Document Type: Research Paper

Digital Storytelling (DST) in Nurturing EFL Teachers' Professional Competencies: A Qualitative Exploration

Seyyedeh Fahimeh Parsaiyan[1], Samira Mansouri[2]

[1]Assistant Professor, Department of English, Faculty of Literature, Alzahra University, Tehran, Iran. f.parsa@alzahra.ac.ir.

[2]MA in TEFL, Alzahra University, Tehran, Iran. s.mansouri.1981@gmail.com

Abstract

The implications of Digital Storytelling (DST), an approach that combines narratives with digital multimedia, have been extensively examined in the context of second and foreign language learning and teaching over the past decade. Nevertheless, research focusing specifically on how the design and implementation of DSs contributes to the enhancement of professional competencies of English as a Foreign Language (EFL) teachers remains limited. This qualitative, multiple-case study sought to address this gap by exploring the competencies nurtured by nine Iranian female language teachers through designing DSs for their classrooms. The participants attended a practical, multi-session DST course one of the researchers conducted. Data were collected through various sources, including observation of the workshop sessions, collection of DSs created by the teachers, their reported teaching practices, and insights gathered from individual interviews and focus-group discussions. The thematic analysis of the data, conducted through an iterative coding process, revealed recurring categories that highlight the teachers' nurturing of professional competencies across multiple domains: artistic, socio-cultural, technological, pedagogical, and psychological. The study's findings highlight the need for language teachers to embrace innovative approaches to foster their professional growth and pedagogical practices. It also reiterates the significance of incorporating technology into Second Language Teacher Education (SLTE) programs to equip teachers with the demands of the digital age.

*****Corresponding Author:** Seyyedeh Fahimeh Parsaiyan   **Email:** f.parsa@alzahra.ac.ir.

Introduction

Story narration is a fundamental aspect of human life, playing a vital role in our understanding of ourselves and the world. It serves as a powerful tool for transmitting knowledge, traditions, beliefs, and history to future generations (Lambert, 2002; Raffone, 2023; Robin, 2008 & 2016). Pedagogically, storytelling has long held a special place in English Language Teaching (ELT), regardless of learners' age and background (e.g., Anilan et al., 2018; Hung et al., 2012; Nami & Asadnia, 2024; Tendero, 2006). The rapid advancement of information and communication technologies in this digital age has transformed traditional spoken and audio-recorded tales into modern Digital Storytelling (DST), which combines narratives with digital multimedia such as photos, videos, and audio (Ohler, 2006; Linville & Vinogradova, 2024; Raffone, 2023). DST enables individuals to tell their own stories through the creative use of multimedia objects. These "processes involve a high degree of information literacy, critical thinking, and creativity, and the results reflect the storyteller's knowledge, experiences, values, and imagination" (Park, 2019, p. 64).

As an art and pedagogical tool, the implications of DST from K-12 to higher education, particularly in second and foreign language learning, have been extensively investigated over the past decade (e.g., Abdolmanafi-Rokni, 2014; Stanley, 2018). A growing body of literature has documented numerous benefits of deploying DST in English as a Foreign Language (EFL) teaching and learning context. Student-based DST (Robin, 2008) has demonstrated its effectiveness in enhancing language learners' productive and receptive skills (e.g., Kim, 2014; Lee, 2014; Nami & Asadnia, 2024; Zarei & Navidinia, 2024), willingness to communicate (e.g., Huang, 2023; Luan et al., 2024; Shen et al., 2022), problem-solving abilities, and information-gathering skills (e.g., Hwang et al., 2023; Rahimi & Yadollahi, 2017). Improving voice, agency, interest, creativity, and engagement of language learners through involvement in learner-centered, experimental, and emotional learning (e.g., Chen, 2024; Hava, 2021); developing the 21st-century skills like information literacy (Dogan & Robin, 2008); and practicing deeper levels of reflection and self-representation (Stenhouse & Schafer, 2019); inter alia, have been reported as other advantages of deploying DST in EFL classrooms. Furthermore, the relatively low cost required to learn and create multimodal digital narratives adds to the merit of DST (Heo, 2009; Linville & Vinogradova, 2024).

Despite the extensive research on DST in various domains, there is limited research on its application in second language teacher education (e.g., Røkenes, 2016; Sancar-Tokmak & Yanpar-Yelken, 2015). Emerging scholarly discourse suggests that familiarity with DST software and the actual practice of developing classroom content could significantly contribute to English language teacher development (Çetin, 2021; Nami, 2020; Park, 2019; Stenhouse & Schafer, 2019). For instance, studies by Røkenes

(2016), Aşık (2016), Çetin (2021), and Yu and Wang (2025) have highlighted the transformative potential of DST in fostering teachers' professional growth, particularly their digital literacy skill, which in turn influences their pedagogical practices and their perceptions regarding the affordances of multimodal composing. Nevertheless, despite these insights, studies exploring how language teachers' engagement in DS production enhances their professional competencies are scarce, particularly within the Iranian context of English teaching. This area warrants further investigation to fully understand and leverage the potential benefits of DST in language teacher education.

While competence has been extensively defined as "knowledge, skills, attitudes, and values that constitute complex abilities to function effectively" (Wang & Maa, 2022, p. 13), teachers' professional competencies in the digital era encompass the abilities, skills, and knowledge required for educators to effectively utilize technology for educational purposes alongside their teaching-profession skills (Instefjord & Munthe, 2017). The existing literature delineates various dimensions of teachers' professional competencies, including pedagogical, content, and technological knowledge, as demonstrated in the TPCK model proposed by Mishra and Koehler (2006). Additionally, professional digital competencies encompass attitudes toward technology use, an awareness of the cultural context of technology application, a critical approach to technology integration, and a commitment to professional engagement (Skantz-Åberg et al., 2022).

With the thriving of Computer Assisted Language Learning (CALL), the necessity of enhancing language teachers' professional digital competencies has become more pronounced. Teacher educators are also urged to use technology effectively and cultivate this competence among language teachers. Consequently, a significant focus of research over the past decade has been on investigating the professional growth of language teachers following their participation in training technology-oriented programs or practical courses, as well as examining the challenges and psychological and contextual barriers they encounter when integrating technology into their teaching environments (Kukul, 2024; Scherer et al., 2019; Wang et al., 2018).

While the intersection of technology and language teachers' professional competencies can be approached from various angles, this study aims to explore a specific aspect. This study sought to delve into the professional competencies of the participants of the study, a cohort of English teachers who attended a practical multi-session workshop on DST, nurtured in their process of creating and implementing DSs.

There are various reasons underscoring the importance of this research. At one level, the emergence of new generations of students, who are "surrounded by computers, the Internet, mobile phones, iPods, digital cameras, and video games since birth" (Stanley, 2018, p. 6), has urged language teachers and materials developers to incorporate technology into language teaching contexts in pedagogically valuable and practical ways. Nevertheless, "paradoxically, teachers have lived a digitally saturated life, but may not

have the preparation to integrate technology in their classrooms or emphasize it in their teaching" (Stanley, 2018, p. 6); they "feel that they lack the required skills or training to design and deliver multimodal practices into their instruction" (Yi & Angay-Crowder, 2016, p. 989) or are "less comfortable and confident with technology than their students" (Mishan & Timmis, 2015, p. 78).

