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Sites of Possibility: Digital Stories as a Means of Making Reflective Practice Visible

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Introduction

Teacher identity development is a critically important component of the learning-to-teach process (Alsup, 2005; Atkinson, 2001; Beauchamp & Thomas, 2009), as it is linked to teacher growth and performance. Bullough and Baughman (1997) have emphasized, “teacher identity, the beginning teacher’s beliefs about teaching, learning and self-as-a-teacher, is a vital concern to teacher education as it is the basis for meaning making and decision making” (p.21).

One way of promoting the development of a teaching identity is through reflection. Ghaye and Lillyman (1997) suggest that reflection can “act as a bridge from tacit knowledge to considered action”; “enhance the quality of action (as professionals)”; and act “as a much-needed counter discourse” to enable us to question established professional “wisdom” (p. 19-20). Larrivee (2008) reports advocates of reflective practice “take the position that teachers should not only reflect on behaviors and events within the confines of the classroom but should include the influence of the larger social and political contexts” and “therefore consider critical reflection to be imperative for teaching in a democratic society” (p. 344). This broader view enables teacher candidates (TCs) to move reflectively between their current understanding of what is and work to create what might be as they place themselves in their own classroom.

Thus, the current study aims to contribute to the literature on the role reflective practice can play in examining how TCs develop their professional identities as reflective practitioners. More specifically, this study

examines the potential of digital storytelling as a tool to enhance reflective practice and make visible the development of TCs’ own reflective practice. To situate this work, we begin with an overview of the current literature on teacher identity development, how that is served by reflective practice, and finally the digital composing process as reflective practice before describing the context of our study, data collection and analysis procedures, and our findings.

Review of the Literature

Teacher Identity Development

Teacher candidates enter teacher education programs with prior experiences and beliefs about what it means to be a teacher. Their apprenticeship of observation (Lortie, 1975), the 13,000 hours they spend as students observing the day-to-day work of teachers, greatly impacts mental framework/schema in which their own professional identity begins to form. By the time one begins to see her/himself as a teacher, there already exists strong beliefs about what that means. Research has suggested that beliefs cannot be changed by the “weak intervention” of several years in a teacher preparation program (Richardson, 1996, 2003). Additionally, it has been shown that the socialization into the profession that occurs once a TC enters the classroom beyond the preparation program, the learning that occurs in it are “washed out” (Kagan, 1992; Zeichner & Liston, 1987).

Levin and He (2008) found that based on participants’ self-reporting of the sources of the personal practical theories (PPTs), “empirically warranted claims-to-know about their own

teaching practice” (Cornett, Yeotis, & Terwillinger, 1990; Marland, 1988) 28% of TCs participating in the study attributed their PPTs to their apprenticeships of observation.

Comparatively, Levin and He found that 66% of the PPTs had their foundation “in either explicit curriculum of their teacher education program or the learning experiences offered by being placed in schools and classrooms for pre-student teaching field experiences” (p. 62). Further, their study provides data that show that teacher education can and does influence teacher beliefs, particularly related to instruction, professional development, planning and organizing, classroom management, the qualities of good teachers, and beliefs about who students are as learners. Like beliefs, identity appears to be fluid, changing constantly shaped by social, cultural, political and historical contexts, as well as positional and socially constructed (Pajares, 1992).

Reflective Practice

Because teacher beliefs and identity are fluid, it is important to support TCs to develop a reflective practice in order recognize the influences on their beliefs and identity. Further, Larrivee (2000) asserts there is a clear distinction between “what we profess to believe in and our values in action” (p. 295). It is the values in action that determine day-to-day practice. Incongruence between the two are only noticed, and potentially remedied, when one engages in reflective practice. Reflective practice refers to one’s ability to reflect on her/his own actions to engage in continuous learning (Schön, 1983). According to Dewey (1933, 1938), reflective thinking requires constant evaluation of beliefs, assumptions, and hypotheses against existing data, and against other plausible interpretations of the data.

Without reflection, teachers can “latch onto techniques without examination” of their beliefs in conjunction with the context in which they teach. Similarly, teachers might connect beliefs about the learning process and expectations for themselves and their students, thus leaving them with only “isolated techniques”. Therefore,

critical reflection is key to continued learning and development of beliefs. (Larrivee, 2008)

In teaching, this requires focusing on the beliefs and values that inform practice. Experience alone does not lead to learning and growth. Rather, careful and conscious consideration of experience is critical in order to learn from it (Loughran, 2002; Cochran-Smith & Lytle, 1999). Schön’s (1983) seminal work on reflective practice introduced concepts of reflection-on and in-action to explain how professionals might learn from experience and improve practice through reflection.

Larrivee (2000) expands on the notion of reflecting on one’s own teaching by including that reflective practice should also involve examination and reflection upon the organizational, social, and political contexts in which teaching takes place. This critical reflection brings commonly-held beliefs into question. This can be an unnerving process as beliefs are at the core of identity. Questioning and subsequently shedding beliefs can reveal “uncertainty and vulnerability” (p. 295). Larrivee continues, “To be critically reflective is to act with integrity, openness, and commitment rather than compromise, defensiveness, or fear” (p. 295).

Becoming a reflective practitioner requires teachers to critically examine their own deeply-held beliefs, attitudes, and values. As Holland, Lachicotte, Skinner, and Cain (2001) suggest, “Humans are both blessed and cursed by their dialogic nature – their tendency to encompass a number of views in virtual simultaneity and tension, regardless of their logical compatibility” (p. 15). Reflective practitioners must continuously challenge assumptions and question practice. It is these beliefs that guide decision-making in classrooms. Without intentional and critical examination, these beliefs go untested and unchallenged.

