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ARTICLE

Experiences of Pre-Service Teachers in Using Digital Stories Combined with the Language Experience Approach in the United Arab Emirates

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ABSTRACT

Second language teachers face challenges to create classroom environments that cater to the needs of the diverse students' needs and abilities. Some young second language learners in particular come to the classroom with difficulties such as communication and comprehension limitations. It is, therefore, essential to find ways to engage those students and provide a learning environment that is inclusive and ensures that all students are learning. This study explores the experiences of ten pre-service teachers in using digital storytelling (DST) combined with the language experience approach (LEA) in teaching English as a second language to K-3 students. The study follows a case study design and data was collected using a reflective form that included open ended questions. Data was analyzed using the qualitative thematic analysis method. Three themes emerged, which were: 1) the perceived benefits of implementing DST combined with LEA, 2) the perceived challenges of implementing DST combined with LEA, 3) and the need for adequate training. The findings revealed that pre-service teachers found using DST combined with LEA a useful approach to teaching reading and writing. The majority of participants, however, were not confident using technology to create digital stories which means that there

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is a need for adequate training to enable them to use it more effectively in the classroom.

Keywords: Digital Storytelling; Story-Writing; Language Experience Approach; Pre-Service Teachers

1. Introduction

Teachers nowadays use storytelling as an effective tool for English Language Learners (ELL). It is a powerful tool that helps develop various skills, such as reading comprehension, oral language skills, communication skills, and moral and social skills[1]. Early childhood educators, in particular, use storytelling to support young learners' language acquisition and help them make sense of complex experiences[2]. As a result, it is an important teaching approach to preservice teachers in early childhood education programs. Teachers have also tried to find various ways to integrate new technologies to improve students' learning. As a result, digital storytelling (DST) was introduced as an extension of traditional storytelling and an effective educational tool in early childhood education. DST is referred to as a mixture of digital media such as photos, music, video, and audio narration used to tell stories[3]. DST is based on the evidence that digital technology and multimedia in education can positively impact students' engagement and achievement[1]. Therefore, educators at all educational levels use it as a tool to improve instruction and promote learning among students[2, 4], aiming to achieve various educational outcomes such as language learning, engagement, social presence, and collaboration[3, 5], and to acquire new media and information technology skills[2]. DST in early childhood classrooms, in particular, can increase students' engagement and support their mastery of the content[6]. According to Verdugo and Belmonte[7], using DST even allows children younger than six to understand a new language.

The language experience approach (LEA) has been used for decades to develop the literacy skills of children, particularly those who are second language learners. It is an effective teaching strategy that can enhance students' literacy development through meaningful and contextualized interactions. It benefits ELLs by providing richer language experiences by effectively integrating reading, writing, listening, and speaking[8].

Leveraging the benefits of LEA through DST has not been adequately researched in the context of the United Arab Emirates (UAE). No studies have examined how this unique approach can help young children develop English language skills by providing linguistic and visual inputs in creating authentic and effective language learning experiences[8]. This study aims to investigate preservice teachers' experiences in creating digital stories combined with LEA for teaching K-3 students in the context of a federal university in the UAE. It focuses on exploring the potential of using DST combined with LEA as an innovative teaching and learning approach. It investigates preservice teachers' confidence in using DST as a viable approach for reading and writing instruction for emergent language learners. The outcomes of this study aim to help understand the power of DST combined with LEA in developing reading and writing skills for emergent language learners in the UAE. The present study has the following objectives:

(1) To explore the perception of preservice teachers on using DST combined with LEA in teaching reading and writing to K-3 students.
(2) To explore preservice teachers' comfort in using technology to support teaching emergent reading and writing through DST.

2. Literature Review

2.1. Digital Storytelling (DST)

Young learners enjoy listening to stories and are able to better understand society and life through stories[1]. Storytelling and reading have been found to improve language acquisition in young learners and are even claimed to be more effective in teaching language skills than traditional language teaching methods[9]. In particular, DST can significantly impact young learners' educational outcomes, collaborative skills, engagement, and critical thinking. For instance, DST contributed to early learners' mathematical and computer literacy development[10]. Early education teachers can use DST to make learning more entertaining, engaging, captivating, and communicative[1]. Collaborative online storytelling can also enhance second language young learners'

communicative skills[11]. Through creating digital stories, students "develop enhanced communication skills by learning to organize their ideas, ask questions, express opinions, and construct narratives"[12]. DST can also enhance young learners' conceptual understanding of stories compared to traditional storytelling[13]. Huang supported including diverse DST formats due to its motivating effect on students[14].

