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Unveiling identities: exploring emotional self-expression and bilingualism through digital storytelling in teacher education

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Abstract

This article examines how teachers can facilitate professional identity development through digital composition. We describe how two teachers use multimodal digital storytelling to reflect on their histories and advance their professional development. The study uses qualitative case study methods and employs a new analytical framework for analyzing multimodal products like digital stories. Data include semi-structured interviews, digital stories, and classroom observations. We analyzed the digital stories using a multimodal analytical framework informed by Systemic Functional Linguistics. This framework illuminates how the teachers express themselves along four dimensions: representational, interpersonal, compositional, and sociocultural. In both cases, the teachers gave a longitudinal view of their own development from childhood and described how their facility with the symbolic systems of dance and folk art was central to their sense of self. The opportunity to share these stories facilitated emotional self-expression and professional identity development.

Keywords Teacher education · Digital storytelling · Bilingualism · Professional identity development · Emotional self-expression · Systemic Functional Linguistics

Communication is fundamental to the human experience. Language is the preeminent tool that we use to communicate. Individuals communicate through semiotic domains, "set[s] of practices that [recruit] one or more modalities (e.g., oral or written language, images, equations, symbols, sounds, gestures, graphs, artifacts, etc.) to communicate distinctive types of meaning" (Gee, 2003, p. 18). The Mandarin language, microbiology, jazz music, and sculpture are examples of semiotic domains.

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Many have praised the arts, particularly, for providing powerful forms of self-expression (e.g., American Academy of Arts & Sciences, 2021; Arnold, 1986; Hanna, 2001). Some scholars have compared the arts to languages due to their communicative potential (e.g., Bannerman, 2014; Blacking, 1983; Eubanks, 1997; Hanna, 2001, 2008). The arts allow individuals to convey messages they may not have the words to express (Eubanks, 1997; Mills & Doyle, 2019).

Like the arts, storytelling provides opportunities for communication and self-expression (Chung, 2006; Skouge & Rao, 2009). Digital storytelling is growing in popularity due to user-friendly, low-cost multimedia editing software availability. A digital story is a short (~2 to 5 min) multimedia movie that combines visuals (e.g., images, pictures, video clips, text) and audio (e.g., narrative voiceover, music) (Kim & Jia, 2020; Kim & Li, 2021).

Digital storytelling has been used effectively in teacher education research to understand teachers' learning, professional identity development, and self-expression (Kim et al., 2020). Researchers have found that digital storytelling can benefit teacher education students by providing a means to express their emotions (Kim et al., 2020, 2021; Kocaman-Karoglu, 2016), to develop their professional

identities (Davis et al., 2017; Marín et al., 2018; Wu & Chen, 2020), to reflect more deeply on their learning (Kearney, 2009), and to enhance their cultural awareness (Humairoh, 2023). Few studies, however, have utilized a multidimensional, multimodal systematic framework that combines systemic functional and sociocultural analytical lenses to analyze teachers' digital stories.

We have built a comprehensive analytical tool derived from a systemic functional linguistic (SFL) approach to language (Kim et al., 2021). SFL provides tools to analyze language as a social semiotic system and speech's functions in social contexts. We extend Kress and van Leeuwen's (2006) use of SFL to analyze images, and we build on Unsworth's (2001) systemic and Serafini's (2015a, 2015b) sociocultural approaches. This qualitative study analyzes digital stories using our four-dimensional digital storytelling analytic framework (representational, interpersonal, compositional, and sociocultural constructs).

Our analysis shows how two teachers shaped and expressed their identities through their digital stories—which integrated the arts, language, and storytelling—in a teacher education course. Teacher education courses play a fundamental role in teachers' identity development (Beauchamp & Thomas, 2009; Suarez & McGrath, 2022). Teacher identity influences teacher decisions about curriculum, instruction, classroom management, and their own professional development (e.g., Beijaard et al., 2004; Hahl & Mikulec, 2018). Teachers' identity clearly impacts their teaching practices and attitudes, which ultimately influences students' outcomes (Suarez & McGrath, 2022).

We address two research questions:

(1) How do teachers use multimodality and digital composition to articulate their stories?
(2) How do teachers use the process of creating digital stories to reflect on themselves and advance their development?

The paper is organized as follows: first, we provide an overview of prior research and theory that has informed this study. Next, we discuss the research methodology and findings for each research question. Finally, we synthesize our findings into two key themes and offer concluding remarks.

Literature review

Our research draws from three major areas discussed in this section: (1) "Teacher identity development", (2) "Digital composition in teacher education", and (3) "Language and art as semiotic domains".

Teacher identity development

An individual's identity is relational, multiple, and culturally and historically situated (Hull & Katz, 2006). When social identity is enacted convincingly, an individual becomes a recognizable social community member (Kim & Vorobel, 2017; Lam, 2000). Identity is: "being recognized as a certain kind of person' in a given context" (Gee, 2000, p. 99). Individuals can also create "imagined identities" by envisioning themselves as part of other communities and thus shaping their sense of self (Kanno & Norton, 2003; Norton, 2013).

One salient aspect of identity for teachers is professional identity, which Beddoe (2013) describes as "the attitudes, values, knowledge, beliefs, and skills that are shared with others within that profession" (p. 27). Trede et al. (2012) identify three aspects of professional identity: (1) developing knowledge, skills, and values associated with the profession; (2) differentiating oneself from those outside the profession; and (3) identifying as a member of the profession.

Teachers' professional identity development is also connected to their emotional experiences (Beauchamp & Thomas, 2009; Zembylas, 2003). Negative emotions can adversely impact teachers' professional identity, even leading them to question their decision to become teachers (Timoštšuk & Ugaste, 2012). Positive emotions, in contrast, can facilitate teachers' problem-solving skills and creativity (Timoštšuk & Ugaste, 2012). Teachers may also struggle to fully express their emotions, as they strive to meet social expectations for professionalism in the field (Stark & Bettini, 2021). Thus, scholars have identified emotional expression, awareness, and reflection as important areas for teacher professional development (Derakhshan & Nazari, 2023; Song, 2016; Stark & Bettini, 2021; Zembylas, 2003). These skills can support teachers in using their emotions for empowerment (Zembylas, 2003).

In addition, professional identity can be transformed through community engagement (Trede et al., 2012) and through self-reflection and communication with others about their teaching (Marín et al., 2018; Miehls & Moffatt, 2000). The perception of themselves as professionals influences prospective teachers' effectiveness, behaviors, and wellness (Rus et al., 2013).

Language and culture are also related to identity. Genetti (2019) describes how "all of us use language as a means to build and portray our identities in the world around us" (p. 4). Indeed, bilingual individuals—i.e., "those who use two or more languages (or dialects) in their everyday lives" (Grosjean, 2010, p. 4)—may negotiate multiple aspects of their identity through the various languages they speak. Beyond formal schooling environments, children can learn

languages by interacting with elderly family members and others in their environment (Baker & Hengeveld, 2012). Language is thus a cultural resource. "Culture is encoded in the linguistic sign and its use" (Kramsch, 2014, p. 32).