Reflection is generally viewed as an incremental process, with varying levels (Larrivee, 2008). Drawing from previous works that explore levels of reflection (Day, 1993; Farrell 2004; Handal & Lauvas, 1987; Jay &

Johnson, 2002; Van Manen, 1977), Larrivee developed an assessment tool that details practice indicators at each of four incrementally more complex levels of reflection: pre-reflection, surface reflection, pedagogical reflection, and critical reflection. It was designed to serve as a means of determining current levels of reflection to create action plans to facilitate movement to higher levels of reflection.

Digital Composing Process as Reflective Practice

Digital stories are first person video narratives created by combining recorded voice, still and moving images and music to relate and reflect upon a personal story or experience (Hull & Katz, 2006; Robin, 2008). Digital compositions can serve as a way of representing ever-evolving contradictory beliefs as their creation invites TCs to self-reflect on their own histories and current experiences in classrooms as students and observers. The digital storytelling project described in this article serves as a means of bringing to the forefront TCs' core beliefs. They make visible the negotiation of competing ideals as they are asked to envision beliefs meeting practice in their future classrooms. Ladson-Billings (2000) argues that when TCs use their 'autobiography' it creates an opportunity to "reflect on their practicum experiences in diverse classrooms" (p. 209).

In teacher education, digital stories have been used to foster both technology integration and as critical participatory literacy practices (Albers, 2011; Beach, 2014; Matias & Grosland, 2016; McVee, Bailey, & Shannahan, 2012; Pandya, 2014; Rish, 2013). In the process of creating a digital story, the author literally uses her/his own voice to make explicit her/his own thoughts and actions thus fostering reflection (Hull & Nelson, 2005). Hull and Katz (2006) expand the notion of how composers use digital stories to articulate and reflect on life trajectories that "as instances of verbal performance, do not simply reflect social life, but have the capacity to comment critically on it as well" (p. 69).

Across education, digital storytelling expands the notion of reflection in which technology can be used to create a space that supports both re-imagining and reflecting on practice (Matias & Grosland, 2016; Paliadelis & Wood, 2016; Authors, 2015, 2017). Using digital storytelling as a pedagogical method, Pandya (2014) and Rish (2013) found that most TCs' videos were more complex and cognitively demanding than the written papers the digital storytelling assignment replaced in their courses. Matias and Grosland (2016) illustrate how digital storytelling itself promotes critical self-reflection by placing the burden on the narrator to self-reflect in her/his study of digital storytelling as racial justice in teacher education. Through choices of images, music, and voice-over narration, Rish (2013) contends the TCs' digital compositions are shaped not only by the medias they used to create the video but also by their histories and relationships to people, places, and discourses involved in the composing process.

Situating Our Study

This study explored our TCs' reflective practice through the analysis of digital stories they composed to allow them to reflect on what they learned during their teacher education program to inform their vision of their future classrooms. The following question guided our study:

What can be understood about our TCs' reflective practice by examining their digital stories?

This examination allowed us to begin to understand how digital stories can reveal insights about TCs' reflective practice. Based on Pandya (2014) and Rish's (2013) research and our experiences as teacher educators, we expected the digital stories our TCs created to be more complex and cognitively demanding than the written papers the digital storytelling assignment replaced in our courses.

Methods

This study developed from a larger qualitative study in which our team jointly explored a project we each assigned in our

literacy methods courses. We asked our TCs to compose digital stories in which they reflected on their learning and experiences as they envisioned their future literacy classroom. Within this digital story, they were asked to “consider potential interpretations of their design choices” (Pandya, 2014) including images and narration that would allow their audience of this first-person narrative to realize the theoretical rationale for their instructional, material, and assessment choices in their future classrooms. Below we provide the details of our research design, context, data collection, and analysis.

Design, Participants and Data Collection

Our study adopts a qualitative design. In selecting digital stories to analyze for this study, we used purposeful sampling (Creswell, 2005) to select ten digital stories produced by TCs enrolled in literacy methods courses we taught over the course of many semesters. In particular, maximum variation sampling (Glesne, 2006) was used to select digital stories from each of the three research sites, representing participants at various stages of their teacher education course work. In each of the programs, most of the TCs are White, middle-class females whose first

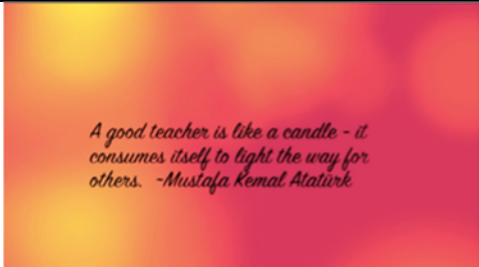
language is English, and in their early twenties. Data were collected under an approved exempt protocol from Instructional Review Boards (IRB) at each university. All students enrolled in the courses created a digital story as an assignment in those courses. IRB permission was granted for analysis of consenting participants’ digital stories who, to prevent coercion, were not identified to the researchers until after each researcher had submitted final grades.