In addition, the advent of technology and its ongoing innovations have complexified the conceptualization of language teaching materials. This shift encompasses a transition from conventional print materials to multimodal and digital resources and a shift from static to dynamic learning materials (Mishan, 2022). The crisis caused by the COVID-19 disease in early 2020, which led to replacing face-to-face classes with remote education around the world, also accentuated the role and importance of developing digital materials (Raffone & Gómez, 2022). Furthermore, "the authorship paradigm" has foregrounded the role played by language teachers in developing classroom contents and materials (Mishan, 2022). Teachers are encouraged to build confidence in harnessing and exploiting the vast number of resources and "authoring tools" that are available on the Internet to prepare pedagogically sound and socio-culturally relevant teacher-generated/designed content and rely less on ready-made materials like globally-distributed commercial course books (Bouckaert, 2019). Given that, in the field of ELT materials development, there has been a surge of interest in the development or professional growth of language teachers as novice materials developers while developing their classroom materials (e.g., Bouckaert, 2019; Brandão, 2018).

In this context, Digital Multimedia Composing (DMC)—which integrates linguistic, visual, auditory, and gestural modes of communication (Kessler & Marino, 2023)—has emerged as a pathway for enhancing language teachers' professional growth (Li, 2020; Yi & Angay-Crowder, 2016). This study aimed to contribute to the evolving discourse by examining how language teachers' active engagement in DST, a recognized genre of DMC, can nurture their professional competencies. The following research question guided the study:

> What professional competencies do the English teachers participating in this study nurture through their engagement in creating pedagogical DSs?

Literature Review

Teachers' Professional Competencies

Technology has long played a role in language education and teacher training. The emergence of the COVID-19 pandemic, which necessitated a shift from traditional face-to-face classes to online modalities, coupled with advancements in digital technologies, has underscored the critical need to enhance language teachers' technological knowledge. Consequently, the enhancement of teachers' digital literacy or digital competency—encompassing both the technical and soft skills required to understand and utilize digital

technologies such as software applications effectively, creatively, and prudently for both personal and professional aims (Dudeney & Hockly, 2016; Instefjord & Munthe 2017)—has gained heightened significance in teacher education programs (Son, 2018; Thomas & Sadeghi, 2023).

Recent technological-pedagogical models, such as Mishra and Koehler's TPACK framework (2006), which emphasizes the interplay of Technological, Pedagogical, and Content knowledge, and Instefjord and Munthe's (2017) professional digital competence framework, which underscores the integration of technological competence, pedagogical compatibility, and social awareness, highlight that mere familiarity with technological tools is insufficient for language teachers. Instead, teachers should align technology with pedagogical objectives and effectively respond to the socio-cultural dynamics of classroom environments. Similarly, Skantz-Åberg et al. (2022), based on their review of the literature, identified seven dimensions of professional digital competencies that teacher education programs should consider: technological competence, content knowledge, pedagogical competence, attitudes to technology use, cultural awareness, critical approach, and professional engagement.

At the research level, numerous studies have also examined language teachers' knowledge and use of technology in diverse geographical contexts. These studies have addressed various themes, including the challenges, affordances, and barriers to technology implementation from teachers' perspectives (e.g., Liu & Chao, 2018); the intrinsic and extrinsic factors influencing language teachers' conceptions and beliefs about technology (e.g., Scherer, et al., 2019); foreign language teachers' professional growth through integration of technology into teaching practices (e.g., Son, 2018); and language teachers' acceptance of technology (e.g., Huang et al., 2019); to mention some.

As an emerging facet of technological integration, the development of digital content—also referred to as Digital Multimedia Composing (DMC)—involves the creation of digital texts via integrating linguistic modes with visual, auditory, or gestural modes of communication (Kessler & Marino, 2023) has been identified as an avenue for fostering language teachers' professional growth and enhancing their professional digital competence (Li, 2020; Yi & Angay-Crowder, 2016). DMC projects can include a variety of formats, including web pages, blogs, wikis, podcasts, different kinds of videos, infographics, and digital storytelling, with the *latter* serving as the focal point of this study.

Digital Storytelling in Language Education

Digital storytelling (DST), as "a natural progression of the ancient art of storytelling" (Raffone, 2023, p. 22), was initially created by joining modern technology and traditional story narration (Anilan et al., 2018) in the 1990s. DST, which is a mixture of written and verbal narratives with the companionship of digital technology offered by Web 3.0 and Web 4.0 (Dogan & Robin, 2008; Heo, 2009), consists of a process of short video making

(lasting between three to five minutes) with various components such as background music or recorded soundtrack, voice, digital images, and narrative script (Robin, 2006). DST "have a variety of uses (from personal tales to historical events or teaching materials), revolve around a chosen theme and often contain a particular point of view" (Robin, 2008, p. 222).

Several stages are involved in developing DSs, including determining a topic or selecting a story, searching about the topic, writing the scripts, collecting images and music pieces, storyboarding, which involves recording the narration and making multimedia elements like soundtracks and images ready, editing and revising the drafts using video editing software, sharing the artifact online, and receiving comments and feedback from the audience (Lambert & Hessler, 2018; Linville & Vinogradova, 2024). Lambert (2009) also suggests that factors such as point of view, dramatic question, emotional content, economy, pacing, voice, soundtrack, and considering the audiences' needs and reactions can enhance the effectiveness of DST.

Theoretically supported by constructivist and socio-constructivist theories of learning, multimedia learning, neural coupling, and narrative-based educational approaches to teaching and learning (Raffone, 2023), DST has widely been used by practitioners and researchers in English language teaching contexts. The findings of diverse studies have highlighted how the DST process fosters English learners' self-confidence, creativity, motivation, sense of ownership, agency, collaboration, critical thinking, and problem-solving skills (e.g., Chen, 2024; Hava, 2021; Yilmaz et al., 2018), improves their productive and receptive skills (e.g., Hajizadeh et al., 2024; Kim, 2014; Lee, 2014; Nami & Asadnia, 2024; Zarei & Navidinia, 2024), as well as their awareness of language structures.

In this regard, Nami and Asadnia (2024) conducted a mixed-methods study examining the role of collaborative DST in enhancing vocabulary knowledge among Iranian EFL learners. The findings indicated that the students who engaged in DST outperformed their peers in the control group and benefited from a learning environment characterized by contextualization, peer support, and personalization of vocabulary acquisition. In another mixed-methods investigation, Zarei and Navidinia (2024) explored the impact of DST on improving the writing skills of tenth-grade Iranian EFL students. Their results demonstrated significant enhancement in writing performance, underscoring DST's potential to foster linguistic competence and psychological and social skills among EFL learners. Hajizadeh et al. (2024) conducted a qualitative case study exploring the experiences of twin siblings using DST for English learning. The results revealed that their engagement in DST not only facilitated the development of specific metacognitive learning strategies but also enhanced their English language proficiency. Additionally, the twins reported increased confidence in self-expression and the cultivation of multi-literacies. Chen (2024) provided a more critical perspective and investigated perceptions of AI-facilitated creativity within DSs created by Taiwanese

EFL learners. Chen reported that while AI tools substantially enriched multimedia elements and contextualization, evaluations from learners, teachers, and peers emphasized the necessity of human input for fostering narrative creativity. This highlights the importance of a balanced integration of AI to support human creativity effectively in educational contexts.