The concept of "culture" has been heavily debated, and there is no consensus on its definition (see Keesing, 1974; Kramsch, 2014; White, 1959). We adopt Hanna's (2008) definition of culture as "the values, beliefs, norms, and rules shared by a group and learned through communication" (p. 492). Still, we add the recent emphasis on culture as fluid and ever-evolving, agreeing with Street that "culture is a verb" (Street, 1993, p. 25). Individuals use cultural resources to express their identities (Blacking, 1983).

Digital composition in teacher education

Storytelling is one means for teachers to express new ideas and reflect on experiences (Chung, 2006; Skouge & Rao, 2009). As Chung (2006) describes, "A story is a narrative and a mostly historical account of or about an incident, event, person, or condition involving who, when, what, where, and how the story evolves" (p. 35). By sharing stories with others, teachers can "make better sense of complex ideas, concepts, or information" (Chung, 2006, p. 35) and shape their sense of identity (Ochs & Capps, 1996). Ochs and Capps (1996) argue that the "narrative and self are inseparable," such that individuals' narration of their experiences can shape their subsequent emotional reactions and actions (p. 20).

The storytelling process can support teachers in "finding" their distinct voices (Sperling & Appleman, 2011). The concept of "voice" serves as "an engaging metaphor for human agency and identity" (Sperling & Appleman, 2011, p. 70). Literacy researchers can explore how individuals' voices are represented in their writing products and how these articulated voices reflect their identity development and the social–cultural environment (Shahri, 2018; Sperling & Appleman, 2011).

Multimodal forms of storytelling are increasingly available, providing multiple modes through which teacher education students can express their ideas and demonstrate their learning (Kress & van Leeuwen, 2006). Modes are "socially shaped and culturally given semiotic resource[s] to [make] meaning" (Kress, 2010, p. 79). Multimodal composition involves "activities that engage learners using digital tools to construct texts in multiple semiotic modes, including writing, image, and sound" (Hafner, 2015, p. 487). Digital stories are one type, combining visuals (e.g., pictures, images, animation, text) and audio (e.g., music, narrative voiceover) into a short multimedia movie (Kim & Jia, 2020; Kim & Li, 2021).

Digital storytelling offers many potential benefits to teacher education students like contributing to developing professional identity (Davis et al., 2017; Marín et al., 2018; Wu & Chen, 2020). In designing digital stories, prospective teachers "view, reflect, compose, and imagine versions of the teaching 'self'" (Tendero, 2006, p. 175). First, prospective teachers can use their digital stories for "deeper analyses of their experiences and appraisal of their learning" (Kearney, 2009, p. 4). As teachers reflect on their stories, they may uncover "layers of meaning" (Jamissen & Skou, 2010, p. 179) to better understand their experiences. Second, when designing their stories, prospective teachers can select multimodal resources that carry personal importance (Nelson, 2006) and reflect their distinctive identities (Norton, 2013). Third, digital storytelling provides opportunities for teachers to express their emotions (Kim et al., 2020, 2021; Kocaman-Karoglu, 2016) more creatively than through traditional storytelling formats (Robin, 2008). Fourth, a culturally informed approach to digital storytelling encourages prospective teachers to develop cultural awareness by examining their cultural biases in relation to their experiences (Humairoh, 2023). Finally, Coggin et al. (2019) find that digital stories can provide a means for teachers to reconcile multiple aspects of their identity; for instance, helping new teachers to reconcile their "idealized vision of being a teacher" with the personal and structural obstacles encountered in the field (p. 14).

At the same time, teachers may find it technically challenging to create digital stories using multimedia technologies (Carroll & Carney, 2005), and this could impede their emotional expression and identity development. It is critical to support teachers in the process of developing digital stories through both emotional encouragement and technical support (Carroll & Carney, 2005).

Language and art as semiotic domains

Languages are "functional system[s] of human communication" (Genetti, 2019, p. 3) and "systems of symbols that represent something" (Baker & Hengeveld, 2012, p. 14). Languages have three metafunctions: (1) to express ideas in logical ways, (2) to allow interactions between the audience and the writer, and (3) to formulate clear, cohesive messages (Brisk, 2015). Each language is a semiotic domain, meaning a "set of practices that recruits one or more modalities (e.g., oral or written language, images, equations, symbols, sounds, gestures, graphs, artifacts, etc.) to communicate distinctive types of meaning" (Gee, 2003, p. 18). Each semiotic domain has its own "design grammar," which Gee (2002) defines as "a set of principles or patterns in which materials in the domain are designed to communicate complex meanings" (p. 23).

The visual (e.g., painting, sculpture) and performing (e.g., dance, drama) arts are also semiotic domains that provide powerful experiences for self-expression (Arnold, 1986;

Hanna, 2001; Langer, 1966). Langer (1966) describes self-expression as "a spontaneous reaction to" something in our immediate environment, which "bespeaks the physical and mental state we are in and the emotions that stir us" (p. 7). Art offers an outward manifestation of internal feelings (Langer, 1966).

Some scholars have compared the arts to languages. Eubanks (1997) describes art as "a visual language" (p. 34). Pysanky, the art of Rusyn Easter Egg decoration, "means to write," evoking written language (Danko-McGhee, 1999, p. 307). Concerning dance, Hanna (2001) claims that "Movement is our mother tongue and primordial thought" (p. 40).

Art can also be combined with more traditional modes of literacy instruction to support language development (Eubanks, 1997). For example, students can use drawings to share ideas they might not have the words to express, and teachers or other community members can aid students in identifying new vocabulary (Eubanks, 1997). This literature review has underscored the importance of teacher identity development and highlighted how multimodal tools and the arts can foster self-expression.

Methodology

Employing a qualitative multiple-case study method (Merriam & Tisdell, 2015), we examined how two teachers created digital stories in a graduate course. The graduate online course entitled "Language Learners in Global Perspectives" is an elective course in an M.Ed. program in the United States. The course covers learning theories, language acquisition, bilingual education, and multimodal literacy, among other topics. All students were aspiring teachers in diverse disciplines.

Participants

Two teachers were selected via purposive sampling (Merriam & Tisdell, 2015) based on (1) their topics' clear relation to language or culture, (2) successful completion of the project, and (3) willingness to participate in the study. Jenifer, a female dance teacher, was Caucasian in her late-20s, and she taught students in private settings, from kindergarteners to adults. Stacey was a Caucasian female teacher who taught young burn survivors in an alternative school. We obtained Institutional Review Board (IRB) approval and obtained signed consent forms from all the participants.

Data collection

Data included (1) semi-structured interviews, (2) observations, and (3) the digital stories participants created as a final class project.