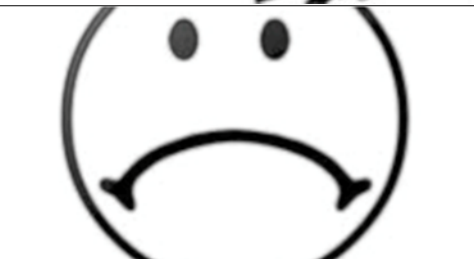
Analysis of Data

Each of the digital stories was transcribed to reflect time anchor, image and paired voice-over performance (See Table 1) as a “multimodal ensemble” (Jewitt, 2008). Recursively, we watched each digital story and reviewed the transcriptions to consider how levels of reflection were evident in images, action, and narration. For our initial coding of the data, we crafted data analysis questions (see figure 1) indicative of Larrivee’s categories of pre-reflection, surface reflection, pedagogical reflection, and critical reflection found in *Survey of reflective practice: A tool for assessing development as a reflective practitioner*.

Table 1

Data Organization Table

Time	Image	Spoken Text
0:03		[No Text]

0:08		From a very young age, I knew I wanted to teach. My sister and I spent many hours, when we were young, playing school. I was always the teacher, of course.
0:21		Throughout elementary, middle, and high school, I had some good experiences and some not so good experiences in school.
0:28		The good experiences always inspired met to be just like those teachers.
:35		The bad experiences made me want to be a better teacher than them and to give my students a better experience than what I had.

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To further understand and classify how TCs used their digital stories reflectively, we individually coded the stories utilizing Larrivee's definitions below to guide our coding along with

the clarifying data analysis question we composed.

Pre-reflection Larrivee (2008) defines pre-reflection as a non-reflective, reactionary level in which classroom situations are interpreted without connection to other events. There is no conscious consideration of alternative responses. At this level, teachers frequently see themselves as victims of circumstance with little to no agency. It is particularly important for those current and aspiring educators who are at this level to be supported to develop their reflective practice. The data analysis question we used to confirm this code was, "Do these data indicate an absence of agency for the TC?"

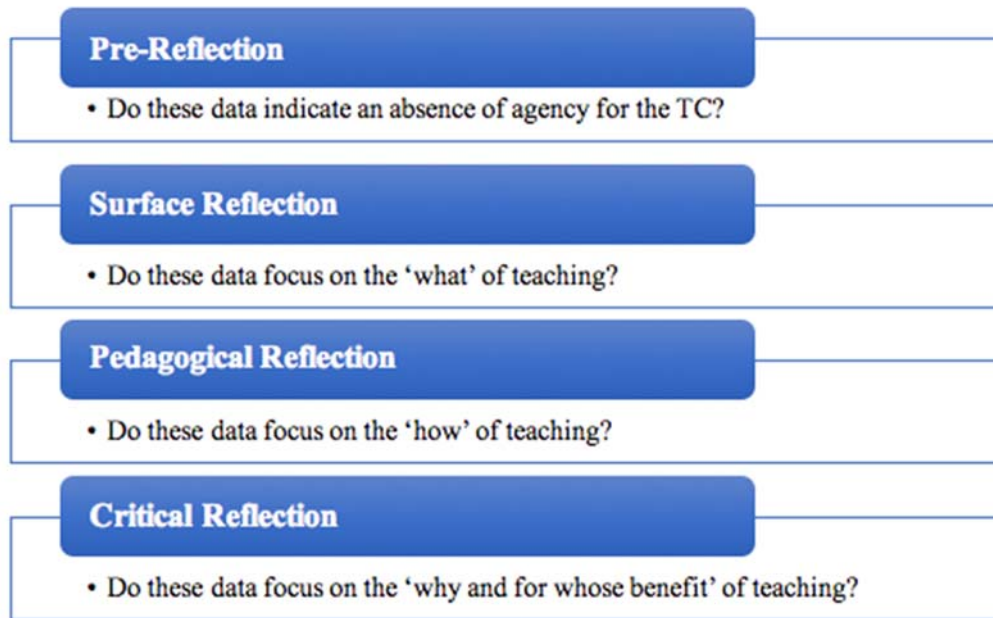


Figure 1: Data analysis questions

Surface reflection Surface level reflection is similar to what has been previously referred to as ‘technical’ reflection in research (Day, 1993; Farrell, 2004; Schön, 1983). At this level, teachers are able to reflect on what strategies and methods work, but with no consideration for the values beliefs, and assumptions that underlie those strategies and methods. This level of reflection relies on experience alone, without regard for theory and/or research. The data analysis question we used to confirm this code was, “Do these data focus on the ‘what’ of teaching?”

Pedagogical reflection Pedagogical reflection suggests an application of teaching knowledge, theory, and/or research. At this level, teachers seek to understand theory underpinning practice as they work toward consistency between their beliefs/what they claim to believe and those beliefs in practice. In previous research, Larrivee points out that this level of reflection has been labeled in many

different ways including “practical (Van Manen, 1977), theoretical (Day, 1993), deliberative (Valli, 1997), comparative (Jay & Johnson, 2002), and conceptual (Farrell, 2004)” (p. 343). There is a goal of continuous improvement and reflection guided by a pedagogical conceptual framework. The data analysis question we used to confirm this code was, “Do these data focus on the ‘how’ of teaching?”

Critical reflection Critical reflection is the most complex level of reflection. It involves viewing one’s teaching practice within the larger social and political context and recognizing the moral and ethical implications of practice. This level of reflection requires careful examination of one’s one personal and professional beliefs to be aware of the range of potential consequences of one’s actions. The data analysis question we used to confirm this code was, “Do these data focus on the ‘why and for whose benefit’ of teaching?”

