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## **Student Teachers' Views on Using Digital Storytelling**

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### **Abstract**

This study examines student teachers' use of digital storytelling to reflect upon beliefs about teaching and learning including their confidence in their use of digital storytelling in the classroom. Findings reveal that student teachers are confident in their use of digital storytelling and plan to use digital storytelling in their classrooms for instructional delivery, assessment of content, and for student created project based learning. Findings also indicate that student teachers believe digital storytelling helped them to reflect upon what it means to be a teacher.

### **Introduction**

One of the hallmarks of an effective teacher is thoughtful reflection about teaching and learning. Through a variety of methods including portfolios, discussion boards, blogs, and essays, teacher education programs emphasize the importance of reflection and require students to partake in the practice of continual reflection. Teacher reflection is mentioned in various educational documents that relate to teacher effectiveness, for both pre-service and practicing teachers. Standard #9I: Professional Learning and Ethical Practice, the Interstate Teacher Assessment and Support Consortium (InTASC) identifies teacher reflection: "The teacher takes responsibility for student learning and uses ongoing analysis and reflection to improve planning and practice" (Council of Chief State School Officers, 2013, p. 41). Similarly, in the Danielson Framework, used by many states and school districts as a part of their teacher effectiveness models, teacher reflection is noted in Domain 4: Professional Responsibilities: "Reflecting on teaching encompasses the teacher's thinking that follows any instructional event, an analysis of the many decisions made in both the planning and the implementation of a lesson" (Danielson, 2014, p. 83). Several researchers (Marzano, 2002; Strong, Tucker, Hindman, 2004) note a causal relationship between teacher reflection and positive student achievement and assert that reflective practice is critical to expertise; thus, teachers need multiple opportunities to grow as reflective practitioners.

Although not used widely, digital storytelling (DST) is another method that has been used for pre-service teacher reflection. The Digital Storytelling Association has defined digital storytelling as follows: "Digital Storytelling is the modern expression of the ancient art of storytelling. Digital stories derive their power by weaving images, music, narrative and voice together, thereby giving deep dimension and vivid color to characters, situations, experiences, and insights" (Rule, 2018, para. 1). Others (Benmayer, 2008; Gregori-Signes & Pennock-Speck, 2012; Lambert, 2012) have defined DST similarly and have outlined various characteristics of digital

stories. Robin (2008) posits that digital stories, like traditional stories, revolve around a theme and contain a specific viewpoint. The creation of a digital story involves the critical selection or omission of artifacts (e.g. photographs, music) and decisions of how chosen artifacts are arranged to give meaning and convey the author's intended message. To construct a personal digital story, one needs to make sense of and reflect upon one's life experiences (Boase, 2008). Tendero (2006) suggests that DST can be a good tool for learners' self-discovery and understanding of identity.

In teacher education, there is research on teaching pre-service teachers to use DST to create more student-centered learning (Gregori-Signes & Pennock-Speck, 2012), to develop their own technological and digital pedagogical skills (Diaz, 2016; Dreon, Kerper, & Landis, 2011), and to assist student teachers in deepening understanding about their content and pedagogy (Hodge & Wright, 2010). There is sparse research on the use of DST for reflective purposes. The research that exists suggests that DST can help in the facilitation of reflection about experiences, help in the development of prospective teachers as reflective practitioners, and help them to develop their professional teacher identity (Ivala, Gachago, Condy & Chigona, 2014; Kearney, 2009; Yang, 2017). The advantage of using DST during the reflective process is that it gives the narrator a different way of expressing his ideas. By placing preservice teachers in the role of storyteller, the DST "technology provides opportunities for preservice teachers to give voice to their ideas" (Hodge & Wright, 2010, p. 35).

To add to the dearth of literature that presently exists, this mixed methods study examines student teachers' views on using digital storytelling to reflect upon their beliefs about teaching and learning as well as their confidence in using and their use of digital storytelling in their future classrooms. The research questions are as follows:

1. How confident are student teachers in using digital storytelling tools?
2. How will student teachers use digital storytelling in their future classrooms?
3. What are student teachers' perceptions of the use of digital storytelling to reflect upon their beliefs about teaching and learning?

## **Methodology**

### **Participants**

The study included eighteen pre-service teachers that were enrolled in Professional Seminar, a course that is associated with their student teaching internship during the spring 2018 semester. Of the eighteen students, 15.8% were male and 84.2% were female. Two of the students were enrolled in graduate education and working towards their teaching certificate; one student was just obtaining a teaching certificate post-baccalaureate, and fifteen students were classified undergraduate.

### **Procedures**

As part of the electronic portfolio capstone in the student teaching seminar course, which meets once a week during the semester, student teachers were introduced to a digital storytelling project titled, This I Believe. This project asked students to reflect upon their beliefs about teaching and learning and do so in the form of a two- to four-minute digital story that included multimedia elements such as video, photographs, images/clip art, sounds, music, and narration/voice over. Students were free to select the multimedia elements they felt would best represent their beliefs. Throughout the digital stories, students were asked to introduce themselves, make evident their beliefs about teaching and learning, share the experiences they bring to the classroom, and tell what they might offer a future school district.