(1) Semi-structured interviews: One-hour semi-structured interviews were conducted with teachers after the course. To respond to the two research questions, we developed interview questions about teachers' backgrounds, feelings, reflections, perceptions, and experiences with the project and their digital story composition.
(2) Observations & field notes: One of the researchers was the class instructor. She observed these two teachers during the semester. All classes were recorded. During the last 4 weeks of the project, twice a week, observers engaged in informal 10-min conversations with students about their experiences during the project. Students shared their thoughts, and observers took notes. We used a researcher's journal as one source of data and in order to do member checks (Merriam & Tisdell, 2015).
(3) Digital stories: We used the digital stories as our primary data sources, building careful analyses of each digital story. The digital storytelling project was designed to offer teachers considerable autonomy within a guided support structure. Teachers freely chose the topics for their stories. Both teachers used iMovie to create the stories. Jenifer's digital story, titled "Language in Motion," was 5 min 7 s long, and Stacey's digital story, titled "Writing Ukrainian Pysanky: The Gift of Language and Culture in Symbols," was 3 min 35 s long. As they crafted their stories, teachers received technical support and ongoing feedback from their instructor and peers. The steps in the creative development process included (1) a brief topic overview; (2) a 400–500-word first draft providing an extended overview of the storyline, an outline, and plans for incorporating multimodal resources; (3) a second draft that demonstrated progress from the first draft; and (4) the final story.

Data analysis

To achieve a holistic understanding of students' digital storytelling experiences, we triangulated across the classroom observation notes, the interview data, and the final digital stories. We used different analytic approaches for the notes/interviews and the digital stories.

The interview and classroom observation data were analyzed inductively (Lincoln & Guba, 1985). We adopted initial codes by drawing on existing literature on digital stories and multimodal analysis (Kress & van Leeuwen, 2006; Unsworth, 2001). During the initial coding, we focused on the key concepts from our research questions, "feeling," "voice," "language," and "reflection." After the initial coding, we added open coding (Strauss & Corbin, 1990), allowing new codes to emerge from the data (e.g.,

discovering bilingualism and family language). All three team members analyzed data and engaged in an iterative coding process. We developed themes through our coding analysis, and then we grouped these themes under the two research questions.

We adopted the multimodal SFL analytical framework for digital stories developed by Kim et al. (2020, 2021) to analyze the digital stories. We used this approach to examine students' use of semiotic resources in their digital stories, drawing on techniques developed by Serafini (2015a, 2015b) and Unsworth (2001). The digital storytelling analytic framework examines four dimensions. The first three dimensions build on Unsworth's (2001) and Kress and van Leeuwen's (2006) systemic functional approach: (1) Representational/Ideational, (2) Interpersonal/Interactive, and (3) Compositional/Textual. The Representational/Ideational perspective focuses on (a) what happened in the story (e.g., the sequence of events), (b) where the story occurred, and (c) who or what was involved. From a representational perspective, we asked ourselves: Who are the participants involved in the story? What are the objects involved? How are they visually and verbally represented? The Interpersonal perspective examines the relationship between (a) the video content and the viewer and (b) the participants or objects in the story and the author. From an interpersonal perspective, we focused on the relationships between the author and the audience, as well as the relationships between participants within the video. For example, we examined camera angles and the direction of eye gaze within images, among other cues. The Compositional/Textual perspective addresses how the author assembles the information in the story and how the individual parts combine to create a coherent whole. The fourth dimension, Sociocultural/Ideological, builds on Serafini's work (2015a, 2015b) and refers to (a) the author's identity and position within social, cultural, and historical contexts and (b) the social context within which the story was created. Kim et al. (2020, 2021) provide a comprehensive overview of the framework. Our digital storytelling analysis was methodical. A visual transcript was developed for each digital story, including screenshots of each slide and information about corresponding narration, text, music, and transitions. Analysis of the four perspectives was done using these detailed transcripts.

We confirmed the trustworthiness of the study by using multiple data sources and two analytical methods—case study methods and multimodal analysis. This allowed us to triangulate across results and increase the validity of our findings (Lincoln & Guba, 1985). All three team members analyzed the data and engaged in the iterative coding process. Any discrepancies in interpretation were resolved through discussion. Follow-up interviews also allowed researchers to clarify emerging codes. These partial member-check interviews (Birt et al., 2016) allowed students to revise previous responses and address puzzles that had emerged in the initial coding.

Results

Expression through multimodality and digital composition

In this section, we use our digital storytelling analytical framework to address the first research question: "How do teachers express their stories with multimodality and digital composition?" To explore how teachers articulate their voices, emotions, and identities in digital storytelling, we organize our findings around the four dimensions of the framework: representational, interpersonal, compositional, and sociocultural. Each dimension illustrates how teachers make deliberate choices with multimodal resources (i.e., visuals, audio, and language) to craft and structure their stories, project certain kinds of relationships, and express themselves in distinctive ways. While our study does not delve deeply into linguistic details, understanding the linguistic meta-language enriches our interpretation of how teachers use digital storytelling for self-expression. We provide examples demonstrating how each story harnesses multimodal resources to convey its message across the four dimensions of our framework.

Representational perspective

The representational perspective explores how teachers used multimodal resources, including visuals, audio, and language, to depict key events in the story, where the story happened, the sequencing of events, and the participants involved.

Jenifer's case Jenifer's story, "Language in Motion," was about her experience as a dance teacher during the COVID-19 pandemic. In her 5 minutes and 6-seconds story, Jenifer discusses her development as a dancer from childhood to adulthood, compares the dance to a second language, explains how she managed to teach dance both remotely and in person during the pandemic, and expresses her vision for dance moving forward. Jenifer uses images, videos, music, and language to accomplish this representational work. We discuss each of these components in turn.

Jenifer used personal images and videos of herself as a dancer at various life stages—i.e., first learning dance as a child from her mother [e.g., Fig. 1–2], continuing her dance education [e.g., Fig. 2], and teaching dance as an adult [e.g., Fig. 1–3 through 1–5]. These images highlight the importance of dance throughout Jenifer's life and the key participants in Jenifer's developmental trajectory as a dancer (e.g.,