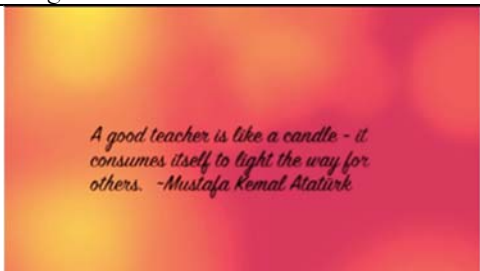


Each transcript was coded paying attention to conceptual breaks rather than sentence by



sentence to delineate the core meanings. We attended carefully to the notion that “reflective practice is generally viewed as developing in stages, although an individual teacher’s progression is not necessarily linear, hence teachers may reflect at different levels simultaneously, interweaving various levels” (Larrivee, 2008, p. 344).

Next, we came back together for discussion during which we confirmed like coding or reached consensus on differing codes. Additionally, in this round we gave each

story a holistic title related to Larrivee’s levels. For example, Irma’s (all names are pseudonyms) story was coded as pre-reflection and Allison’s story was coded at the pedagogical level. We did this because digital stories are actually multi-modal ensembles (Jewitt, 2008) that allowed us to not only code by time-stamped frames, which included the spoken narrative with images but to consider each digital story as a whole performance (see Table 2).

Table 2
Data Organization Table with Coding and Holistic Title

Overall Holistic Code: Pre-Reflection Stretching to Surface		
Time	Image	Spoken Text
0:03		[No Text] Pre-Reflection
0:08		From a very young age, I knew I wanted to teach. My sister and I spent many hours, when we were young, playing school. I was always the teacher, of course. Pre-Reflection...
0:21		Throughout elementary, middle, and high school, I had some good experiences and some not so good experiences in school. ...

0:28		<p>The good experiences always inspired me to be just like those teachers.</p> <p>...</p>
:35		<p>The bad experiences made me want to be a better teacher than them and to give my students a better experience than what I had.</p> <p>Surface</p>

Finally, to look across stories we created a visual representation, which we describe in the findings, to allow us to view the movement and frequency of levels of each story. To accomplish this, we quantified each level of reflection (1-4) and then plotted each time-stamped frame on a graph to allow us to visualize the TCs' movement across levels of reflection.

Role of the Researchers

To ensure internal validity in our qualitative research, we ascribed to Lincoln and Guba's (1985) tenets by employing prolonged engagement, peer debriefing, and triangulation. Having four researchers involved in the study added an intentional layer of validity to the aspects of peer debriefing. Because we were the TCs' instructors when they created their digital stories, we were cognizant of including theoretical and methodological measures to strengthen the validity of our study.

Findings

Levels within Digital Stories

The findings from our analysis of TCs' digital stories indicated that, within each of their

stories, they reflected at various levels. This aligned with Larrivee's (2008) statement that, "teachers may reflect at different levels simultaneously, interweaving various levels" (p. 344). Our TCs affirmed this interweaving of various levels when they moved back and forth between reflective levels within their digital stories. This interweaving was apparent when we plotted the levels of reflection within one TC's story. (See Figure 2).

Figure 2 is an example of the interweaving of levels within one TC's digital story. Dana's reflection included surface level, pedagogical level, and critical level of reflection. All TCs exhibited similar interweaving within their own stories. Figure 3 demonstrates the overall variability of levels of reflection across the seven digital stories.



Figure 2. Levels of reflection within one digital story.

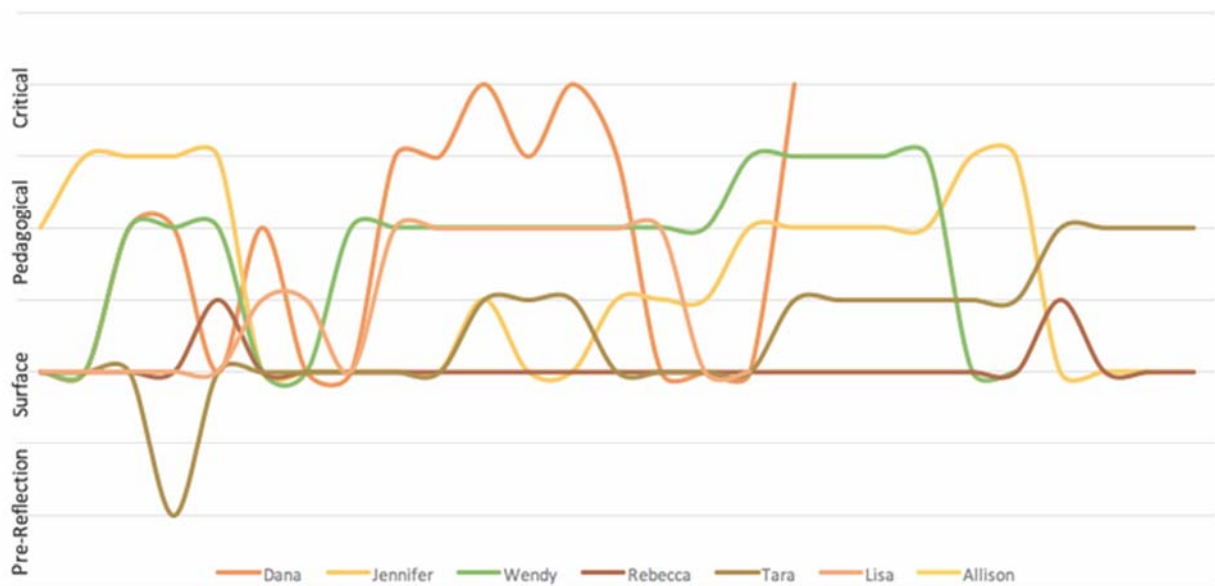


Figure 3. Levels of reflection across digital stories.