Nevertheless, compared to extensive research done on DST and language learning worldwide, fewer studies have been conducted in second language teacher education, though varied studies have investigated the topic in diverse teacher education fields (e.g., Dogan & Robin, 2008; Gürer, 2020; Heo, 2009; Røkenes, 2016; Yu & Wang, 2025). For instance, Røkenes (2016) undertook a study in Norway to examine the impact of DST on the digital competence of Norwegian secondary school ESL teachers. The research was structured into three phases: survey, intervention, and evaluation. This mixed-methods study involved three cohorts of ESL teacher candidates who participated in workshops held in three consecutive years. Various data collection methods were utilized, including field notes, observations, DST artifacts created by the participants, reflection logs, and semi-structured interviews. The results indicated a significant enhancement in the participants' digital competence, evidenced by their improved ability to edit videos and integrate technology into their teaching practices. Similarly, Çetin (2021) investigated the digital literacy skills of 36 pre-service teachers using a mixed-methods exploratory case study. Three experts assessed participants' digital literacy before and after the DST intervention using a digital literacy assessment scale. The study's findings revealed that the processes of planning, creating, and presenting DSs positively enhanced the digital literacy skills of the pre-service teachers. In another study, Yu and Wang (2025), using a mixed-methods study grounded in Activity Theory, explored how collaborative designing of DSs influenced pre-service English teachers' language and digital skills. Involving 28 participants from two Hong Kong universities, the study found that the process enhanced the participants' language proficiency, digital competencies, learning autonomy, peer collaboration, motivation, and confidence. However, the participants noted "contradictions" regarding the technical aspects of DST and uncertainty about its practical integration into language classrooms.

In the context of Iranian education, there is a notable scarcity of research-based data on the professional changes experienced by language teachers involved in developing and implementing DSs. This gap in the literature is significant, especially given the increasing importance of technology in language teaching. Further research is essential to explore how these technologies can contribute to developing new pedagogies and teaching practices, thereby improving language teachers' professional growth (Kearney, 2011; Tendero, 2006).

Method

A generic qualitative research design was adopted in this study to explore how language teachers nurtured professional competencies through the production and implementation of teacher-designed DSs in their classes.

Participants

The study comprised a purposive selection of nine female Iranian English language teachers (24-41 in age) who willingly enrolled in a seven-session online DST workshop from diverse cities in Iran. Among these participants, eight were pursuing Master's degrees in TEFL and one in CALL at the time of the study. Their English teaching experience in language institutes or schools ranged from six to 15 years, and all had a solid grasp of language teaching principles and materials development fundamentals. Since the technical information for making DSs was presented during the workshops, the participants did not need special technical skills, and basic computer literacy and Internet skills were deemed sufficient for participation.

Instrumentation

The data for the study were collected through multiple sources, employing a combination of participant observation, digital artifacts, and interviews.

Observation and Field notes

As the teacher and a full participant in the study, one of the authors ran, observed, and video-recorded the participants' interactions, comments, feedback, and multimodal presentations during each workshop session. These observations were transcribed and supplemented with detailed field notes and memos, encompassing the preparations for each class and a detailed account of the events that occurred during or after class. As a data source, these transcriptions and field notes offered real-time and reflective insights into the participants' learning process.

Group Communication

A dedicated group was created on WhatsApp Messenger to facilitate regular communication with the participants and foster ongoing engagement. This group served as a platform for participants to raise queries, discuss challenges encountered while experimenting with different software, share drafts of their DSs, and provide feedback on their peers' artifacts. The synchronous and asynchronous conversations held within this group, capturing the iterative process of learning, problem-solving, and collaboration among the participants, were saved and utilized as an additional data source.

Digital Artifacts (Teacher-created DSs)

Participants were required to create at least one short DS, drawing upon the information and skills imparted during the course. Having done so, they were asked to explain the process of its development, the reasons behind selecting the story topic and its plot, the techniques they used while recording the DS and its narration, cover page, subtitle, or references, and modify their developed DS based on the suggestions made by other class members. The teacher-created DSs, as tangible outputs of their creative application of the course content, were used as another data source in this study.

Interviews

A person-to-person semi-structured virtual interview, lasting more than one hour per participant, and a focus-group interview, lasting over 90 minutes, formed another primary body of data in this study. During the interviews, the participants discussed the challenges they faced while developing their DSs and taking them to their classes, the feedback they had received from others, especially their students, and the professional competencies they perceived they had experienced. The person-to-person interviews provided individualized insight into each participant's perspectives and experiences while the focus group encouraged collective reflection and exchanging ideas. Together, they illuminated the participants' trajectories and their perceived impact of the workshop on their professional growth.

Procedure

This study commenced with a preparatory phase during which the researchers conducted an extensive review of the literature on DST, explored and experimented with various relevant software applications, and designed a detailed course framework, which was then implemented with the participation of nine English language teachers. The seven workshop sessions, conducted via Skyroom, spanned approximately 90 minutes each and took place once a week. This conferencing platform allowed the users to have video conversations, screen sharing, and presentations. Throughout the workshop, which was held by one of the researchers of the study, the participants were exposed to a range of topics, including the fundamental structure of stories, the features of DSs, the procedural aspects of crafting DSs, and a selection of low-threshold mobile and computer-based DST applications and software tools. Prominent examples of these tools encompassed Remini, Comic Strip Maker, MoStory, Animated Story, Inshot, Storybird, and Story Jumper. In addition to step-by-step instructions, the teachers were provided with tutorials, YouTube videos, samples of DSs produced by other creators or the teacher-researcher, and rubrics (Lambert, 2007: Robin, 2008) for evaluating them. In the subsequent phase, the teachers were requested to implement the DSs they had created in their classrooms and document their reflections alongside their students' feedback. The study concluded with a focus-group discussion and person-to-person semi-structured interviews, during which the

participants reflected on the challenges they experienced while preparing and implementing their DSs and discussed the professional growth they experienced as a result of attending the DST workshop.

Data Analysis

The data analysis procedure includes coding, analyzing, and interpreting the research data, commencing with a thorough reading and re-reading of the workshop sessions and interview transcriptions, the examination of the teacher-created DSs, their practice reports, and other files. This immersion in the data facilitated a thorough familiarization with the content, identifying data segments, such as sentences, paragraphs, or images, and detecting points, ideas, or clues related to the research question. Through the *initial* coding process, a large number of codes were generated. The researchers examined and refined these codes' similarities, interconnections, and repetitions during the focused coding stage. This process was iterative, involving multiple comparative readings of the data to ensure that the codes derived inductively from the data or deductively informed by existing DST literature accurately captured the essence of the events and the participants' perspectives. Subsequently, interconnected codes were grouped into broader, meaningful sub-categories and categories during the *axial* coding process (Charmaz & Belgrave, 2019), with each category labeled to represent the professional competencies demonstrated by the participants. In presenting the findings, original excerpts from the data were included as illustrative evidence to substantiate the interpretations and arguments.

Trustworthiness and Ethical Considerations

Multiple measures were taken in this study to enhance the trustworthiness of the findings. Extended engagement and contact with the participants and collection of data via multiple sources (data triangulation) were carried out to enhance the credibility of the findings. Furthermore, attempts were made by the authors to describe the procedure as richly as possible and to present the findings with concrete details so that readers may find them transferable or naturalistically generalizable to similar groups or situations.