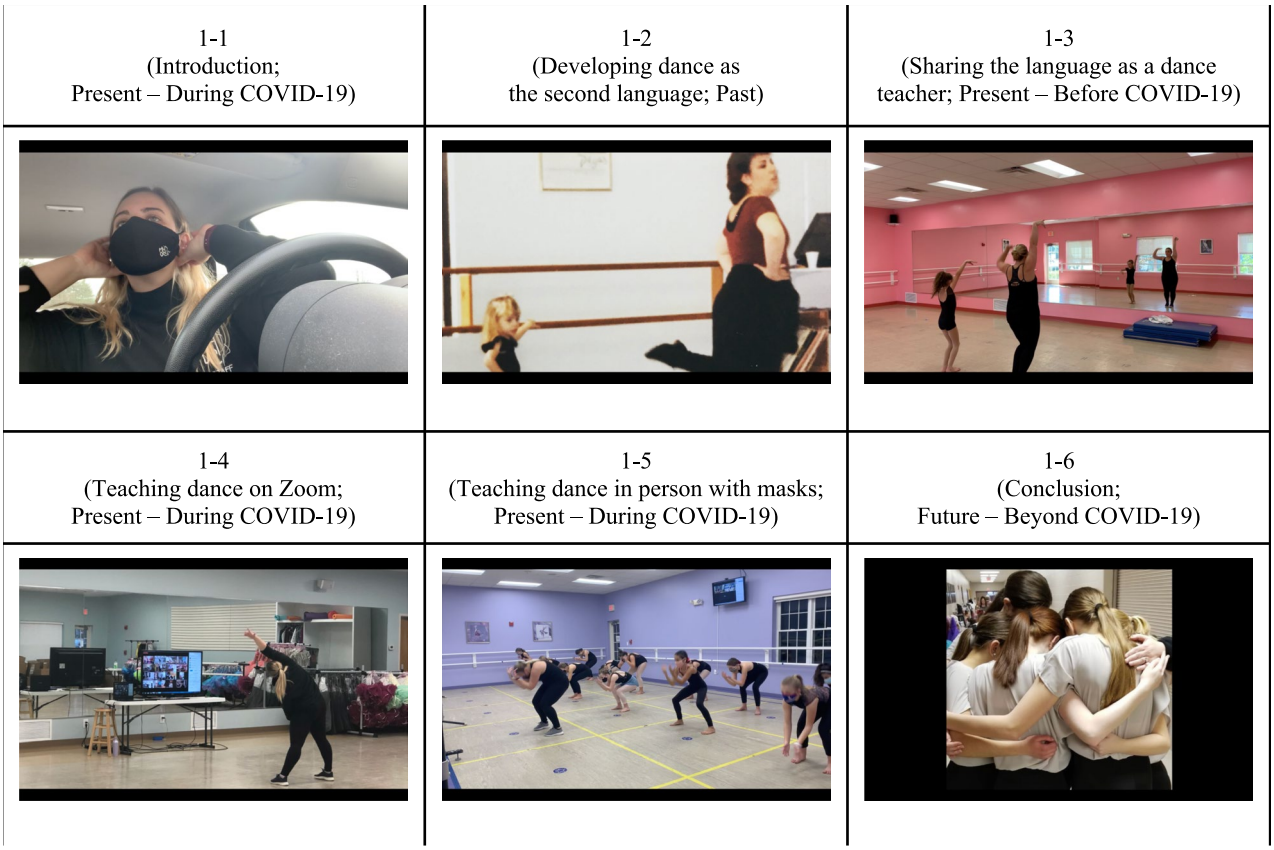

Fig. 1 Significant moments in Jenifer's story

Fig. 2 Expansion of Fig. 1–2 in Jenifer's story

her mother and her dance students). She describes multiple time points, such as early childhood and the COVID-19 era with remote dance classes via Zoom, and then going back to in-person teaching with masks. Jenifer's visuals of her adult engagement with dance focus on the COVID-19 pandemic, illustrating how this transformed how she engaged with her dance students. For instance, the pre-pandemic visuals [like Fig. 1–3] depict the inside of a dance studio and an indoor dance stage, whereas the pandemic visuals [e.g., Figs. 1–1, 1–4, and 1–5] show face masks, masking tape on the dance studio floor to maintain social distancing, and remote dance classes via Zoom. Jenifer also represented how she and her students created close connections despite this isolated era [Fig. 1–6].

The audio underscores the changing tone of the story. As the story begins, Jenifer sits in her car wearing a mask [e.g., Fig. 1–1]. The only sound is the eerie sound of her car being turned on, foreshadowing the pandemic-related challenges she will describe. Later in the video, Jenifer selected a song with a warm and soft guitar called "Keep Breathing" by Ingrid Michaelson. Jenifer felt that the song "conveys feelings of hope and perseverance" and that "there

is a light" amidst uncertainty. The song included words like "storm" and repetition of the phrase "All I/we can do is keep breathing."

Given the highly personal nature of her story, Jenifer primarily used first-person pronouns in her narration. She used "I" in the first half of her story when recounting her development as a dancer (e.g., "From the time I could walk, I spoke two languages"). However, she shifted to "we" when describing how the pandemic impacted her experience as a dance teacher (e.g., "When COVID changed the world, we found that our language needed to evolve"). Jenifer did not include written language except in the title.

Stacey's case Stacey's story, "Writing Ukrainian Pysanky: The Gift of Language and Culture in Symbols," is about the tradition of Pysanky, Ukrainian egg decorating. In her 3 minutes and 35 seconds video, Stacey discusses the meaning of Pysanky within her culture, how to create Pysanky, how to communicate specific messages through colors and symbols, and the gifting practices surrounding Pysanky. Stacey constructs her story using images, video, music, and language. Each component is described below.

Stacey's images and videos represent multiple time points, depicting how she learned Pysanky from her mother [e.g., Fig. 3–1] and how she carries forward the tradition with her family [e.g., Figs. 3–2 and 3–6]. By including an image of Stacey's daughter and her daughter's boyfriend at the end of the story [e.g., Fig. 3–6], she implies that her daughter will continue the tradition. Stacey's visuals also outline the process for creating Pysanky [e.g., Fig. 3–3 through 3–5] and explain the meanings of the symbols and colors used to decorate the eggs [e.g., Fig. 3–4].

As Stacey explains in her story, Pysanky is typically done around the Easter holiday. By this context, Stacey selected a sublime a cappella Easter song in old Slavonic called "Christ Is Risen." She chose the song, in consultation with her cousin, because it evoked memories of creating Pysanky with her family.

Stacey primarily used first-person singular ("I") and plural ("We") pronouns throughout her story. She described Pysanky as both "part of my culture" and "our tradition." Stacey ended the story with the collective "we," while describing the significance of gifting Pysanky (e.g., "We send good thoughts … and we wish for these thoughts throughout eternity"). She shifted to third-person pronouns when discussing the materials and methods involved in creating Pysanky (e.g., "Carefully one must choose colors and symbols") and second person pronouns when asking the audience to interpret the eggs' symbols and colors (e.g., "Can you see the colors and symbols and translate them into the good wishes put forth by our Pysanky artists?").

Stacey also used written captions and text in diagrams to accompany the narration [e.g., Figs. 3–3 through 3–5].

Fig. 3 Significant moments in Stacey's story

The text conveyed information about interpreting Pysanky's colors and symbols [e.g., Fig. 3–4].