The concept of the digital story as well as digital story tools were introduced to students during two separate class sessions. During the first session, students were given an overview of the project and were provided an introduction about digital stories, their purpose, how they have been used both in the classroom and in business and media. The idea of storyboarding was also introduced during the first session. Students were provided a sample storyboard template and shown examples of a variety of digital stories made by K-12 students and student teachers. Prior to the subsequent class session, students were asked to use the storyboard template to begin brainstorming ideas for their digital story.

During the second session, students were formally introduced to the digital tools they could use for their project: Animoto, iMovie, or Powtoon. Students were also given a list of other digital tools and were told they could self-select a different tool to use with instructor approval. During the formal introduction of the digital tools, students were introduced to the tools through introductory videos, were shown how to access each tool, and were shown the tool's features. Students were also provided resources to deepen their understanding of the tools, if they chose to do so. Also during this class session, students shared their digital story ideas with peers. From here, students were on their own to create their digital story. The final digital story project was due before the last class session. Students were asked to upload a video link or the video file to the course Learning Management System.

### **Data Analysis**

At the conclusion of the spring 2018 semester, students enrolled in the Professional Seminar course were provided information about the study and a copy of the IRB consent form. During the last class session, students who provided consent were emailed a link to an online survey and asked to respond to that survey on their own time. The survey link remained open until the conclusion of the semester. The survey consisted of demographic information, Likert-scale items on a five-point scale [(strongly agree (SA), agree (A), neutral (N), disagree (D), strongly disagree (SD)], that asked students about their knowledge and use of the digital storytelling process and tools as well as their beliefs about digital storytelling in relation to teaching and learning and teacher identity. The survey also consisted of two open-ended questions to gauge how students would use digital storytelling in their future classrooms and to expound upon the impact digital storytelling had on helping them to convey their beliefs about teaching and learning.

Thematic analysis was used to analyze the qualitative data obtained from open-ended responses. Thematic analysis, a very common form of qualitative data analysis, allows the researcher to extract meaning from the data and then recording patterns and themes found in said data (Patton, 1990). The quantitative data were analyzed with Excel; descriptive statistics for Likert-scale items were found.

### **Findings**

Student teachers' confidence in their knowledge and use of various aspects of digital storytelling and digital storytelling tools was examined. Findings on the Likert-scale items were overwhelmingly positive. See Table 1 for mean and standard deviation data. Students were confident with their overall knowledge of digital storytelling (95% SA/A), with knowledge and skills about storyboarding (89% SA/A), about scriptwriting (89% SA/A), and digital storytelling technology (95% SA/A). Students also responded favorably about using digital storytelling in their future classroom (83% SA/A).

**Table 1** Digital Storytelling Knowledge, Use, & Beliefs

	Mean (SD)
Knowledge and Use	
I am confident with my overall knowledge and skills	
Digital storytelling (n=18)	4.22 (0.533)
Storyboarding (n=18)	4.17 (0.601)
Scriptwriting (n=18)	4.44 (0.685)
Digital storytelling technology (n=18)	4.17 (0.5)
I plan to continue to develop my knowledge and skills about digital storytelling (n=18)	4.22 (0.853)
I will use digital storytelling in my future classroom (n=18)	4.16 (0.687)
Beliefs	
Developing my digital story has helped me to reflect upon what it means to be a teacher (n=18)	4.28 (0.650)
Developing my digital story helped develop my identity as a teacher educator (n=18)	4.17 (0.764)
Digital storytelling helped convey my thoughts about my beliefs about teaching and learning (n=18)	4.28 (0.803)
Digital storytelling helped convey my emotions about my beliefs about teaching and learning (n=18)	4.33 (0.745)

Fifteen students responded to the open-ended prompt: If you plan to use digital storytelling in your future classroom, give one example of how you might do so. Two overarching themes, Teacher Use of digital storytelling (n=4) and Student Use of digital storytelling (n=11), emerged from the data and within these themes several smaller subthemes emerged. Within the Teacher Use theme, students identified ways in which they would use digital storytelling to introduce and teach concepts. For example, “I would utilize digital storytelling to introduce new concepts to students during anticipatory sets, or even during review” (S13) and “I think it would be awesome to introduce a unit with digital storytelling” (S4). Within this same theme, students also wrote about how they would use digital storytelling in a flipped classroom or for when the teacher and/or students were absent: “I could use it to do a flipped classroom lesson and teach students things when I am unavailable” (S2) and “This was an awesome experience and I believe that I can use this to teach lessons and make lessons that students can view at home or if kids are going on vacation and will miss a week of instruction” (S7). Within the Student Use theme, students shared ideas for using digital stories during a narrative writing unit, for assessment of unit concepts, to digitize a story or biography, and to share a career exploration. For example, one student wrote this about using digital storytelling for assessment of unit outcomes: “In a project-based learning unit, students may use a digital story to showcase their mastery of a chosen outcome” (S11). See Table 2 for examples of student responses.