Ethical considerations were carefully addressed throughout the study. Before data collection, the participants were informed about the purpose and procedures of the study. They were assured that their identities would remain anonymous in the final report. These ethical guidelines were followed to maintain the participants' confidentiality and trust while ensuring the research findings' integrity.

Results

While developing and implementing teacher-designed DSs, the participating language teachers undertook an exploratory journey to find intriguing stories, contemplated the

purpose of the stories, composed multiple drafts of their scripts, searched for attractive music and visuals, and experimented with various new applications. The analysis of the multiple data sources highlighted that this process contributed to nurturing professional competencies across key dimensions among these teachers, including arts-related, socio-cultural, pedagogic, digital, and psychological competencies. These competencies, which emerged as the major categories of the study, were further organized into related sub-categories, reflecting the multifaceted aspects of the professional growth experienced by the participants. A succinct discussion of these categories and their sub-categories is presented below.

Nurturing Arts-related Competencies

Story Crafting

As reported by the participants, designing DSs sparked their previously "unrecognized" artistic abilities and creativity potential, particularly in crafting narratives. Through the analysis of the DSs they crafted, their efforts in selecting, modifying, or creating engaging narratives became apparent. This process required them to acquaint themselves with the essential elements of fiction like plot, script, tone, setting, characters, theme, and point of view. Notably, the artistic competency in story writing was evident in a couple of DSs composed by two of the teacher participants. One of them, Hedieh, created a DS about a baby elephant called *Elphy*, who was unsatisfied with his long nose and large ears; however, he came to appreciate the benefits of his appearance, having gone through a series of well-arranged adventures like saving a mouse drowned in the river by his long nose and using his big ears as an umbrella to shield his friends during heavy rain. Hedieh delineated the process of story writing as follows:

> *I did not write it in advance, but I organized and reorganized the sequence of events, characterizations, and the story's climax in my mind several times. I had a general plan, and gradually, I improved my story and added details to make my story more appealing and believable.*

Aida also decided to teach a proverb through a comical DS, which narrates the tale of an unlucky boy suffering from unceasing misfortunes. She explained the process of selecting the topic and generating the characters and events as follows:

> *I consulted with my friend, and we decided to produce a unique and novel comic character rather than a repetitious one, so we decided to write a story on our own. We selected a Persian proverb and put it into an imaginary story about an unlucky boy and his constant misfortunes. The plot and storyline evolved during our conversation and consultations. Constructing, reconstructing, editing, and finalizing the story took some days.*

Visual Composition

Another demonstration of artistic competency among the teachers was their creative inclusion or production of visuals, including photos, illustrations, cartoons, artworks, paintings, and drawings within their DSs. These visuals were employed to "capture the audience's attention" more effectively and to "convey their intended messages." They described photographing and selecting appropriate visuals as a highly "time-intensive" process. They explained that they took copious pictures to choose the most suitable ones to be displayed on their DSs "just for a few seconds." For instance, Zahra, who created a DS titled *Heroes* depicting the life of her martyred uncle, began by scanning photos of her uncle from his album and arranging them chronologically. The opening slide of her DS featured pictures of several characters, sourced primarily from the Internet, including Professor Mahmoud Hesabi, a prominent Iranian physicist, Batman, Iron Man, Superman, the medical staff in the coronavirus pandemic, a firefighter, and her martyred uncle (Figure 1). According to her, juxtaposing the images of these characters allowed the audience to "compare Iranian and Western heroes." For another segment, she placed her uncle's framed photograph next to a bouquet of daffodils and an Iranian cashmere tablecloth to add more visual appeal to the images. Zahra said: "I took twenty to thirty photos to select just one that is shown for about two seconds in my DS." She further noted that this practice had sparked her interest in photography to the extent that she had decided "to save" her "income to purchase a professional camera."

Figure 1

The opening slide of Heroes DS created by Zahra

In another case, Sahar, whose DS narrated the story of an old woman offering shelter to some domestic animals (Figure 2), handcrafted her characters using colored papers, arranged them side by side, and photographed them. Delineating the process, she explained: "I changed the layout several times and took hundreds of photos for each

setting to arrange these images in an orderly manner and show the chronological flow of events by placing the photos side by side."

Figure 2

The Old Woman and the Gatecrashers DS created by Sahar using handcrafted images

In other instances, the participants meticulously sourced their images from the Internet and enhanced them with visual effects to increase their aesthetic appeal. For example, using a specialized software application, Mandana, who crafted a DS about Afghan women and their sufferings, incorporated animation effects into her characters' portraits. These effects included animating the movements of their eyes and lips to imbue them with a more life-like appearance. In one particularly evocative image, she applied the fire effects, simulating roaring flames around an elderly woman (Figure 3), thereby enhancing the dramatic impact of the visual representation in her DS.

Figure 3

Afghanistan DS created by Mandana using animation effects

Soundscapes Design

Besides the visual components, the participants deployed various creative auditory elements, encompassing audio narrations, voiceovers, environmental sounds, and melodic musical compositions, demonstrating their meticulous attention to their DSs' audio features. They put effort into narrating their stories impressively via the strategic manipulation of vocal pitches, tones, intonation patterns, tempos, and expressive sounds like deep breaths and sighs. For instance, in narrating her Afghanistan DS, Mandana adeptly modulated her vocal pitch to express her profound empathy for the pains and suffering of Afghan women, employing both high and low tones to evoke a sense of sorrow. To intensify the emotional impact of her narrative, she incorporated moments of crying and soft-spoken narration. Later, in one of her interviews, she mentioned that since "the women's rights" is her "concern," she had deliberately "put emotion and infuriation" into her voice "to embody the Afghan women's voice".

In another case, Zahra, in her portrayal of her martyred uncle's life, utilized pitch variations, stress, and duration techniques in her narration to convey her feelings of loss and mourning. Her audible sigh in the middle of the story transmitted her sentiments of regret and grief to the audience. She explained: "I think the narration is the most powerful aspect of DST, which transfers the creator's emotion and feelings." Aida also narrated her comical DS in collaboration with her friend. They employed voice modulation to animate various characters with distinctive and engaging vocal tones, illustrating their awareness and control over their vocal delivery. Several participants echoed this awareness. Considering their narration experiences, they stated that acting as narrators, which required recording their narrations several times to prepare them without pronunciation mistakes and stuttering, had made them more conscious of the "power of their voice." In this regard, Hedieh, a teacher eager to expand her knowledge about digital content, stated that she had even shared her DS with a digital content production team and received an invitation to produce podcasts. She said: "These invitations revealed to me that my voice is quite good, something I was unaware of before the DST course. Creating DSs unveiled my talent. I suppose I can be more active in audio narration."

Besides audio narrations, a couple of participants creatively selected or produced melodic pieces of music or songs for their DSs. For example, Sahar asked one of her relatives to play a piece of music that resonated with the cultural theme of her DS. She explained:

I searched a lot to compose a piece of original music for my DS instead of downloading a pre-made one. I asked a musician to play a piece of music with an Iranian instrument, and he chose a dulcimer. I wanted pure Iranian music.