Interpersonal perspective

The interpersonal perspective focuses on relationships (1) between the audience and the story and (2) among characters within the story. In our case, this involves how teachers developed and represented the interactive meanings of their visuals and established social relations in their stories.

Jenifer's case Jenifer used the sizes and angles of her visuals to communicate a detached attitude to her audience. Many visuals were long shots with oblique camera angles, positioning the audience as invisible onlookers and outsiders. In Fig. 1–5, for example, the participants are focused on their activities and do not make direct eye contact with the audience. The audience cannot look closely or squarely at them. The image of young dancers observing the activities of the dance studio from the doorway [e.g., Fig. 4–1] further positions the audience as outsiders and objective observers of Jenifer's story.

Jenifer's visuals also showed her intimate relationships with other dancers. For instance, in Fig. 4–2, Jenifer and her dancing partner are represented using an equal-level camera angle. Both dancers gaze at one another, while posed and dressed identically, establishing their equality and strong connection. Equal-level camera angles also communicate how Jenifer's students worked together and supported one another as a team, as they made the same body movements simultaneously side by side [e.g., Fig. 4–3] and engaged in a group hug [e.g., Fig. 1–6] that shows their close bonds.

Stacey's case Stacey broadly used close- or extremely close-up frames and frontal or overhead camera angles for her visuals, positioning the audience as involved. The audience could look at Stacey's family closely and squarely [e.g., Figs. 3–1 and 3–2]. The family members smiled and made direct eye contact with the audience, welcoming engagement and establishing imagined interpersonal relationships. When describing how to create Pysanky, Stacey invited the audience into her personal space by often showing her hands as she held objects in the visuals [e.g., Figs. 3–3 and 3–5].

Stacey's visuals also emphasized the positive relationships among the participants. In Fig. 3–6, for example, Stacey's daughter directly gazes at her boyfriend as she gives him Pysanky, and he returns a warm smile.

Compositional perspective

The compositional perspective focuses on the structure of digital stories and how teachers assemble multimodal resources to tell their stories coherently.

Jenifer's case Jenifer's story has three main segments: (1) an introduction with Jenifer starting a new day in the present [e.g., Fig. 1–1], (2) a main body highlighting Jenifer's dance experiences chronologically, from childhood to adulthood [e.g., Figs. 1–2 through 1–5], and (3) a conclusion showcasing Jenifer's feelings and her reflections about the future [e.g., Fig. 1–6]. The introduction begins with a black screen and a ticking car noise. Jenifer puts her mask on in the car (e.g., Fig. 5), and the black screen returns when Jenifer exits the car. Jenifer used the mask to foreshadow the importance of COVID-19 to her story, and she used the black screen to foreshadow her challenging experience during the pandemic.

Jenifer also aligned the body movements of characters dancing with the background music. She explained that she "know[s] how music looks" as a dancer. She used this expertise to "match the lyrical mood of the song" with the videos, selecting contemporary dance videos to "match" Ingrid Michaelson's "Keep Breathing."

Stacey's case Stacey's story has three segments: (1) an introduction that depicts Stacey's cultural attachment to Pysanky

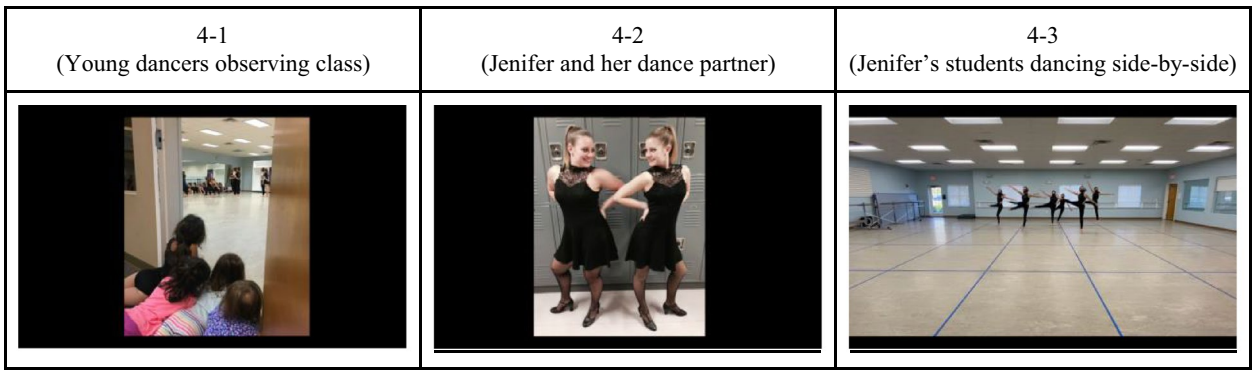

Fig. 4 Example visuals from Jenifer's story depicting social relations

Fig. 5 Expansion of Fig. 1–1 segment in Jenifer's story

[e.g., Figs. 3–1 and 3–2], (2) a main segment with instructions on how to create Pysanky [e.g., Figs. 3–3 through 3–5], and (3) a conclusion describing how Pysanky are shared in Stacey's family. The introduction includes moments in the past and present, while the main body and conclusion focus on the present.

Stacey supplemented her narration with written instructions on how to create Pysanky. For example, Stacey included the segment "Eggs represent rebirth as do the first flowers of spring and the Easter season," coupled with an image of differently sized eggs and the caption "chicken, quail and goose eggs" [e.g., Fig. 3–3]. This communicated to the audience that they could use any kind of egg to create Pysanky. Similarly, Stacey used diagrams to illustrate the meanings of colors and symbols not included in her narration [e.g., Fig. 3–4].

Sociocultural perspective

The sociocultural perspective focuses on the social, cultural, and political contexts in which digital stories are created.

Jenifer's case Jenifer is a Caucasian female student enrolled in a teacher education master's degree program in the northeastern United States. She grew up in New Hampshire. Dance is an important part of Jenifer's life. She learned dance from her mother as a young child. For more than 10 years, Jenifer has taught various genres of dance to students ages three and up. Jenifer's story was created in the fall of 2020, during the 1st year of COVID-19. The pandemic is repeatedly mentioned in Jenifer's story.

Stacey's case Stacey is a female student enrolled in a teacher education master's degree program in the northeastern United States. Stacey has taught diverse groups of burn survivors aged 7 to 17 at a respite camp in Pennsylvania. Stacey's story was created in spring 2020, during the early COVID-19 pandemic. The pandemic is not mentioned in Stacey's story, however.

Stacey is also a third-generation immigrant from Ukraine. She grew up in a family with a strong cultural tradition, Pysanky, passed down from mother to daughter. In her interview, Stacey described how the digital story provided a chance to reconnect with her Ukrainian heritage, feeling "a deeper appreciation for something that was getting lost." Stacey's story was composed before the Russian invasion of Ukraine.

Tracing family language with digital stories

This section discusses the second research question: "How do teachers use the process of creating digital stories to reflect on themselves and advance their development?"