In the sections that follow, we describe instances of the various levels of reflection that were made visible within TCs' digital stories.

Figure 4 denotes the data analysis questions we used to guide decisions about these levels of reflection.

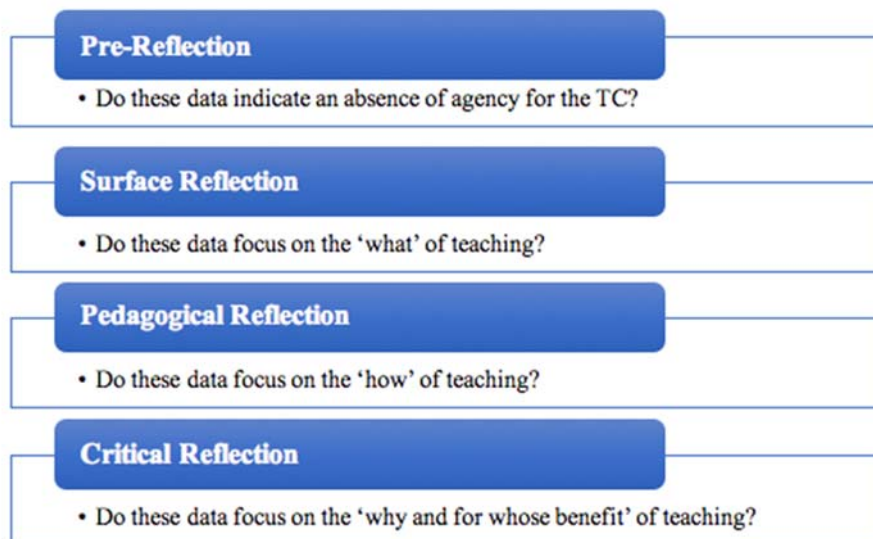



Figure 4. Questions that guided determination of reflection levels.

Pre-reflection. At the pre-reflection level, we saw TCs “tak[ing] things for granted without questioning and ... not adapt[ing] their teaching based on students’ responses and needs” (Larrivee, 2008, p. 342). For example, Rebecca stated, “In order to be an effective teacher, you

must be prepared and organized in all you do.” The image Rebecca paired with this statement included craft sticks with students’ names printed on them in a small, metal bucket and another showing bookcases with baskets of books and labeled with bright signs (See Table 3).

Table 3
Examples of Pre-reflection within Digital Stories

Level of Reflection	Spoken	Image
Pre-reflection	In order to be an effective teacher, you must be prepared and organized in all you do. - Rebecca	

We also work on math every
day... - Irma (Frame 1)



... and I try to incorporate
social studies or science each day.
Or... - Irma (Frame 2)



...at least a few times a week.
— Irma (Frame 3)





Rebecca's narrative showed "no conscious consideration of alternative responses" (Larrivee, 2008, p. 342). Rebecca foregrounds organization, through her images and narration, as an imperative to being an effective teacher. Her image, which is accompanied by other images reflecting organization, "enforces preset standards of operation without adapting or restructuring based on students' responses" and indicated that she is "preoccupied with management control and student compliance" (p. 350). Irma stated, "We also work on math every day...and I try to incorporate social studies or science each day. Or...at least a few times a week." This narrative statement was matched with a three clip art images representing math, social studies and science. In the same vein as Rebecca, Irma also accepted without question that teaching these subjects, separately, is a necessity with no mention of student needs or interests and "fails to consider differing needs of learners" (p. 350). In analyzing these frames, we considered our data analysis question, "Do these data indicate an absence of agency for the TC?"

(See figure 3). We found Rebecca and Irma's narration and images indicated a focus on overall effectiveness and the need to teach subjects separate from student interests or needs, respectively, rather than a focus on instructional strategies and methods. It was as if they simply set up an organized classroom or included various subjects in their daily schedule, their students would learn, regardless of their own instructional decisions.

Surface Larrivee defines the surface level of reflection as, "teachers' reflections focus on strategies and methods used to reach predetermined goals" (Larrivee, 2008, p. 342). In the digital stories we examined, Dana said, "My classroom will be a learning community. I don't want to be a dictator but a team captain. In the end, I am going to call the plays where we are all working together for everyone's success." Dana combined this portion of her narrative with a photograph taken during a whole school convocation at one of her field experience sites (See Table 4).

Table 4

Examples of Surface Reflection within Digital Stories





Level of Reflection	Spoken	Image
Surface	My classroom will be a learning community. I don't want to be a dictator, but a team captain. In the end, I am going to call the plays where we are all working together for everyone's success. - <i>Dana</i>	
	...room and supply the room with a variety of resources for my students to use. I want to have a classroom... - <i>Felicia</i>	

Dana's image and narrative here illustrated the surface level of reflection because she "fails to connect specific methods to underlying theory" (p. 253) since she did not refer or even allude to any specific theory regarding creating a classroom culture of teamwork. Felicia also demonstrated the surface level of reflection when she stated, "and supply the room with a variety of resources for my students to use." While making this statement, Felicia displayed an image of a white board with a map and an agenda. This also illustrated surface reflection because Felicia "limits analysis of teaching practice to technical practices about teaching techniques" (p. 253) when she only showed and talked about the physical environment of her future classroom. When we analyzed these frames, we considered our data analysis question, "Do these data focus on the 'what' of teaching?" In these data clips, Felicia commented only on ensuring her students have supplies and resources (the "what"), not how or why this would impact her students' learning,

which could have indicated a more complex level of reflection. We considered Dana's reflection surface level because she focused on her role as a team captain, without allusion, within the images or narration, to the importance or impact of collaboration on student learning.