In addition to music, the teachers skillfully used the background music, environmental sounds, and voiceovers available in video creation and editing applications to make their DSs livelier. For instance, using the audio features of Benime animation

creator, Bahar incorporated the sounds of nature, including the harsh cawing of the crows, the soft rustling of leaves, and the gentle sound of the breeze into her DS. Similarly, using the Inshot application, Sahar integrated the sounds of rain falling, knocking on the door, creaking of the door, the clucking of the hen, the meowing of the cat, and the dog barking into her DST.

The integration of narrative techniques, visual composition, and sound design within the DSs produced by the teachers demonstrates that the platform facilitated a creative space for thoughtful expression and innovative action, thereby fostering the flourishing of their arts-related competencies.

Developing Sociocultural Competencies

Based on the participants' experiences shared in the workshop, one of the most important shortcomings of globally distributed commercial English textbooks is the lack of consideration for the diverse local, ideological, and socio-cultural contexts in which language learners are situated. The analysis of DSs produced by the teachers displayed their endeavor to leverage the power of DSs to fill in this gap by producing content integrating elements rooted in the Iranian-Islamic cultural, artistic, religious, and literary traditions or current lifestyle. In other words, the teachers capitalized on their local socio-cultural and contextual background knowledge in developing English language teaching content. For instance, Hedieh attempted to present the traditional Iranian lifestyle in her DS. Her DS contained several images of traditional houses with azure pools and flowerpots in the yards. The buildings' architecture, the vibrant glass windows, and the women's attire represented the Iranian-Islamic traditional lifestyle (Figure 4).

Figure 4

The Lost Heaven DS, created by Hedieh depicting the Iranian traditional lifestyle

Similarly, Aida planned to elucidate an Iranian proverb, "drop the ball," within her DS by recounting a humorous narrative, employing culturally resonant names and settings familiar to Iranian learners. Parisa, who showed great passion for religious content, turned a Quranic tale—*The Companions of the Cave*—which narrates the tale of devout believers entering a centuries-long sleep—into a DS to provide her students "with

educational content that is both culturally and spiritually enriching". She sourced the narrative directly from the Quran, accompanied it with images selected from the Internet, and subsequently refined it using digital editing tools. Furthermore, Sahar explained that taking DSs into her classes inspired some students to develop DSs based on Persian classic literature. She shared one of her students' DSs narrating a story extracted from Shahnameh, an ancient Persian epic poem while using English at her disposal.

Besides cultural and religious topics, several DSs created by the teachers addressed socio-political and *hot-off-the-press* topics. For example, the coincidence of the workshop with the news released regarding the Taliban imposing restrictions on Afghan women prompted Mandana to create a DS depicting Afghan women's sufferings. She explained, "It was too hard to keep quiet against the cruelty that is done to Afghan women and girls; many of whom are deprived of the rights of education and freedom."

The deliberate integration of Iranian-Islamic cultural, religious, and socio-political elements into the DSs suggests that the teachers actively enhanced their socio-cultural competencies. By designing content that resonated with their students' cultural and contextual realities and addressing complex social issues, the teachers clearly understood the importance of creating culturally relevant materials that foster deeper engagement and critical thinking in the language learning process.

Improving Technological Skills

Based on the experiences shared by the teachers, prior to attending the workshop, their application of technology in education was mainly restricted to creating PowerPoint slides for their lessons. The DST workshop encouraged them to incorporate technological and authoring tools into their teaching practices actively. However, the first challenges they faced were technophobia and a lack of familiarity with technological tools. Except for one of the participants, the rest had severe difficulties attending Skyroom and downloading the software. Over time, not only did they solve such hurdles, but also they developed an interest in learning about and exploring other applications. Highlighting her initial struggle with technology, Parisa recounted how she required others' assistance to download the necessary software. She said: "I needed my husband's help at the beginning of the course to download the software tools. Over time, as my technical questions were answered, I felt more comfortable using different applications." She later expressed to the class her fascination with Remini software, describing how captivated she became by its capabilities and how she spent an entire day editing photos with it. This evolution may show an expansion in her technological knowledge, from basic operational skills to a more sophisticated understanding and application of technology.

Mentioning their "growing enthusiasm to learn more about other software tools," Mandana and Parisa articulated their willingness to acquire proficiency in further applications. Zahra explained her "technical skill development": "I did not consider the educational aspect of technology before the workshop. Although I initially had no interest

in software tools, I then launched an Instagram page to share some educational posts. I learned to decorate and design my posts with software tools." Mandana explained: "I got more aware of the technology gap in my teaching in the DST workshop. Contrary to my former belief, I now see that I can use technology in my teaching quite easily. I was not technologically literate before the workshop."

Furthermore, the analysis of the DSs they created showed that all the teacher participants skillfully utilized various applications to produce their DSs, even those they had not been introduced to during the workshop. They benefited from software tools like Inshot, Viva Video, and Kine Master to sequence their story plots, add background sounds and voiceovers, narrate their story, adjust music, and the like.

Moreover, as a facet of technological knowledge, deliberate actions were taken by the teachers in upholding publication ethics while disseminating DSs. During the DST course, the importance of the inclusion of a reference section to deter plagiarism was elucidated for the participants. An examination of the DSs crafted by the teachers indicated their meticulous attention to intellectual property and authorship rights through the citation of references within their DSs. Sahar, for instance, concluded her DS by attributing the musician who performed a musical piece, incorporating both the photo and name of the artist. Bahar carefully mentioned all the sites, including Pinterest and YouTube, that she had used as sources of information. Similarly, Aida acknowledged her friend for her assistance in voicing the dialogues of various story characters by mentioning her name in the reference section.

The workshop appears to have played a crucial role in helping the teachers overcome their initial technophobia, enhance their technological proficiency, and foster a tremendous enthusiasm for using technological tools. Additionally, it encouraged them to develop educational content with careful attention to ethical considerations related to authorship and intellectual property.

Considering Pedagogic Objectives for DSs

Pedagogical competence was another type of knowledge that could be observed in the teachers' products. With their audience in mind, the teachers determined educational objectives for their designed DSs and developed activities to achieve the expected learning goals. The wide range of activities chosen by the teachers is noteworthy. Sahar, who developed a DS about an old woman welcoming domestic animals to her home on a rainy day, put the animals in different locations inside the house. She put the sparrow *on* the shelf, the donkey *next to* the suitcase, the hen *in* the egg basket, the dog *in front of* the TV, and the cat *by* the window. She designed several fill-in-the-blank exercises to let her students practice prepositions of place *in front of*, *by*, *in*, *next*, and *on*. She reasoned: "Pre-intermediate students have difficulty distinguishing prepositions correctly. Learning prepositions visually can help them learn and remember them better." She added, "While

watching a DS, students are exposed to sentences containing a particular grammar point and learn that grammar point implicitly."

Mandana, who created *Afghanistan* DS, asked her students to write a letter to an Afghan girl as a post-task. Hedieh, who in her *The Lost Heaven* DS compared the traditional lifestyle and the modern one after the advance of technology, used her DS as a springboard to encourage her students "to speak about technology and share their viewpoints regarding its merits and demerits." Having presented the biography of her martyred uncle, Zahra asked her students to seek and "introduce their hero and explain his/her characteristics." Aida also purposefully used speech bubbles in her comic DS instead of subtitles (Figure 5). She explicated her pedagogical reasoning as follows:

I wanted to improve students' listening skills, so I preferred not to add subtitles. I just typed the complicated clauses and proverbs. I preferred to add story characters' thoughts and dialogues in speech bubbles, not subtitles. The captions possibly prevented the students from concentrating on the audio narration.