Both teachers were identified as multilingual, and their digital stories presented dance and Pysanky as "languages." Jenifer called dance "language in motion," and Stacey called Pysanky a "language of symbols." In their interviews, both teachers described how they began to view dance and Pysanky as not only forms of communication but as actual languages during the process of creating their digital stories.

Jenifer's case

Jenifer claimed in her interview that calling herself "a bilingual because [she] speak[s] dance" came to "just make sense because it has been so much a part of [her] life." In her story, she described learning how to speak through both English and her body movements ever since she could walk. Jenifer's said:

> From the time I could walk, I spoke two languages. The first was English, the language I heard spoken around me. The second was one that my mother spoke, the one that she helped me to learn. I learned to speak through plié and pirouette … I learned to match sounds to my body movement.

Jenifer's images (e.g., Fig. 2) and videos captured the importance of dance throughout her life. Dance allowed Jenifer to express her feelings and to communicate with her mother and her students. "With my oldest students, I didn't even need words. I could begin a movement and they could respond by following my body's sentences and phrases." Sufficiently advanced students understood the meaning of Jenifer's dance movements.

Jenifer also described how her languages evolved during the pandemic to adjust to the changing needs of her students. When teaching remotely via Zoom, Jenifer needed more oral language to convey what she could previously share through movement. She described this as "One complete language alongside a second, a web of words and soul that became a new form of communication." Similarly, when students returned to in-person instruction, masks limited facial expression. Jenifer said: "We could no longer convey happiness in our expressions. We had to find it on our bodies. Sadness became evident in our pliés, in our contractions, in our resistance." Jenifer's narration captures the adaptability of her languages and how they changed across contexts.

Stacey's case

Stacey described how creating her digital story involved "finding connections of [her] past and [her] ancestry," which led her to see Pysanky as another language.

> At this point, I'm like a third generation, so the language is mostly lost. … But the coloring of the eggs has remained, which is really neat. It made me really go back and reflect, "Hey, I still have this connection from the past." Some of the eggs that I showed in the video were made by my mother, [who has] been dead for a while. [But] I have [her Pysanky], … [on which] her thoughts are represented … [and] remained solid. I can do the same when I make an egg for someone, and those [will be] my thoughts.

Pysanky's language is used through colors and symbols, allowing Stacey's mother to continue communicating with her after death through the symbols on the egg. Stacey embraces the idea of continuing this cultural tradition with loved ones.

Stacey included a diagram in her video which explains what various colors and symbols mean. For example, red indicates bravery, hope, and enthusiasm, while blue represents the sky and good health. Animals represent prosperity, while trees denote health, strength, and a long life. She then asked her audience: "Here are some of our Pysanky designs. Can you see the colors and symbols and translate them into the good wishes put forth by our Pysanky artists?" This question positions Stacey as a teacher who is encouraging her audience to practice their translation skills, treating Pysanky as a language.

Discussion

The digital storytelling project allowed Jenifer and Stacey to share stories that mattered to them personally. This section describes two key themes: (1) how digital storytelling provides a means for emotional self-expression and identity development and (2) the relations between bilingualism and the arts. Kim et al.'s (2020, 2021) multimodal SFL framework played a critical role in identifying these themes. The framework's integration of systemic functional and sociocultural elements of digital stories emphasizes how the storyteller's sociocultural background influences their use of multimodal resources. The framework allows analysts to make connections between the digital story and the author's self-expression, identity development, and reflections about their cultural background and artistic talents.

Digital storytelling for emotional self-expression and identity development

Through digital storytelling, teachers select and assemble multimodal resources to express their emotions (Kim et al., 2020, 2021; Kocaman-Karoglu, 2016; Robin, 2008) and their identities (Norton, 2013). Our multimodal analytical framework is a valuable tool for seeing how this is done representationally, interpersonally, compositionally, and socio-culturally. Jenifer focused on expressing her complex emotions during the COVID-19 pandemic and its impact on her identity as a dancer and dance teacher. Stacey focused on the happiness and joy of creating Pysanky and her identity as a Ukrainian mother and daughter. We review each teacher's self-expression and identity development here.

Jenifer's emotions were complex, shifting along with the complexities of the pandemic. In her introduction, she used black screens and eerie silence to foreshadow the challenges and feelings of "doom and gloom" during COVID-19. Other images remind the audience of the pandemic, such as masks on people's faces, dance classes held remotely via Zoom, and masking tape on the dance studio floor to enforce social distancing. These visuals remind the audience of what was lost—e.g., facial expressions and physical closeness. Toward the end of her story, however, Jenifer conveyed a feeling of hope by using visuals that captured her and her students' determination to keep dancing on Zoom, in the studio, and in an outdoor dance space despite the challenges. Through equal-level camera angles and images conveying affection (e.g., hugging and smiling), Jenifer expressed her positive emotions toward her students, highlighting the strong bonds they formed. Jenifer communicated "resistance" against the burdens of COVID-19 and "resilience" of overcoming the difficulties through interpersonal connections and community building. This was coupled with the hopeful tone of the background music, with its warm and soft guitar sounds (de Leeuw & Rydin, 2007).

The emotional highs and lows of being a dancer and a dance teacher during the pandemic are vivid in the story, and they derive their power in part from the centrality of dance to Jenifer's identity. Through various compositional

choices, Jenifer communicated her strong identification as a dancer and dance teacher. For example, she incorporated personal images into her story in a way that Hoskins (2001) describes as "memory devices" because they spark engagement in "a process of active construction of personal history" (de Leeuw & Rydin, 2007, p. 460). Jenifer used images of herself in dance costumes as a child, adolescent, and adult to depict her lifelong participation in dance and her ability to communicate with others through dance. She also used two parallel images, one with herself as a child learning dance from her mother and a second as an adult teaching dance, communicating how dance has been passed down from generation to generation.

Further, her choice of long-shot framing with oblique camera angles established a detached attitude for the audience, positioning them as outside observers. This interpersonal perspective (Kim et al., 2021) also reflects Jenifer's identity as a dancer, in that she is the performer, and her viewer is the often-invisible audience. Finally, given her dance expertise, it was important that the dancers' choreography in the story "match" the background music.

Stacey's emotional expression centered on the warmth and happiness involved in gifting and receiving Pysanky. These feelings are evoked by the uplifting music and the photos depicting the intimate relationships in Stacey's family. For example, Stacey used visuals of her creating Pysanky with her daughter and her daughter's boyfriend at home, while explaining how Pysanky creators pray for and think about those receiving their gifts. Using images of her mother's Pysanky, Stacey communicated her ongoing closeness and warm feelings toward her mother. She felt her mother was still communicating with her through the colors and symbols on her eggs. Echoing Gibbons et al. (2011), Stacey expressed in her interview how she found "a deeper appreciation for something that was getting lost" (i.e., Pysanky) through the digital storytelling process.