Pedagogical Larrivee (2008) defined pedagogical reflection as applying "the field's knowledge base and current beliefs about what represents quality practices" (p. 343). Over the course of three frames, Wendy stated, "I want my students to be exposed to many different kinds of texts. In order to achieve this, I plan to have a classroom library full of many different kinds of fiction and nonfiction. I feel that this exposure to text will promote a more positive interaction with reading." These statements are paired with three different images showing students raising their hands in a classroom, a girl reaching for a book on a bookshelf, and a girl gazing at a pile of books (See Table 5).

Table 5
Examples of Pedagogical Reflection within Digital Stories

Level of Reflection	Spoken	Image
	I want my students to be exposed to many different kinds of texts. – <i>Wendy (Frame 1)</i>	
	In order to achieve this, I plan to have a classroom library full of many different kinds of fiction and non-fiction - <i>Wendy (Frame 2)</i>	
	I feel that this exposure to text will promote a more positive interaction with reading – <i>Wendy (Frame 3)</i>	
	To make learning worthwhile you have to engage your students. The key to engage students in your lesson is to make things relatable to their lives. Allow time for them to use their imagination and let their creativity flow and let them fuse their interest in their learning so that it's not just a lesson, it's fun too. – <i>Lisa</i>	

This narrative paired with the images demonstrates Wendy analyzed the “relationship between teaching practices and student learning” (p. 354) by thinking about how she would achieve this exposure. In her digital story, Lisa demonstrated the pedagogical level of reflection when she said,

To make learning worthwhile you have to engage your students. The key to engage *[sic]* students in your lesson is to make things relatable to their lives. Allow time for them to use their imagination and let their creativity flow and let

them fuse their interest in their learning so that it's not just a lesson, it's fun too.

In Lisa’s digital story, the viewer sees a photograph of two children under a banner bearing the word “Learning”. This statement, in conjunction with the image, showed that Lisa sought “ways to connect new concepts to students’ prior knowledge” (p. 354).


In returning to our data analysis question for pedagogical reflection, “Do these data focus on the ‘how’ of teaching?”, we found both Lisa and Wendy explained, via their narration and images,

their understanding of the connection between teaching practice and student learning. Lisa's explanation of how she would activate her students' prior knowledge by making lessons "relatable to their lives" demonstrated consideration of student engagement. Additionally, Wendy's statement that she would expose her students to a variety of genres by creating a print-rich environment in her future classroom illustrated an understanding of the "how of teaching".

Critical Larrivee (2008) states, "Critical reflection involves examination of both personal

Table 6

Example of Critical Reflection within a Digital Story

Level of Reflection	Spoken	Image
Critical	We'll also learn how to persuade. To write letters that matter about issues that matter to us and be a working part of our community - Dana	

In combining this narrative and this image, Dana described how she would encourage "socially responsible actions in" her future students (p. 354) when she combined persuasive writing with taking action around issues "that matter to us". Guided by our data analysis question, "Do these data focus on the 'why and for whose benefit' of teaching?", we concluded Dana exhibited critical level reflection at this point in her digital story because her image of President Obama and assertion that engaging her future students in activist behavior would be part of her future classroom. This illustrated her focus on why her students' involvement in the community, for the benefit of others, would be a part of her writing curriculum and instruction.

and professional belief system. Teachers who are critically reflective focus their attention both inwardly at their own practice and outwardly at the social conditions in which these practices are situated" (p. 343). As an example of critical reflection, Dana stated, "We'll also learn how to persuade. To write letters that matter about issues that matter to us and be a working part of our community." In her digital story, this statement was accompanied by an image of President Obama seated at a desk (See Table 6).

Stretching within Digital Stories

While Larrivee's levels served as a valuable framework for examining TCs' digital stories, there were instances within these stories that did not fit neatly into only one level. In these instances, TCs demonstrated practice indicators that fit into more than one level of reflection and/or displayed glimpses of reflection at a more complex level. Therefore, we developed the concept of *stretching* which allowed us to acknowledge TCs' movement toward more complex levels of reflection. For example, a TC *stretched* from the pedagogical level to critical level, within a single frame in a digital story. Our data analysis question for considering whether TCs were stretching was, "Do these data approximate characteristics from more than one level?"