Technology is believed to improve learners' language skills; therefore, integrating DST into language learning can positively impact young learners' literacy skills development, including reading, writing, and vocabulary mastery[15]. Al-Omari and Al-Sayari found that DST positively affected learners' reading, analysis, and recognition abilities[16]. Compared to young learners who received traditional storytelling activities, those who received DST activities showed a significant increase in alphabet knowledge and phonological and print awareness[17]. Amirinejad and Rahimi found that young learners' reading and writing skills were improved due to integrating DST into STEAM teaching[18]. Korosidou and Griva also concluded that DST enhanced young learners' second-language writing skills by providing a safer and more creative teaching context, positively impacting their attitudes toward writing in a second language[19]. Exposing children to new terms regularly through DST activities is also a laborious approach to teaching vocabulary in the classic sense[20]. Although DST can enhance young learners' learning outcomes, teachers often prefer to follow the traditional approaches and avoid using them[21].

2.2. Language Experience Approach (LEA)

LEA is based on teaching literacy skills by building on students' unique backgrounds, interests, and lived experiences, which creates a better chance for them to develop these skills successfully[22]. In a language experience classroom, students verbally recreate individual or shared experiences, and teachers transcribe those oral shared experiences verbatim. The student-generated text then makes a foundation for teaching and learning literacy skills[23]. Through LEA, students enhance their learning experiences by utilizing learning materials that incorporate meaningful ideas and familiar vocabulary tailored to their unique backgrounds and experiences. LEA is an effective teaching method for young second-language learners because it extends their creativity in storytelling and allows for collaborative work, which can extend language skills[8]. Using DST as an activity, teachers can effectively leverage the benefits of LEA in their classrooms. Both DST and the LEA are grounded in the constructivist learning theory principles. Used correctly, it can be a powerful instructional tool to create an engaging and constructive learning environment[5]. Constructivism in learning implies that learners construct new knowledge through experiences and interactions with their environment[24]. Through DST and LEA, young learners actively create and interact with content as they develop their digital stories based on their lived experiences, transforming them from passive to active learners[5]. Young learners also immerse in hands-on experiences in a context that is authentic and relevant to their experiences, which allows for a deeper understanding of language concepts.

2.3. Technology Integration in Education

Examining the competencies required of in-service and preservice teachers has become more crucial due to the digitization of education. Over the last 10 years, "digital competence" has gained significant relevance due to the benefits and difficulties of utilizing digital technology in education and training. The process of digitizing education can potentially influence the growth of educators' digital competency and their views of this domain[25]. Redecker and Punie define the transdisciplinary concept of digital teaching as a combination of pedagogical and procedural knowledge, content knowledge of school topics, and transdisciplinary knowledge[26]. According to Smestad et al., research on teachers' digital competence typically possesses the following traits: it is unclear who benefits from digital competence; it views teachers more as functionaries than as designers; it focuses on teachers' attitudes, knowledge and abilities; and it sees competence as derived from theory and experience, frequently unrelated to subjects, and usually derived from self-reported data[27].

Further findings indicate that the COVID-19 pandemic altered the landscape to some degree. The requirement to educate a whole class digitally over an extended period of time may have led to a shift in emphasis away from instructors' roles as designers and toward the entire student body and the use of pre-made teaching resources. Though technology integration in teaching and learning is an important approach to enhancing learners' experiences, it is not always applied

correctly in the teaching process [15].

2.4. Technology-Based Language Teaching

The use of different technologies can improve the development of language and literacy skills in young learners [28]. Integrating technology in language education has become increasingly prevalent [29]. One of the prominent models used to investigate the application of technology in teaching is the Technological Pedagogical Content Knowledge framework [30]. The framework emphasizes the importance of interaction between teachers' technological, pedagogical, and content knowledge to create effective and meaningful technology integration in teaching. The flexibility allowed by TPACK in adopting it for different educational and cultural contexts makes it an effective tool for technology integration into language learning [31]. TPACK's application in language teaching can improve learners' reading skills [32], writing skills [33], and grammatical understanding [34]. Amongst the most used and promising applications of technology integration in language teaching are technology-enhanced language learning (TELL), computer-assisted language learning (CALL), and mobile-assisted language learning (MALL) [29]. Many studies investigated the impact of using these three models on developing different language skills. For example, studies found a positive impact of MALL on reading comprehension [35], vocabulary acquisition [36, 37], and grammar performance [38], listening skills [39]. The effect of integrating technology in early childhood education, however, remains a controversial topic in the literature.

3. Methodology

3.1. Research Design

The study followed an exploratory qualitative case study approach by collecting descriptive responses from participants. Qualitative case studies allow for analyzing a research problem or concern within its natural setting [40]. This design was chosen to explore and understand participants' experiences using DST combined with LEA in their teaching.