Figure 5

Use of speech bubbles in Unlucky Boy DS created by Aida

Overall, the teacher's ability to establish clear pedagogical objectives for the digital stories, deliver the content, and design relevant and engaging activities that facilitate learners' deeper understanding of the material reflects their pedagogical and content competence.

Fostering Self-Efficacy Beliefs

According to the teachers, the process of learning to create DSs and sharing them with students, friends, family, and colleagues was a "psychologically rewarding" experience that made them feel positive senses of "pride," "self-confidence," "self-efficacy," "ownership," and "satisfaction" and broadened their career outlook and possibilities. In this regard, Bahar said: "I sent my digital story to one of my professors, who provided feedback on how to enhance it. I also presented my work to my coworkers and received

their appreciation." Zahra reflected on her work, saying, "I have accomplished something meaningful. My aunt always lamented that the memories of my martyred uncle would be forgotten over time. Now, I have preserved them. I developed a DS that showcases my uncle's bravery." She proudly shared: "I sent my DS to all my family members. My grandmother, who does not understand English, asked me to translate every line into Persian."

Referring to "an increase in her self-confidence to develop teacher-made digital materials," Nousha said: "The workshop changed my view toward myself. I had long been forced to obey the institute's strict discipline. Now, I gained the self-confidence to develop my classroom materials. Self-confidence, courage, and change of views were the gifts of this workshop." She remarked: "Before attending the workshop, I would have felt embarrassed to present any educational content I created in class. Now, I've confidently submitted my DS to the central branch of our institution, making it accessible to language learners across other branches in Iran."

Furthermore, three out of nine teacher participants reported that they no longer needed an institute as a workplace to teach English, as they believed they could acquire the necessary skills to create their teaching content and use digital platforms for independent virtual language instruction. Mandana, who had lost her teaching job in a language institute due to the coronavirus and the closure of educational sites, said: "I am keen on enhancing my capability to develop digital content and pursuing freelance teaching more seriously. I am exploring different platforms and their affordances and limitations to start anew." Echoing this sentiment, Fariba elaborated on her burgeoning interest in becoming a teacherpreneur and discussed how the evolution of digital technology and social media platforms has allowed educators to venture into independent teaching and content creation. She explained: "By developing some technical skills, spending some time, and profiting from a smartphone, every teacher can produce DSs for her freelance teaching."

Such remarks shared by the teachers suggest that having been trained about DST, they felt cognitively and effectively more autonomous in generating digital content, leveraging technology for their teaching practices, and pursuing opportunities and innovative avenues for professional growth, such as teacherpreneurship.

Discussion

This study sought to explore the professional competencies nurtured by English teachers through their engagement in creating DSs. The analysis revealed that designing DSs fostered the participants' professional competencies across several domains: arts-related, socio-cultural, technological, pedagogical, and psychological. One of the notable competencies nurtured among the participants was their artistic ability. This was evident in their creativity in crafting, rewriting, or adopting short narratives and employing visual

elements and artworks to enrich the aesthetic appeal and visual meaning of their DSs. These endeavors stimulated the participants' creativity and enhanced their awareness and proficiency in story writing, photography, painting, and narration, leading to a greater appreciation for artistic expression. While previous research has extensively highlighted the effectiveness of DST in fostering language learners' authentic learning experiences, creative thinking, and creative productive skills (Chen, 2024; Hava, 2021; Yilmaz et al., 2018), this study extends these findings to language teachers, emphasizing the transformative potential of DST for language teachers as content creators (Nami, 2020). Nevertheless, while expressing a strong interest in adopting DST in their future teaching practices, the participants of the study voiced concerns that the creation of DSs necessitated excessive time and effort, along with advanced technological skills; concerns which are similar to the findings of the study by Gürer (2020).

The integration of visual and textual content reflecting Iranian-Islamic cultural, artistic, religious, and literary traditions, alongside elements of contemporary lifestyle, underscores the participants' nuanced understanding of the social contexts and values that shape their own lives and those of their students. This deliberate incorporation of culturally relevant and meaningful references into the developed digital narratives, as an aspect of culturally responsive pedagogy (Gay, 2002), demonstrates the participants' commitment to promoting a sense of cultural identity within their learning environment through their DST, a key aspect of professional digital competence as outlined by Skantz-Åberg et al. (2022). This awareness of the cultural context of technology application resonates with the existing literature, suggesting the potential of DST as an instructional tool and a medium for celebrating and preserving cultural heritage (e.g., Kim & Li, 2021; Kristiawan et al., 2022).

Furthermore, the attempts made by a couple of teachers to incorporate real-world socio-political themes from their immediate society and broader global contexts suggest their recognition of educational content as a potent platform for voicing the self, negotiating complex socio-political issues, encouraging critical consciousness, and avoiding neutrality. This approach aligns with the findings of studies indicating the potential of DST as a pedagogical tool for challenging dominant discourses, facilitating discussions around demanding socio-political topics, and making language learning experience not just informative but also reflective and transformative (e.g., Chen, 2024; Hava, 2021; Nami, 2020; Ohler, 2006; Raffone & Gómez, 2022; Raffone, 2023).

In addition, as reported by the participants, the workshop seemed to have been instrumental in aiding them to experience less technophobia, enhance their technological skills, find techniques to troubleshoot their technical problems and generate a deeper interest in integrating technology tools into their language teaching practices. It also encouraged them to approach the creation of multimodal educational content with strong attention to ethical issues. The knowledge and skills acquired in handling various digital tools for educational purposes, managing digital resources, and resolving technical issues

significantly enhance the teachers' digital competencies, which are integral to their overall professional competencies (Skantz-Åberg et al., 2022). Additionally, the participants exhibited their pedagogical competence by establishing educational objectives for the DSs and designing activities that enhanced students' understanding and engagement with the materials. Such deliberate integration of technology, pedagogy, and content may reflect growth in TPACK (Voogt et al., 2016), alongside a heightened sense of "perceived utility" of technology and "behavioral intention" to use technology, as outlined in the Technology Acceptance Model (TAM). The findings partially resonate with previous research, such as Kukul (2024), which highlighted how increased familiarity with DST enhances educators' perceptions of ease of use, usefulness, and intention to integrate technology.

The participants also highlighted that the positive emotions and sense of ownership they experienced while creating their DSs were crucial in nurturing their self-efficacy beliefs. This newfound confidence empowered them to envision new career possibilities, approach challenges more resiliently, and take pride in their pedagogical contributions. These findings are consistent with existing literature, such as the study conducted by Yu and Wang (2025), which emphasizes the connection between material development, increased self-satisfaction (Nami, 2020), and heightened confidence in professional abilities (Park, 2019).

Conclusion

This qualitative, multiple-case study sought to explore the competencies developed by nine Iranian female language teachers while designing DSs for their classrooms. Data were collected through various sources, including the DSs created by the participants, individual interviews, and focus-group discussions. The findings revealed that designing DSs supported the participants in developing competencies across multiple domains, including artistic, socio-cultural, technological, pedagogical, and psychological. The participants nurtured creativity, cultural awareness, technological skills, pedagogical decision-making, and self-confidence while demonstrating the ability to integrate culturally relevant content and address socio-political themes into their DSs, reflecting growth in their professional digital competencies.