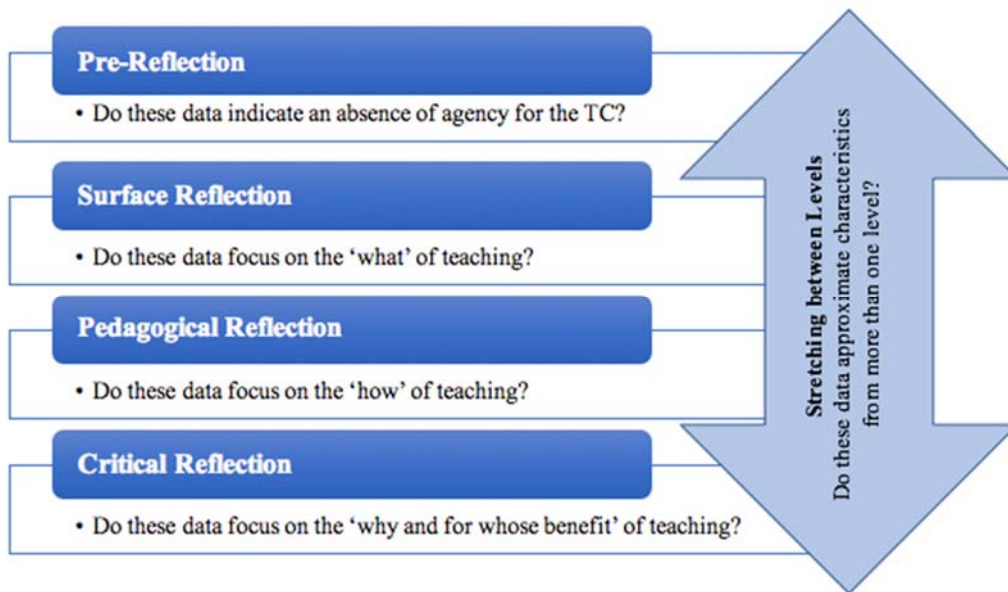



Figure 5. Questions that guided determination of reflection levels, including stretching.

Surface level stretch to pedagogical level In Lisa's digital story, she displayed images of a bulletin board she would create that included photographs of her future students' families as she said, "But most of all, I want my classroom to feel like a second home because we are there as a school family that is there to support them

through the journey of self-discovery." Here, she described specific pedagogical action she planned to take (creating a bulletin board), however her rationale for the pedagogical action was grounded in evidence from experience only, without a connection to theory or research (See Table 7).

Table 7

Examples of Surface-level Reflection Stretching to Pedagogical

Level of Reflection	Spoken	Image
	But most of all, I want my classroom to feel like a second home because we are there as a school family that is there to support them through the journey of self-discovery. - Lisa	

Our classroom layout will reflect
this by having a reading corner –
Tara (Frame 1)



An area for writers' workshop –
Tara (Frame 2)



Surface stretch to pedagogical

And a large rug for us to come
together – *Tara (Frame 3)*



Lisa's comments were not quite at the level of pedagogical reflection in which the teacher considers how teaching practices affect student learning, are guided by a pedagogical conceptual framework, and are supported by experience as well as being grounded in theory and research (Larrivee, 2008).





Tara stated, "Our classroom layout will reflect this by having a reading corner... an area for writers' workshop...and a large rug for us to come together." These statements were accompanied by three frames of still images. The first frame contained an image of a classroom library with pillows on the floor and posters on the walls; the second frame included an image of a bulletin board with genre names; while the third frame showed a large blue rug, with colorful polka dots, in front of a white board (See Table 7). Tara stretched from surface level to

pedagogical level of reflection when she mentioned how she and her students would use these areas ("for writer's workshop" and "for us to come together"). These frames of her digital story showed glimpses of the pedagogical level, rather than fully embodying all characteristics of that more complex level since she did not allude to nor mention the theory or research undergirding these practices.

Pedagogical level stretch to critical level In her digital story, Jennifer stated, "Ultimately, I want my students to be able to become anything they want to be. I want to inspire my students to cultivate a love for learning. I want to be a resource for my students." Jennifer combined this statement with an image of a teacher talking to a young student (See Table 8).

Table 8

Examples of Pedagogical-level Reflection Stretching to Critical

Level of Reflection	Spoken	Image
Pedagogical stretch to critical	Ultimately, I want my students to be able to become anything they want to be. I want to inspire my students to cultivate a love for learning. I want to be a resource for my students. - <i>Jennifer</i>	
	Take away what is really important in a student's learning. Instead I will evaluate my students – <i>Wendy (Frame 1)</i>	
	by assessing their work as learning is still taking place. This could be a writing journal or – <i>Wendy (Frame 2)</i>	
	a presentation given to the class. I feel that students' work such as this is more often than a test score – <i>Wendy (Frame 3)</i>	

Jennifer showed flashes of critical reflection when she acknowledged the “social...consequences of one’s teaching”, which is only one characteristic of critical reflection (Larrivee, 2008, p. 354). In her digital story, Wendy combined three frames that demonstrated stretching from pedagogical to critical reflection. The first frame showed an image of a student presenting information in front of a poster board, the second frame included a photograph of a student showing a recycling poster, while the image in the third frame showed a young student looking directly into the camera (See Table 8). While these images were displayed, Wendy stated,

...take away what is really important in a student's learning. Instead I will evaluate my students by assessing their work as learning is still taking place. This could be a writing journal or a presentation given to the class. I feel that students' work, such as this, is more authentic than a test score.

Wendy expressed the ways in which she would use assessments in her future classroom, which is indicative of pedagogical reflection. In her description of the importance of authenticity in assessment, she hints at some of the moral and ethical implications of testing within the larger social and political context when she stated students' work “is more authentic than a test

score.” In these frames of her digital story, Wendy’s words and images also approximated, or stretched, to the critical level.

Holistic Titles of Digital Stories

Given the multimodal nature of digital stories, it was necessary for us to return to the

whole story to give each digital story a holistic title that represented the overall complexity of reflection demonstrated by each TC. Figure 5 provides a visual overview of the holistic titles.



Figure 6. Holistic titles.