3.2. Participants

Participants were ten Emirati female pre-service teachers from the College of Education at a UAE government university. All participants were enrolled in the College of Education's Early Childhood Education program. All participants were bilingual, speaking both Arabic and English, with Arabic being their first language. They were conveniently chosen as they were enrolled in a language development and emergent literacy early childhood course. Participants were asked to teach reading and writing skills to K-3 students by creating digital stories combined with the language experience approach protocol.

3.3. Data Collection

The data for this study was collected using a descriptive response form that included ten open-ended questions. Participants were asked to respond to the questions in writing. The questions allowed participants to describe and reflect on their experiences using DST and LEA with K-3 children. The questions in the response form focused on their personal experiences, their students' reactions to the approach, and their perceptions of the advantages and disadvantages of using DST and LEA.

3.4. Data Analysis

According to Braun and Clark , a thematic approach involves "identifying, analyzing, and reporting patterns (themes) within data" [41]. Qualitative data in this study was analyzed using a deductive thematic approach. The collected data was coded manually. The analysis involved reading through the response forms to understand the data better. The data was then coded by identifying common ideas or themes. Three main themes were identified as an outcome of the thematic data analysis process. These are: 1) the perceived benefits of implementing DST combined with LEA, 2) the perceived challenges of implementing DST combined with LEA, 3) and the need for adequate training.

4. Findings

4.1. Perceived Benefits of Implementing DST Combined with LEA

Nearly all the respondents noted that using DST with LEA increased their students' motivation and engagement in learning. Respondents also asserted that this approach fosters the development of communication skills such as self-expression. For example, respondent 3E observed that students' excitement emanated from "their love for attractive colors". As Respondent 3E explained, students were engaged in photographing and competing in producing different drawings based on their imaginations. Respondent 4E mentioned that the students' excitement stemmed from their exposure to new experiences of using different senses, such as touch, in creating their stories. The approach promotes interactive, sensory, and active learning, which makes it appealing to students with different learning styles, such as "the auditory, visual, and motor students" (6E).

There was a consensus among respondents that using DST with LEA was a very effective technique for acquiring reading and writing skills. Respondents identified positive outcomes such as generating in students the desire to acquire new experiences, providing great flexibility in education methods, and adapting to the curriculum. The approach raises students' curiosity and excitement as they convey their newly learned ideas and develop new opinions. Respondent 5E observed that "the student's handwriting improved, he also learned writing skills…where to put a question mark, period and comma…" There were also improvements in communication skills, which allowed them to express themselves freely. Developing higher-order skills such as listening, critical thinking, and imaginative skills was considered critical in developing writing skills. The experiment underscored the importance of a relaxed, interesting, and familiar learning environment as conducive to developing reading and writing skills.

Adopting storytelling with LEA was viewed as an effective approach to encourage using varied activities that appeal to learners with different learning styles. Respondents felt that this approach promotes more and better inclusivity in the classroom. There was a general agreement that DST combined with LEA was suited to all ages as well as being appropriate for inclusive classrooms (students with diverse learning abilities) as it gave all students an opportunity to adapt using "drawing and colouring to help students express their ideas" (3E). The approach allowed the students to gradually and sequentially communicate their ideas. However, about half of the respondents noted that although the model is inclusive, slow learners needed more time to adapt to it. Respondent 8E suggested the need for activities "to be simple and suited to all levels of students".

4.2. Perceived Challenges of Implementing DST Combined with LEA

On the shortcomings of using DST with LEA, some respondents felt that applying this approach was time-consuming. Respondent 7E felt that the approach could be effective if students were given adequate time to complete their tasks, especially if there were "difficulty in understanding [the tasks]". Respondent 10E shared similar concerns that the approach required "a long time to prepare" so that learners could benefit from the given tasks. Preparation includes ensuring clarity and suitability of the lesson objectives, matching the activities to students' cognitive levels, assessing the students' readiness, and determining the timing of the lesson. Respondent 10E mentioned that there was a need to incorporate various learning activities, including video presentation and game installation, to create a conducive, familiar, and exciting learning environment, which can increase the time teachers spend preparing for the lessons. This was echoed by Respondent 8E, who stated that "the process can be very complex as there is a need for thorough planning, analysis, and organization of ideas".

Another challenge mentioned was the need to be experienced in differentiated instruction. Some respondents felt that as preservice teachers, it was important for them to know how to design activities "according to [students'] "likes and interests" (Respondent 6E, Respondent E7). According to the respondents, designing the writing process also requires proper knowledge of sequencing the learning activities from lower to higher order skills, which is another area they thought they should be experienced in. For example: "from intersecting letters, forming of words, writing a simple sentence to finally composing a short story that matches the drawing that she drew" (7E). This emphasizes the importance of understanding students' cognitive development so that tasks can match their cognitive levels. Respondents also mentioned the approach calls for patience with learners as the teacher needs to equip learners with psychomotor skills, "demonstrating what the learner needs to master until the

learner can write on his own" (8E).