Despite its illuminating findings, the study suffered several limitations that may impact the interpretation and generalization of its findings. Firstly, the research involved a minor, purposive cohort of nine female Iranian English language teachers attending a multi-session DST workshop. The limited number, gender representation, and socio-cultural specificity of the sample necessitate caution when extrapolating the study's findings to broader contexts. Subsequent research can address these limitations by expanding the sample size and including a more diverse range of participants. Additionally, the duration of the workshops and the number of introduced software tools

were relatively short, and the study's concentrated focus was on the teachers' accounts of perceived professional growth through the creation of a limited number of DSs. Accordingly, the study does not capture the long-term impacts and challenges of embedding DST in shaping teachers' professional identity. There is a critical need for additional cross-sectional and longitudinal studies to assess these aspects thoroughly, ensuring a deeper understanding of the sustained effects and hurdles in integrating technology within pedagogical frameworks (Belda-Medina & Goddard, 2024).

Nevertheless, the findings of this small-scale study hold implications for language teachers, Second Language Teacher Education (SLTE) curriculum designers, and teacher educators. For language teachers, these findings underscore the value of getting acquainted with innovative technologies, not only as a means of enriching their teaching and learning experiences but also for personal and professional growth. For policymakers, curriculum designers, and teacher educators involved in SLTE, this study advocates for principled integration of technology within curriculum frameworks, preparing future teachers to meet the evolving demands of the digital age and equipping them with the competencies for creating meaningful and engaging learning experiences for their students. Ultimately, these insights emphasize the need for ongoing research and development in integrating DST within educational practices to grasp its potential and limitations fully.

Bio-data

First Author:
Supervised the procedures, reviewed the final draft, and made necessary revisions.

Second Author: Collected the data and wrote the first draft. Designed and conducted the procedures.

Declaration of Competing Interest: The authors declare no competing interests.

References

Abdolmanafi-Rokni, S. J. (2014). Digital storytelling in EFL classrooms: The effect on the oral performance. *International Journal of Language and Linguistics, 2*(4), 252–257. https://doi.org/10.11648/j.ijll.20140204.12

Anilan, B., Berber, A., & Anılan, H. (2018). The digital storytelling adventures of the teacher candidates. *Turkish Online Journal of Qualitative Inquiry, 9*(3), 262–287. https://doi.org/10.17569/tojqi.426308

Aşık, A. (2016). Digital storytelling and its tools for language teaching: Perceptions and reflections of pre-service teachers. *International Journal of Computer-Assisted Language Learning and Teaching (IJCALLT)*, *6*(1), 55-68.

Belda-Medina, J., & Goddard, M. B. (2024). AI-driven digital storytelling: A strategy for creating English as a foreign language (EFL) materials. *International Journal of Linguistics Studies, 4*(1), 40–49. https://doi.org/10.32996/ijls.2024.4.1.4

Bouckaert, M. (2019). Current perspectives on teachers as materials developers: Why, what, and how? *RELC Journal, 50*(3), 439–456.

Brandão, A. C. (2018). Visualizing EFL teacher identity (re)construction in materials design and implementation. *Applied Linguistics Review, 9*(2-3), 249–271.

Çetin, E. (2021). Digital storytelling in teacher education and its effect on the digital literacy of pre-service teachers. *Thinking Skills and Creativity, 39*, 1–9. https://doi.org/10.1016/j.tsc.2020.100760

Charmaz, K., & Belgrave, L. L. (2019). Thinking about data with grounded theory. *Qualitative inquiry*, *25*(8), 743-753.

Chen, H. J. (2024). Multimodal digital storytelling presentations in EFL contexts: Learning outcomes, positive/negative affects, and perception between high-/low-achieving learners. *Innovation in Language Learning and Teaching, 18*(2), 181–196.

Dogan, B., & Robin, B. R. (2008). Implementation of digital storytelling in the classroom by teachers trained in a digital storytelling workshop. *Society for Information Technology & Teacher Education International Conference (SITE)*, 2, 902–907.

Dudeney, G., & Hockly, N. (2016). Literacies, technology and language teaching. In F. Farr & L. Murray (Eds.), *The Routledge handbook of language learning and technology* (pp. 115–126). Routledge.

Gay, G. (2002). Preparing for culturally responsive teaching. *Journal of Teacher Education, 53*(2), 106–116.

Gürer, M. D. (2020). Should pre-service language teachers develop digital stories?: Engagement with digital storytelling. In E. Alqurashi (Ed.), *Handbook of research on fostering student engagement with instructional technology in higher education* (pp. 429-445). IGI Global.

Hajizadeh, S., Ebadi, S., Salman, A. R., & Badiozaman, I. F. B. A. (2024). Young twins' journey via digital storytelling towards multi-literacy development. *Journal of Visual Literacy*, *43*(3), 214-232.

Hava, K. (2021). Exploring the role of digital storytelling in student motivation and satisfaction in EFL education. *Computer Assisted Language Learning, 34*(7), 958–978.

Heo, M. (2009). Digital storytelling: An empirical study of the impact of digital storytelling on pre-service teachers' self-efficacy and dispositions towards educational technology. *Journal of Educational Multimedia and Hypermedia, 18*(4), 405–428. http://editlib.org/p/30458/

Huang, F., Teo, T., & Zhou, M. (2019). Factors affecting Chinese English as a foreign language teachers' technology acceptance: A qualitative study. *Journal of Educational Computing Research*, *57*(1), 83-105.

Huang, H. T. D. (2023). Examining the effect of digital storytelling on English speaking proficiency, willingness to communicate, and group cohesion. *TESOL Quarterly, 57*(1), 242–269.

Hung, C. M., Hwang, G. J., & Huang, I. (2012). A project-based digital storytelling approach for improving students' learning motivation, problem-solving competence, and learning achievement. *Educational Technology and Society, 15*(4), 368–379.

Hwang, G. J., Zou, D., & Wu, Y. X. (2023). Learning by storytelling and critiquing: A peer assessment-enhanced digital storytelling approach to promoting young students' information literacy, self-efficacy, and critical thinking awareness. *Educational Technology Research and Development, 71*(3), 1079–1103.

Instefjord, E. J., & Munthe, E. (2017). Educating digitally competent teachers: A study of integration of professional digital competence in teacher education. *Teaching and teacher education*, *67*, 37-45

Kearney, M. (2009). Investigating digital storytelling and portfolios in teacher education. *Association for the Advancement of Computing in Education (AACE)*, 1987–1996.

Kim, D., & Li, M. (2021). Digital storytelling: Facilitating learning and identity development. *Journal of Computers in Education, 8*(1), 33–61. https://doi.org/10.1007/s40692-020-00170-9

Kim, S. (2014). Developing autonomous learning for oral proficiency using digital storytelling. *Language Learning & Technology, 18*(2), 20–35.

Kristiawan, D., Ferdiansyah, S., & Picard, M. (2022). Promoting vocabulary building, learning motivation, and cultural identity representation through digital storytelling for young Indonesian learners of English as a foreign language. *Iranian Journal of Language Teaching Research, 10*(1), 19–36.