**Table 2** Uses of Digital Storytelling in Future Classroom

Theme	Subtheme	Participant Quote
Teacher Use	Introduce/Teach Concepts (n=2)	S13: "I would utilize digital storytelling to introduce new concepts to students during anticipatory sets, or even during review."
	Flipped Classroom/Absences (n=2)	S2: "I could use it to do a flipped classroom lesson and teach students things when I am unavailable."
Student Use	Narrative Writing (n=2)	S9: "I may do so in a unit on narrative writing. Students will have to know how to tell a story. Because of this, I will have students, as a final project, create a story using digital story telling."
	Assessment (n=3)	S12: "At the end of a unit, students may produce short videos describing key events/ideas from within the unit."  S11: "In a project-based learning unit, students may use a digital story to showcase their mastery of a chosen outcome."
	Stories/Biographies (n=5)	S1: "I think that this would be to use in a third or fourth grade classroom, I would have the students use it to do social studies lessons. They could do projects on certain people in history, and then create a digital storybook about that person. I also think it would be effective in English to do character storybooks."  S5: "I might have my students create their own digital story for a book that we read!"
	Career Exploration (n=1)	S3: "Students can create a digital story about different jobs, connecting career standards."

Using digital storytelling to reflect upon beliefs about teaching and learning was also examined. Findings on the Likert-scale items indicate that digital storytelling did help students reflect upon what it means to be a teacher (89% SA/A), helped students develop their identity as a teacher educator (78% SA/A), helped students better convey their thoughts and beliefs about teaching and learning (78% SA/A), and helped them better convey emotions about their beliefs about teaching and learning (88% SA/A). See Table 1 for mean and standard deviation data.

Thirteen students responded to the open-ended prompt: If digital storytelling helped you to better convey emotions about your beliefs about teaching and learning, please explain how. The following themes emerged from the data: Use of Voice and Pictures, Reflection of Beliefs, Useful for Employers, and Technology Skills. Within the theme Use of Voice and Pictures, students wrote about how using their own voice, personal pictures and selected images helped them to convey their beliefs about teaching and learning. With regards to this, one student wrote, "Digital storytelling involved me reflecting on my beliefs about teaching and learning not only verbally but also visually. Creating and watching my photos and voice together made me realize how much I actually did learn and what my actual beliefs are" (S14). Within the theme Reflection of Beliefs, students wrote about how digital storytelling helped them reflect about their

beliefs surrounding teaching and learning: “It (digital storytelling) really helped me sit down and think about what I believe and how passionate I am about the profession” (S5). The last two themes that emerged were not directly related to the idea of teaching and learning; instead they had more to do with the impact digital storytelling had on outside forces. Within the theme Useful to Employers, students wrote about how the digital storytelling projects would be beneficial to share with a potential employer as stated here: “The digital story project will allow potential employers to hear and visualize my philosophy” (S10). The last theme, Technology Skills, referenced how digital storytelling impacted a student’s skillset. See Table 3 for examples of student responses.

**Table 3** Digital Storytelling and Emotional Impact on Teaching and Learning

Theme	Participant Quote
Use of Voice and Pictures (n=6)	<p>S1: “Almost anyone who has watched my digital storytelling project said that they could really feel my personality through it, and it made them tear up! I was able to put meaningful pictures on the story, while also giving an emotional explanation of why those pictures are relevant.”</p> <p>S15: “Since digital storytelling has both a moving slideshow and voice over, the imagery on the slideshow comes alive with the emotions heard in the person’s voice as they speak about each slide.”</p>
Reflection on Beliefs (n=4)	<p>S4: “It has helped me take the time to sit down and think about my beliefs. It has also helped me find better ways to portray those beliefs.”</p> <p>S7: “I think that it brought everything full circle. It allowed me to see all of my hard work and effort over the years and allowed me to reflect on where I started as a freshman to where I am now about to graduate in two weeks.”</p>
Useful for Employers (n=2)	<p>S9: “It allowed me to show future onlookers the reasoning behind my desire to teach.”</p>
Technology Skills (n=1)	<p>S13: “Yes, digital storytelling has helped enhance my technology skills and how to utilize them in the classroom.”</p>

**Conclusion**

This research supports the use of DST as a reflective tool and as tool for use in the classroom to enhance instruction and support student learning. As a reflective tool, DST can provide preservice teachers a variety of tools (i.e.: music, images, voice) to assist and support them in reflecting upon and sharing a new understanding of their values and beliefs about teaching and learning. As an instructional tool, DST can assist teachers in the delivery of content and be use to engage students in learning content. Although additional research on how DST impacts preservice teacher reflection is needed, teacher educators should consider adding DST as another method for reflective practice.

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