4.3. The Need for Adequate Training

Some respondents indicated that they were not yet ready to integrate technology, particularly digital stories, in their teaching, citing a lack of training in this area. For example, Respondent 8E stated that "digital story is new to many teachers, hence the need for training" in order to acquire "sufficient knowledge and awareness". The need for further training was also echoed by Respondent 6E, who said that "teachers must develop themselves through engaging in many courses on how to facilitate [this type of] learning". Respondent 3E believed that DST could be successful if preservice teachers received adequate training on using different digital technologies to make the lessons enjoyable and successful. Some respondents believe that students also need proper training in making digital stories. According to them, the approach required sound digital competence so that students could easily adapt to new digital applications. Respondent 3E mentioned this by saying, "… so that they are familiar with those different technologies…with a focus on making students enjoy the lessons". Respondent 8E also highlighted the need for thorough preparation for students to ensure that they took the activities seriously. These responses stress the importance of training teachers and students in digital competence to integrate digital story-making in literacy instruction effectively.

5. Discussion

The results of this study show that the use of DST combined with LEA was generally seen as a viable tool to teach emergent literacy skills, specifically reading and writing. There was a general consensus among the respondents that active, interactive, and collaborative strategies used for DST and LEA were effective in teaching reading and writing skills. Most respondents appreciated the opportunity to teach reading and writing skills from the perspective of students' experiences. This confirms findings from previous studies where preservice teachers found the use of DST to be an effective tool for engaging young learners and enhancing their literacy learning experience [42–45].

The importance of using modern technology aligns with the TPACK framework, which guides teachers on how to promote learning in the classroom in an interesting and effective way [30]. The results also show that using DST in teaching reading and writing can be hindered by the technological incompetence of both the teachers and the students. The majority of respondents were not comfortable using technology in the classroom. This could be because technology is rarely used in early education classrooms [46]. Preservice teachers demonstrated the need to be equipped with appropriate technological skills to effectively use DST for reading and writing instruction. Facing technological challenges by preservice teachers in using DST was also reported in a number of studies [44, 45].

6. Implications for Practice

Using DST combined with LEA to teach young second language learners reading and writing can be viable. Both DST and LEA allow young learners to construct and co-construct contextual and relevant knowledge to their interests and experiences. Using students' experiences as a foundation to teach them reading and writing enhances their engagement and willingness to learn. However, applying this approach in early education language classrooms can be challenging. Teachers' attitudes and intentions to use DST tools are significantly influenced by their perceptions of the ease of use of these tools [47]. Inservice and preservice teachers report the need for proper training on using technology to create digital stories and teach students how to create their digital stories. Usually, early education teachers refrain from using technology in the classroom because of regulatory requirements to limit the use of technology with young learners. It is, therefore, important to train teachers on the effective use of technology to create digital stories while also ensuring this use does not interfere with specified educational requirements. This can be achieved by providing continuous professional development and workshops to ensure teachers are always equipped with the latest technology and the best pedagogical approaches to implement them in their classes. Schools can also integrate DST into the curriculum to ensure consistent application across the board. Schools can also provide access for teachers and students to DST tools such as Alice and Scratch [48].

7. Limitations

This study is not without limitations. The first and most obvious limitation is the sample size. The data would have been richer if the sample size was more than ten. The second limitation was the duration of the study, which was only one semester. A longitudinal, multi-site design that investigates the use of DST combined with LEA in early education classes could provide valuable insights into how this approach can impact language learning. Another limitation of this study is the use of one data collection method, which is the self-reported response form. Using other data collection methods, such as observations, could have produced richer data. Another limitation was the lack of data about the children with which participants in this study implemented DST combined with LEA. More information about those children's profiles, learning levels and capabilities could have enhanced the study's findings. Finally, because the use of technology in teaching and learning has increased in recent years, more studies should focus on the technological challenges and needs of preservice teachers.

8. Conclusions

The aim of this study was to explore the use of DST combined with the LEA in the context of an early education program in a federal university in the UAE. The study found that using DST with LEA has benefits in making reading and writing instruction more interactive, which can potentially enhance students learning. While DST proved to be a promising approach, the challenges associated with technological incompetence among preservice teachers and students must be addressed. The findings of this study call for more training and professional development on the use of technology, particularly the effective use of DST. Preservice English language teachers can become more confident if they understand how to use new technologies to improve the literacy outcomes of their future students.

Author Contributions

For research articles with several authors, a short paragraph specifying their individual contributions must be provided. The following statements should be used Conceptualization, methodology—G.A.M.; investigation, A.A.Z.; writing—original draft preparation, R.T.A, D.A. and C.M.; translation, F.A. All authors have read and agreed to the published version of the manuscript.

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