Kukul, V. (2024). Should I use digital storytelling in my future classroom? Why or why not? Investigating pre-service math teachers' acceptance of digital storytelling. *E-Learning and Digital Media, 21*(1), 70–86. https://doi.org/10.1177/20427530231156173

Lambert, J. (2009). *Digital storytelling: Capturing lives, creating community* (3rd ed.). Digital Diner Press.

Lambert, J., & Hessler, B. (2018). *Digital storytelling: Capturing lives, creating community* (5th ed.). StoryCenter & Routledge. https://doi.org/10.4324/9781351266369

Lee, L. (2014). Digital news stories: Building language learners' content knowledge and speaking skills. *Foreign Language Annals, 47*(2), 338–356. https://doi.org/10.1111/flan.12084

Li, J., Gao, X. (Andy), & Cui, X. (2021). Language teachers as materials developers. *European Journal of Social Theory, 0*(0), 511–529. https://doi.org/10.1177/1368431013484024

Li, M. (2020). Multimodal pedagogy in TESOL teacher education: Students' perspectives. *System*, 94, 102337.

Linville, H. A., & Vinogradova, P. (2024). *Digital storytelling as translanguaging: A practical guide for language educators.* Taylor & Francis.

Liu, Q., & Chao, C. C. (2018). CALL from an ecological perspective: How a teacher perceives affordance and fosters learner agency in a technology-mediated language classroom. *ReCALL*, *30*(1), 68-87.

Luan, L., Yi, Y., Hwang, G. J., Dong, Y., Jing, B., & Liu, J. (2024). Facilitating EFL learners' willingness to communicate amidst the pandemic: A digital storytelling-based online flipped learning approach. *Innovation in Language Learning and Teaching, 18*(2), 139–154.

Mishan, F. (2022). Language learning materials in the digital era. In *The Routledge handbook of materials development for language teaching* (pp. 17–29). Routledge.

Mishan, F., & Timmis, I. (2015). *Materials development for TESOL.* Edinburgh University Press.

Mishra, P., & Koehler, M. J. (2006). Technological pedagogical content knowledge: A new framework for teacher knowledge. *Teachers College Record*, *108* (6), 1017–1054.

Nami, F. (Ed.). (2020). *Digital storytelling in second and foreign language teaching.* Peter Lang.

Nami, F., & Asadnia, F. (2024). Exploring the effect of EFL students' self-made digital stories on their vocabulary learning. *System, 120,* 103205. https://doi.org/10.1016/j.system.2023.103205

Ohler, J. (2006). The world of digital storytelling. *Educational Leadership, 63*(4), 44–47. https://doi.org/10.1109/LCN.Workshops.2017.68

Park, H. R. (2019). ESOL pre-service teachers' experiences and learning in completing a reflection paper and digital storytelling. *Australasian Journal of Educational Technology, 35*(4), 63–77. https://doi.org/10.14742/ajet.4117

Raffone, A. (2023). *Digital storytelling and digital gaming in the 21st century EFL classroom: New frontiers in CALL.* Cambridge Scholars Publishing.

Raffone, A., & Gómez, A. M. (2022). "What is it like to suddenly shift from traditional face-to-face to exclusively online training?": Narratives from global L2 teachers during the pandemic. In P. Bawa (Ed.). *Preparing faculty for technology dependency in the Post-COVID-19 era* (pp. 175-194). IGI Global.

Rahimi, M., & Yadollahi, S. (2017). Effects of offline vs. online digital storytelling on the development of EFL learners' literacy skills. *Cogent Education, 4*(1), 1–13. https://doi.org/10.1080/2331186X.2017.1285531

Robin, B. R. (2008). Digital storytelling: A powerful technology tool for the 21st century classroom. *Theory into Practice, 47*(3), 220–228. https://doi.org/10.1080/00405840802153916

Robin, B. R. (2016). The power of digital storytelling to support teaching and learning. *Digital Education Review, 30,* 17–29.

Røkenes, F. M. (2016). Digital storytelling in teacher education: A meaningful way of integrating ICT in ESL teaching. *Acta Didactica Norge, 10*(2), 311–328. https://doi.org/10.5617/adno.2431

Sancar-Tokmak, H., & Yanpar-Yelken, T. (2015). Effects of creating digital stories on foreign language education pre-service teachers' TPACK self-confidence. *Educational Studies, 41*(4), 444–461.

Scherer, R., Siddiq, F., & Tondeur, J. (2019). The technology acceptance model (TAM): A meta-analytic structural equation modeling approach to explaining teachers' adoption of digital technology in education. *Computers & Education, 128,* 13–35.

Shen, X., Hao, C., & Peng, J. E. (2024). Promoting EFL learners' willingness to communicate through transmediation in a digital storytelling workshop. *Journal of Multilingual and Multicultural Development*, *45*(8), 3109-3126.

Skantz-Åberg, E., Lantz-Andersson, A., Lundin, M., & Williams, P. (2022). Teachers' professional digital competence: An overview of conceptualisations in the literature. *Cogent Education*, *9*(1), 2063224.

Son, J. B. (2018). *Teacher development in technology-enhanced language teaching*. Springer International Publishing.

Stanley, N. (2018). Digital storytelling. In J. Liontas (Ed.), *The TESOL encyclopedia of English language teaching* (pp. 1-7). https://doi.org/10.1002/9781118784235.eelt0403

Stenhouse, V. L., & Schafer, N. J. (2019). Empowering teachers through digital storytelling: A multimedia Capstone Project. *Journal of Digital Learning in Teacher Education, 35*(1), 6–19. https://doi.org/10.1080/21532974.2018.1532359

Tendero, A. (2006). Facing versions of the self: The effects of digital storytelling on English education. *Contemporary Issues in Technology and Teacher Education, 6*(2), 174–194.

Thomas, M., & Sadeghi, K. (2023). Introduction: Educational Technology in Teacher Education. In K. Sadeghi & M. Thomas (Eds.), *Second language teacher professional development: Technological innovations for post-emergency teacher education* (pp. 3-12). Springer International Publishing.

Voogt, J., Fisser, P., Tondeur, J., & van Braak, J. (2016). Using theoretical perspectives in developing an understanding of TPACK. In C. Herring, M. J. Kohler, & P. Mishra (Eds.), *Handbook of technological pedagogical content knowledge (TPACK) for educators* (pp. 33–52). Routledge.

Wang, A. Y., & Maa, T. Y. (2022). Competency-based education: A literature review and its practical considerations for EFL teacher education. In A. W. Wang (Ed.),

Competency-based teacher education for English as a foreign language: Theory, research, and practice (pp. 9–25). Routledge.

Wang, W., Schmidt-Crawford, D., & Jin, Y. (2018). Pre-service teachers' TPACK development: A review of literature. *Journal of Digital Learning in Teacher Education, 34*(4), 234–258. https://doi.org/10.1080/21532974.2018.1498039

Yi, Y., & Angay-Crowder, T. (2016). Multimodal pedagogies for teacher education in TESOL. *TESOL Quarterly, 50*(4), 988–998. https://doi.org/10.1002/tesq.326

Yu, B., & Wang, W. (2025). Using digital storytelling to promote language learning, digital skills and digital collaboration among English pre-service teachers. *System*, *129*, 103577.

Zarei, M. J., & Navidinia, H. (2024). Improving EFL students' writing skills through digital storytelling. *Computer-Assisted Language Learning Electronic Journal, 25*(1), 108–128.