web 2.0 tool for more in-depth reviewing and reflecting on shared learning experiences. Participants were 25 teacher candidates, who participated in semi-structured interviews. The findings of this study suggested that the development and implementation of VoiceThread assignments increased student reflective response, engagement, and Web technology literacy.

Introduction

The focal point of the growing collection of Web technology tools is on practices such as sharing thoughts and information through self-publishing and harnessing the collective responses of all users to generate information and solve problems. These tools are changing how student and teachers receive and respond to information and interact with the world, so that communication and collaboration are possible at any time (Solomon & Schrum, 2007). Many educators around the world are creating innovative pedagogical strategies in their classrooms every day. These innovative pedagogical strategies integrate prior knowledge and transforms practice through critical reflection and applying web technologies.

Marzano and Kendall (2007) suggested a new taxonomy of educational objectives which incorporates a wide range of elements involved with students' thinking and learning that is an intersecting of three systems of thought and three knowledge domains. Time on task requires the students to use their new self-system to determine whether to proceed as usual or engage in a new activity; the metacognitive system sets goals and monitors progress and accuracy, and the cognitive system processes the information while the knowledge domains furnish the content.

Literature Review

Free Web 2.0 tools are globally available to teachers, students and teacher candidates that allow them to be actively involved in analyzing, synthesizing and evaluating. Teacher candidates are able to create, share, and organize text and media, permitting individuals to reflect, collaborate and communicate in new ways with individual sustainable technologies. Research studies have shown mixed results for the effects of technology enhancement for learning and of teaching, however, researchers seem to agree that using web technology in teaching and learning will grow immensely in the near future. Romano and Schwartz (2005) imparted that as teacher candidates experience and process new information during their initial acts of teaching, reflection is an

inherent part of the process. Cornford (2002) argued that reflection requires prior thinking, reflection, and the ability to engage in critical thinking, that is, there must be content or coherent body of knowledge and logical processing skills. Technologies hold promise worldwide for eliciting and encouraging beginning teachers' reflective practice. The technology tools provide an avenue for reflection on teaching and a structure for thinking and discussing their work as teachers. Skiba and Barton (2006) proposed that faculty must adapt and modify their teaching strategies to recognize and address student preferences relating to digital literacy, experiential learning and collaborative interactions. Bisoux (2008) considered the building upon prior student experience as a part of this interactive learning process. Graffam (2007) suggested that increased student engagement and reflection through interactive pedagogies relies upon "intentional engagements" that link students to the learning process. Web technologies are in a state of transformation, the technology itself subjected to change, as well as the application. Research by Oblinger (2005) indicated that web technologies are affected not just by the possibilities of the technology but by our understanding of learning as well.

Web technologies offer a potential for reflective discourse in this growing global and culturally diverse learning environment. The research by Hawkes and Rosmiszowski (2001) has shown that discourse achieved a higher overall reflective intensity than do reflections generated by teachers in face-to-face interactions, recognizing the importance of time independence for providing a better opportunity to ask reflective questions. Reflection enables practitioners to examine, converse, assess, and change their own practice, adopting an analytical approach toward their practice, and encourages them to consider the moral and ethical issues inherent in classroom practices, including the critical examination of their own beliefs about high-quality teaching.

Method

The purpose of this present study was to provide educators with a better understanding of how VoiceThread can be used to elicit more in-depth responses from teacher candidates. People who use VoiceThread are always asking questions, making connections, forming opinions and gathering facts. This purpose could best be achieved by exploring student responses for two assignments: 1) a miscue analysis and 2) a case study in which the teacher candidates completed VoiceThread reflection responses.

The participants were 25 university students in a reading class from the Early Childhood and Special Education programs, who were juniors and seniors of various ages, backgrounds, and gender. I intend this information to aid educators in identifying ways of bridging the gap between written assignments and assignment completion through digital tools.

Three questions guided the development and assessment of the proposed methodology. The first question addressed how VoiceThread can be employed to elicit more in-depth responses from teacher candidates. This principle appraises whether teacher candidates act on their commitment to a construct of practice differently from their counterparts who do not use VoiceThread. The second question asked how the mock-up VoiceThread case study helped the teacher candidates reflect better on their individual case study assignment. The third question sought to determine

how the sample VoiceThread miscue analysis increased the teacher candidates' skill in administering diagnostic tests.

The case study method with semi-structured interviews was used to gather information on the research topic. The semi-structured interviews allowed a series of open-ended questions that defined the topic to be explored, was flexible, and well suited to the educational setting. In the present study, I used semi-structured interviews to probe the ideas of the participants to better understand how the integration of VoiceThread impacted the assignment responses and if VoiceThread was a potential stimulus for strengthening assignment responses comprehensively.

Results

The findings of the study provided insight into student views on using VoiceThread to expand responses in a case study and miscue analysis. Several themes emerged. Participants considered VoiceThread uncomplicated to use and a fairly rapid process. Participants were of the opinion that that clear learning objectives for using VoiceThread and the preferred learning outcomes were evident and that produced a more meaningful learning experience for the teacher candidates. Participants concluded that the assignments heighten their ability to access authentic teaching opportunities and provided a transition to daily classroom teaching by contextualizing the use of a Web 2.0 tool through sustained practice. The teacher candidate participants also indicated pedagogical advantages such as motivation, supporting higher-order thinking and extending scope, and facilitating learning in areas of speaking, listening and reflecting.