Of the ten digital stories, Irma’s demonstrated an overall pre-reflection level. Rebecca’s, Lisa’s, and Brittany’s digital stories were at a surface level of reflection when viewed holistically. We titled Felicia’s digital story surface stretching to pedagogical reflection. Allison and Tara’s digital stories were at the overall pedagogical level of reflection. Finally, Dana’s, Jennifer’s, and Wendy’s were primarily pedagogical reflections with stretches into the critical level.

Discussion and Implications

Through our analysis of TCs’ digital stories, we identified instances in which they traversed levels – stretched between two levels. It was these instances that provided sites of possibility in which we could take steps in our own practice to promote and support the development of reflective practitioners. Previous research has shown that through strategic and multifaceted facilitation of reflection, preservice and novice teachers can be supported to reflect at more complex levels (see, for example, Brookfield, 1995; Cole & Knowles, 2000; Fox, Campbell & Hargrove, 2011; Griffin, 2003; Hoover, 1994;

Pultorak, 1996; Rhine & Bryant, 2007; Russell, 2005; Lalor & Rami, 2014; Dervent, 2015; Gungor, 2016). This project has spurred us to think about future research projects that could extend our own learning about reflective practice.

Stretching Between Levels within Digital Stories as Sites of Possibility

As the TCs created their digital stories, they imagined their future classrooms and made visible their reflection at various levels and stretches between levels. These stretches serve as sites of possibility for growth as reflective practitioners for TCs and for facilitation for us, as teacher educators. This stretching highlights for us places in TCs’ digital stories in which they were beginning to reflect at more complex levels, which can also serve as launching points for discussions to facilitate movement. These sites of possibility, spaces in which TCs approximate higher levels of reflection are similar to Vygotsky’s (1978) Zone of Proximal Development. We can see instances of TCs beginning to approximate characteristics of the more complex level while not being quite there themselves, thus the need for a “more

knowledgeable other” to support them while they stretch between levels. These sites of possibility can be leveraged as we differentiate our instruction to meet the needs of TCs.

Implications

Given that reflection is clearly a dynamic and developmental process in which the TCs in our programs are often engaged, it is vital for teacher educators to recognize this and facilitate and support their movement to deeper more complex levels of reflection than the holistic titles of their digital stories may indicate. The imagining that takes place in the creation of a digital story can allow TCs to verge on these more complex levels of reflection and promote critical self-reflection (Matias & Grosland, 2016). Because digital stories are shaped by both the media used to create them as well as the experiences and beliefs of the author, they can serve as an effective mode for teacher educators to notice and subsequently facilitate and support movement between various levels of reflection (Pandya, 2014; Rish, 2013).

Implications for practice In response to our work, we recognize the need to differentiate instruction in order to meet the needs of TCs in developing their own reflective practice. Additionally, we suggest establishing protocols for small group instruction in courses that will allow TCs to interact and support each other in their development. Differentiated instruction better supports students in learning since it is a more focused way to deliver instruction (Tomlinson, 2014). Differentiated instruction allows an instructor to consider students’ current understanding of a topic and moving the students forward from there. This also allows instructors to take advantage of students’ background knowledge, prior experiences, and in our case, their own beliefs as demonstrated through the digital stories. By differentiating instruction for TCs, teacher educators can recognize and support the dynamic process of becoming a reflective practitioner. TCs who are already demonstrating reflection at

the pedagogical level need to engage in conversations that are different than TCs reflecting at the pre-reflection level. They need to be asked questions and engage in conversations with peers that are markedly different than the conversations involving TCs who are stretching from pedagogical level and critical level. In other words, by differentiating instruction teacher educators can take full advantage of the stretches as sites of possibility within groups as the key to moving them to more complex levels of reflection.

To achieve this differentiation, teacher educators can create small groups in which conversations regarding TCs’ reflection, as exhibited in their digital stories, and scaffold them as they create their own action plan. “The generally accepted position is that without carefully constructed guidance, prospective and novice, as well as more experienced, teachers seem unable to engage in pedagogical and critical reflection to enhance their practice” (Larrivee, 2008, p. 345). This setting allows TCs to see examples of their peers’ reflection and gain an understanding of the type of thinking that led to those levels of reflection.

Implications for research Based on these findings, further research on ways in which one might most effectively facilitate movement to more complex levels of reflection is needed. Additionally, it is important to examine to what degree TCs are able demonstrate complex levels of reflection on their own teaching practice in their actual rather than imagined classrooms. This may take place by asking them to reflect on recordings of their own teaching. It would also be beneficial to include a longitudinal aspect in this research to examine whether the complexity of reflection increases over time. This further research would contribute to the research on digital storytelling as reflective practice.

Conclusion

As researchers, we recognize that examination of these digital stories provides only small glimpses of TCs’ reflective practice and is

not meant to be generalized. These glimpses, however, have allowed us to recognize the importance of noticing the reflective practices of TCs to guide instruction in teacher education courses. This study underscores Larrivee's (2008) assertions that reflection is a complex and interweaving developmental process that is not necessarily linear. Based on our findings, we developed the concept of stretching between levels of reflection as potential sites of possibility

for facilitated movement to more complex levels of reflection, as an addition to Larrivee's work. As Larrivee and others, we take the position that "even novice teachers can deepen their level of reflection with powerful facilitation and mediation within an emotionally supportive learning climate" (p. 345). We recognize the importance of teacher educators supporting TCs in becoming critically reflective practitioners

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