Her compositional choices also expressed Stacey's identity as a Ukrainian mother and daughter. Her images have close-shot frames and frontal or overhead camera angles. This interpersonal perspective (Kim et al., 2021) aligns with the intimacy of Pysanky and allows the audience to feel connected to Stacey's Ukrainian heritage and family. Stacey used images of her mother's family in black and white to signify earlier times in her family's history with Pysanky, while using color images to show her daughter and her daughter's boyfriend. These pictures communicate the importance of keeping the Pysanky tradition alive over the generations, with Stacey being the generational glue holding the tradition together. Representing family history through these media allows immigrant families to share their history and ethnic identities and connect to their heritage (de Leeuw & Rydin, 2007).

Digital storytelling composition can be a powerful form of self-expression. Both stories offer a snapshot of Jenifer and Stacey's emotional states (Langer, 1966) at an essential stage in their professional development as they further define their "selves" as teachers (Ochs & Capps, 1996). The multimodal SFL analytic framework helped us show how both teachers used multimodal resources to express their emotions, and their compositional decisions communicated crucial aspects of their identities.

Discovering bilingualism through the arts

The digital storytelling project provided an opportunity for deep reflection. One exciting outcome was how both Jenifer and Stacey began to view themselves as "bilinguals" through the languages of dance and Pysanky. Jenifer claimed that dance was a "language in motion," while Stacey defined Pysanky as a "language of symbols."

Jenifer and Stacey's comparison of these arts to languages rests on their communication ability. This raises more significant questions about what "counts" as language. Language is "a functional system of human communication" (Genetti, 2019, p. 3) with three metafunctions: (1) to express ideas, (2) to allow communications between the audience and the author, and (3) to express clear, cohesive messages (Brisk, 2015). Dance accomplishes this through choreography, aligning movement to music, with different dance styles and movements conveying different messages. Pysanky accomplishes it through colors and symbols.

Others have argued that visual (e.g., Eubanks, 1997; Mills & Doyle, 2019) and performing arts (e.g., Arnold, 1986; Bannerman, 2014; Blacking, 1983; Hanna, 2001, 2008) are similar to languages. Eubanks (1997) describes art as "a visual language, with receptive and expressive components, in which ideas are both spoken and heard" (p. 34). Mills and Doyle (2019) critique traditional notions of literacy, which devalue the arts as a form of language, and they describe how visual arts are an essential part of communication among Indigenous People in Australia such that there are often no English words to convey the multidimensional expressions in Indigenous languages.

Pysanky can be considered a visual art, and *dance* is a performing art. Hanna (2001) claims that "movement is our mother tongue and primordial thought" (p. 40). Blacking (1983) adds that the "evolutionary importance [of dance] as a communication is borne out by the fact that it has not been superseded by verbal language" (p. 89). Dance uses its own "grammar" and communicates messages that are optimally presented non-verbally (Blacking, 1983). Hanna (2001) compares the vocabulary of verbal language to dance steps and the grammar in verbal language to considerations about how to choreograph a particular flow of movements. Blacking identifies "the core of the dance experience" as

"the transfer from verbal to non-verbal discourse" (1983, p. 93). In her story, Jenifer said: "With my oldest students, I didn't even need words. I could begin a movement and they could respond by following my body's sentences and phrases." Jenifer's statement echoes Hanna and Blacking's discussion of the parallels between the "grammar" of dance and verbal language.

Just as culture is reflected in language (Kramsch, 2014), the arts also reflect their cultures. Blacking (1983) describes dance as "culturally encoded" (p. 95), meaning that dance is a "mirror of society" (Kassing, 2007, p. 5). Hanna (2008) explains that "culture gives meaning to who dances what, why, how, when, where, and with and for whom" (p. 492). Dance can inspire cultural change by "engendering visions of alternative possibilities" through choreography that invokes "messages of grievance and remedy" about the state of society (Hanna, 2008, p. 492).

Jenifer's story may be viewed as a "message of grievance and remedy" (Hanna, 2008, p. 492), in which she takes the challenges of the pandemic and responds with an inspiring message. Jenifer accomplishes this by modifying the language of dance throughout the pandemic. She "learned to speak" the language of dance as a child from her mother "through plié and pirouette." Before COVID-19 Jenifer "could begin a movement" and her students "could respond by following [her] body's sentences and phrases," but when teaching remotely Jenifer found that "dance was suddenly something that required more language." She described this new language as "a web of words and soul" that fused verbal language with dance. When students returned to in-person dance classes wearing masks, the movement gained even more importance than it had pre-COVID since facial expressions mainly were covered. Jenifer described how emotions "became evident in our pliés, our contractions, our resistance."

In Stacey's case, Pysanky's language also conveys "messages of grievance and remedy" through its symbolism and colors (Hanna, 2008, p. 492). For instance, the Pysanky creator can message hope and good health through their eggs. Thus, Pysanky, like dance, can "[engender] visions of alternative possibilities" (Hanna, 2008, p. 492).

Jenifer and Stacey's cases illustrate how *dance* and *Pysanky* are "languages." The digital storytelling process allowed Jenifer and Stacey to see the importance of these languages to their respective identities, allowing them to adopt a bilingual identity. Genetti (2019) contends that "All of us use language as a means to build and portray our identities in the world around us" (p. 4). Bilingual individuals—i.e., "those who use two or more languages (or dialects) in their everyday lives" (Grosjean, 2010, p. 4)—use multiple languages to express their identities. The pandemic became an opportunity for the fusion of Jenifer's two languages, as she learned to negotiate verbal language and dance into "a web of words and soul." Jenifer better understood her identity and felt better prepared for future challenges. Stacey found a renewed appreciation for cultural heritage, which was embodied in the "language" of Pysanky. The art of Pysanky became a means of communication that could outlive verbal language in that Stacey could look at the eggs her mother gave her at any time and fondly remember her mother's messages.

One caveat is warranted. Although Jenifer and Stacey identify as bilinguals and view art as one of their languages, their identity as bilinguals in the broader context of the United States likely carries a different meaning than other bilinguals. For example, Jenifer and Stacey are professionals in graduate-level programs with a strong command of the English language. Their experience will differ from adult immigrants with emerging English skills or immigrant school-aged children learning English. This does not negate Jenifer and Stacey's identity as English/arts "bilinguals," but it underscores identity's socially situated nature (Hull & Katz, 2006). There is not one universal bilingual experience or identity.

Moreover, language is not static, and thus the term "bilingual" could, over time, undergo semantic change (Akmajian et al., 2001; Traugott, 2017). One type of semantic change is "generalization," in which the meaning of a word extends to other contexts (Traugott, 2017), which might apply to Jenifer and Stacey's use of "bilingual" to apply to arts-related communication.