Reading and studying the case study assignment on VoiceThread furnished an opportunity for the teacher candidates to respond and complete sample assessments related to the case study. The teacher candidates viewed examples of a step-by-step procedure that they later implemented in a final individual case study project. VoiceThread was thought provoking, challenged the teacher candidates to think outside of the box to respond to the mock-up case study questions and an impressive tool to gain extra practice formulating thorough responses. Teacher candidates were able to reflect in a more meaningful way, to realize what different types of information were important and to ask questions that would help to create an effective individual case study. Overall, the teacher candidates' reflections were more specific in describing and recalling the teaching and learning experience and how they might personalize learning in the future to increase effective teaching. As a bonus through the practical application and subsequent analysis of their work, the overall literacy and understanding of VoiceThread, a Web 2.0 tool improved. Teacher candidates indicated that completing the case study assignment increased their ability to reflect and to apply specific language related to the diagnosis, prescription and remediation techniques rather than just reading about the processes.

VoiceThread, a free Web 2.0 hosted service was used for diagnosing a child's reading through a miscue analysis. The teacher candidates listened to an audio file of a child orally reading a passage that was uploaded into VoiceThread and the teacher candidate recorded the miscues that did not match the anticipated response. The miscues were analyzed and the teacher candidates were able to conclude whether the student understood the passage, had the ability to self-correct, or was able to employ strategies to aid comprehension. The teacher candidates indicated that

they listened to the oral reading passage several times to make certain that they identified all of the miscues, to hone their fluency in identifying the miscues as the child read and to become more skillful and adaptive to the immediacy required for the assessment. Evidence shows that teacher candidates attempted to search for relationships between different sections of the experience by engaging in a higher level of reflection by interpreting and analyzing. The responses of the teacher candidates were more purposeful and comprehensive and the teacher candidates remarked on feeling more confidence in their abilities to administer a miscue analysis. Some of the teacher candidates expressed their individual voice by stating what they were planning to do in their future administration of a miscue analysis. One hundred percent of the students commented that the pen feature for the miscue analysis in VoiceThread was very awkward to use and difficult to properly and legibly document the miscues.

After seeing how the teacher candidates responded to the VoiceThread-based assignments, the author suggests that much can be learned that will assist teachers incorporate technology into their learning environment. The participants in this study have used VoiceThread before, so the technological aspects were familiar and they did not have problems undertaking these assignments. The author recommends that those inexperienced in using VoiceThread may need some instruction before completing the assignments.

Discussion

The application of a digital tool such as VoiceThread can augment, extend and refine teacher reflection experience by facilitating and structuring the analysis process. Web technology educational innovations begin in the classroom but escalate into intercontinental contexts through repeated application. As instructional technology continues to develop and teachers continue to learn more about how to use it, students will gain the ability to identify and solve problems for which there is no routine solution. Teacher educators assist teacher candidates in cultivating more advanced mental models that correspond with problem-solving approaches by challenging students with ambiguity and contradictory perspectives. Teacher candidates need to have more opportunities for skill development and the ability to infuse technology into course work, so faculty should meet and review course syllabi for technology integration.

Skill development requires repeated assessment of the skill, practicing and feedback. Formative and summative assessment is essential for the development of skills, because with these assessment methods, we can improve and support students' self-directed and shared learning. As teacher educators, we need to provide timely feedback, so that students' self assessment will be fostered and students' learning will be supported during the whole process. Future practice ensuring web technology-enhanced reflective learning activities consistently provide students with a reason and will to engage in and to support successful outcomes.

Educators endeavoring to integrate technology cope with an array of challenges and impediments to the utilization of technology for educational and professional reflection. Institutional barriers are depicted as the lack of access to technology, inadequate technological support or deficient technology skills. In addition, using technology can be time-intensive for both the student and

teacher. Another barrier may be related to intrinsic beliefs about teaching and learning in a global world.

Amid the challenges and barriers, educators are witnessing an increase of technology integration into education settings. It is essential that teachers understand how to generate reflective learning opportunities using technologies to create optimal reflective learning environments. Oliver and Herrington (2001) suggested scaffolding as a means to assist student by modeling reflective behavior, identifying the processes used in reflective practice, providing feedback and promoting a supportive environment where students can identify areas of uncertainty and articulate their opinions to facilitate learning. Brigden (2004) communicated that through these reflective learning experiences, students can demonstrate that they are able to reconceptualize by synthesizing various quantities of information that they have received or obtained through resources to solve a problem. Borsheim, Merritt & Reed (2008) noted that VoiceThread technology provided an expanding knowledge of professional presence and engages the student, teacher or teacher candidate in the process of social and conceptual negotiation, conceptual and written revision, technological prowess, and professional communication.

Conclusion

The findings of this study propose that the methodology has potential and that VoiceThread is a high-quality tool that can increase reflection responses and the ability to respond more fully, suggesting important implications for educational practice. Future research directions advocate for approaches that build on the interplay of technological concepts and deep-rooted pedagogical principles. Web 2.0 tools provide a service and give us a new worldview through an array of free, participatory, shared and disseminated resources that educators can use in their classroom or online. Current research trends in Web technology learning aim at addressing the multiplicity and complexity of the needs of students, teacher candidates and teachers. Some research has recommended that a platform for modeling educational technology integration would be the methods course in teacher education. There are advantages of infusing Web 2.0 tools in all courses where student can utilize video, web-cam, image, and voice technologies for communicating, reflecting, and collaborating in electronic constructivist learning settings but educators should select the technology that best fits the learning task and complements the culture. VoiceThread and other Web 2.0 tools bring us closer to the understanding of the teaching and learning opportunities that Web technology holds for the future.

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