The arts have been underappreciated considerably in the United States educational system (American Academy of Arts & Sciences, 2021; Hanna, 2008). Efforts to uplift the arts and recognize their potential to support literacy should be viewed positively, even if they are not complete languages.

Pedagogical implications

Traditionally bilingualism has been framed in terms of spoken and written language proficiency focusing on linguistic competencies in two or more languages (García & Wei, 2014). However, the cases presented in this study challenge and expand this definition by demonstrating how other semiotic systems, such as dance and visual art, function as legitimate semiotic resources. Jenifer's conceptualization of dance as a "language in motion" and Stacey's framing of Pysanky as a "language of symbols" reveal how educators can use multimodal literacies to communicate meaning and express identity. This redefinition of "bilingualism" aligns with recent scholarship on translanguaging (Vogel & García, 2017), which emphasizes the fluid use of linguistic and semiotic resources for meaning-making. Teacher education programs can leverage these insights by incorporating

pedagogical approaches that recognize and validate diverse forms of communication beyond traditional verbal and written modes, encouraging future teachers to foster inclusive multimodal learning environments.

This broader view of bilingualism has direct implications for how teachers approach language learning and literacy instruction in the classroom. Recognizing that language is not confined to words but extends to multiple semiotic domains enables teachers to design instruction that values students' full range of communicative repertoires. For instance, educators could integrate movement-based storytelling, visual narratives, or culturally significant artistic expressions into literacy lessons, thus providing multilingual learners with alternative pathways to demonstrate understanding and engage with content (Smith & Murillo, 2023). This pedagogical shift can be especially crucial in linguistically diverse classrooms, where students may not yet have full proficiency in the dominant language of instruction but can nonetheless communicate complex ideas through other modalities. By equipping teachers with strategies to recognize and build upon multimodal literacies, teacher education programs can prepare educators to support all learners, particularly those from culturally and linguistically diverse backgrounds.

The study's findings also highlight the importance of fostering identity-affirming pedagogies that acknowledge bilingualism as a dynamic and evolving process. In an era in which educational institutions increasingly serve multilingual and multicultural student populations, teacher education must emphasize the role of identity in shaping teaching practices. Future teachers should be encouraged to reflect on their own linguistic and cultural identities and consider how their experiences influence interactions with students. The cases of Jenifer and Stacey illustrate how identity exploration through digital storytelling can not only deepen teachers' self-awareness but also empower them to create more inclusive classrooms that celebrate diverse linguistic and cultural heritages. Given the growing need for culturally responsive teaching (Paris & Alim, 2017), integrating digital storytelling into teacher preparation programs can serve as a powerful means for fostering educators who view bilingualism as an asset rather than a challenge. This approach ultimately contributes to a more equitable education system, where all forms of communication and identity expression are valued and nurtured.

The study's exploration of digital storytelling in teacher education underscores the crucial role of teacher professional identity in shaping instructional practices and long-term career development. Professional identity is not a static construct but rather a dynamic process influenced by personal experiences, emotions, cultural backgrounds, and pedagogical beliefs (Beauchamp & Thomas, 2009). In the cases presented, Jenifer and Stacey engaged in reflective storytelling, allowing them to explore and articulate their evolving professional identities. Jenifer's story of dance as a "language in motion" and Stacey's narrative of Pysanky as a "language of symbols" highlight how personal and cultural histories inform pedagogical choices. These cases show that when teachers critically engage with their own identities, they are more likely to develop authentic, student-centered teaching approaches. Integrating digital storytelling into teacher preparation programs can provide future educators with opportunities to reflect on their professional trajectories, strengthening their self-efficacy and commitment to teaching.

The implications of fostering strong teacher professional identity extend further into classroom practice. Teachers who possess a well-defined professional identity are more confident in their pedagogical decision-making, better equipped to handle challenges, and more likely to remain in the profession (Hong, 2010). By engaging in reflective practices like digital storytelling, teachers can develop a deeper sense of purpose, resilience, and adaptability—qualities essential for navigating the complexities of modern classrooms. Furthermore, a strong professional identity enables educators to create inclusive learning environments that recognize and value students' diverse identities. When teachers see their own identities as multifaceted and evolving, they are more likely to foster similar self-exploration among their students, promoting a more personalized and meaningful learning experience.

Given the increasing challenges facing educators today—ranging from sociopolitical debates over curriculum content to the demands of culturally responsive teaching—teacher education programs must prioritize identity development as a core component of training. Encouraging teacher candidates to engage in identity work through creative methods, such as digital storytelling, can provide them with tools to navigate these challenges with confidence and purpose (Lasky, 2005). The current study contributes to this discourse by demonstrating how reflective, multimodal composition can serve as a bridge between personal experience and professional growth. Future research should continue to explore the impact of teacher identity development on instructional practices, student engagement, and long-term teacher retention. By embedding identity formation within teacher education, institutions can cultivate educators who are not only skilled practitioners but also reflective, culturally responsive, and emotionally resilient professionals.

Limitations

One limitation of this research study is the relatively small sample size. However, although the sample size is small, these case studies usefully illustrate digital storytelling

and how our multidimensional, multimodal framework can illuminate the important work that digital stories often do. Furthermore, the purposively selected sample allowed for a deep analysis of each digital story. Future research could explore digital storytelling among teachers in additional teaching contexts and across diverse teacher identities (e.g., with respect to gender, race/ethnicity, linguistic background), and it could explore how digital storytelling might be used to foster teacher professional development outside the university.

Conclusion

Jenifer and Stacey's digital stories and subsequent reflections show how digital stories can be useful in teacher education courses and beyond. The stories provided an avenue for these teachers to communicate their emotions through multimodal compositional choices (Kim et al., 2020, 2021; Kocaman-Karoglu, 2016; Robin, 2008) and to discover new aspects of their identities (Norton, 2013).

Jenifer's emotional expression centered on the complexity of her feelings as a dancer and dance teacher during the COVID-19 pandemic, coupled with her positive connection toward her mother and her students through dancing. Stacey focused on her happiness when creating Pysanky and feeling connected to her Ukrainian heritage and her family. These emotions led both teachers to uncover new "layers of meaning" (Jamissen & Skou, 2010, p. 179) about their cultural identities (Humairoh, 2023). Jenifer and Stacey began to view themselves as bilinguals through the languages of dance (i.e., "language in motion") and Pysanky (i.e., "language of symbols").

These findings underscore the centrality of emotions in shaping teachers' identity (Beauchamp & Thomas, 2009; Timoštšuk & Ugaste, 2012; Zembylas, 2003). Indeed, Stark and Bettini (2021) believe that "emotional expression [should be recognized] as a pedagogical competency in teachers" (p. 11). We thus recommend that faculty members recognize teacher education students' emotions by including creative assignments that foster emotional expression.

Digital stories allow students to express emotions like these. The process of creating such stories thus provides opportunities both for learning and for personal development.

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