

Exploring Benefits and Challenges of Implementing Digital Storytelling in EFL Writing Classrooms.

استكشاف فوائد وتحديات تنفيذ رواية القصص الرقمية في فصول الكتابة باللغة الانجليزية كلغة أجنبية.

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Abstract:

Digital storytelling (DST) emerged as a powerful pedagogical tool capable of developing various skills including writing. The main objective of this study is to explore Algerian EFL teachers' experiences and challenges during the implementation of DST in their writing classes, examine the perceived educational impact on students, and record teachers' adaptive strategies. A qualitative study was conducted using interviews with Seven Algerian EFL teachers who implemented DST, and the data was thematically analyzed. The findings displayed Key challenges encountered including technological barriers. However, a significant educational impact was recorded. Despite difficulties, DST can be successfully implemented in Algerian EFL writing classrooms. This research provides valuable insights for educators who seek to revolutionize their writing instruction through Digital Storytelling.

Keywords: Digital Storytelling, English as a foreign language, challenges, technology integration, writing skills.

ملخص:

ظهرت رواية القصص الرقمية كأداة تربوية قوية قادرة على تطوير مهارات مختلفة بما في ذلك الكتابة. الهدف الرئيسي من هذه الدراسة هو استكشاف تجارب وتحديات معلمين جزائريين للغة الانجليزية كلغة ثانية أثناء تنفيذ رواية القصص الرقمية في فصول الكتابة، و فحص التأثير التعليمي المتصور على الطلاب، وتسجيل استراتيجيات تكيف المعلمين. تم إجراء دراسة نوعية باستخدام مقابلات مع سبع معلمين جزائريين للغة الانجليزية كلغة ثانية الذين نفذوا رواية القصص الرقمية، وتم تحليل البيانات بشكل موضوعي. أظهرت النتائج التحديات الرئيسية التي تمت مواجهتها بما في ذلك الحواجز التكنولوجية. ومع ذلك، تم تسجيل تأثير تعليمي كبير. على الرغم من الصعوبات، يمكن تنفيذ رواية القصص الرقمية بنجاح في فصول الكتابة باللغة الانجليزية كلغة أجنبية بالأقسام الجزائرية. يوفر هذا البحث رؤى قيمة للمعلمين الذين يسعون إلى إحداث ثورة في تعليمات الكتابة من خلال رواية القصص الرقمية.

الكلمات المفتاحية: رواية القصص الرقمية، اللغة الإنجليزية كلغة أجنبية، التحديات، إدماج التكنولوجيا، مهارات الكتابة.

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1. Introduction

Storytelling has historically been employed across several cultures as a powerful instructional tool. Pellowski defined storytelling as an art form which existed throughout history,

“Storytelling is the art or craft of narration of stories in verse and/or prose, as performed or led by one person before a live audience; the stories narrated may be spoken, chanted, or sung, with or without musical, pictorial, and/or other accompaniment and may be learned from oral, printed, or mechanically recorded sources; one of its purposes may be that of entertainment.” (as Cited in Nguyen et al., 2021).

In today's digital era, Storytelling evolved to incorporate new multimedia technologies. Digital storytelling (DST) is the integration of conventional art of storytelling with digital components such as images, audio, music, and video (Robin, 2016). The concept of digital storytelling (DST) developed and became a practical tool in the field of education (Churchill, 2020; Yang et al., 2012). Among the language skills which DST has been making significant progress and causing a profound transformation is writing. It is well recognized that writing is a challenging skill for learners due to its complex nature, (Graham & Perin, 2007) especially for young EFL learners. Since the 21st-century students grew surrounded by technology, they are inherently familiar with technology and more motivated to use it as a means of enriching their knowledge, while demonstrating reluctance towards conventional modes of education. Therefore, the traditional methods of teaching and practicing writing skills in EFL Classrooms need to be revolutionized through the use of Digital Storytelling.

1.1 Research Objective

This paper focuses primarily on exploring the benefits harnessed from DST integration into Algerian EFL writing classrooms and the challenges faced by teachers during the implementation besides recording different strategies adapted by teachers to overcome the obstacles consequently providing significant insights for educators to strategically implement Digital Storytelling and maximize its benefits on students' writing skills.

2.1 Research questions

In order to achieve the study's objectives, the following research questions are addressed:

1. What benefits does the integration of DST in the EFL writing classroom offers for students?
2. What obstacles do teachers encounter in implementing DST in EFL writing classrooms?
3. How do educators manage to strategically overcome obstacles and effectively implement DST in EFL writing classrooms?

3.1 Research Significance

The study offers strategic insights based on teachers' direct experiences inside their writing classrooms. The findings can serve as practical instructions for educators and institutions providing concrete measures for the successful and feasible implementation of DST in the Algerian EFL writing classroom. Teachers may also use these findings to develop more captivating and interactive language learning experiences. This study urges educators, institutions and policy makers to develop an inclusive learning environment, establishing a solid technological infrastructure and ensure equitable access to technology for all students. In summary, this research's value rests in its capacity to enlighten educational practises, enrich academic research, and inspire future research in the evolving field of foreign language education.

2. Literature Review

The widespread impact of technology, particularly the internet, has become an undeniable aspect of the 21st century classroom. (Tamim et al., 2011) Prensky (2001) described the concept of “Digital natives” as the generation that has been fully engaged with digital technology from a young age and that they are already familiar with multitasking and prefer interactive, visual learning experiences. This generation often employs a range of digital devices, including computers, electronic games, multimedia players, digital cameras, and mobile phones, they are deeply engaged in many forms of digital communication and entertainment, such as instant messaging, emails, online surfing, blogs, wiki tools, portable music, social networking, and video sites (Prensky 2001; Lea & Jones 2011; Sternberg et al. 2007).

The incorporation of computers and the internet into the life of this tech-savvy generation has led to major shifts in educational practices, such as distance education, online learning, and blended learning (Tamim et al., 2011). In modern educational setting, technology is an integral part of the school environment, with instructors using it frequently. The fundamental school infrastructure comprises various technological devices such as computers, printers, scanners, digital cameras, and access to the Internet. Additionally, the majority of teachers have the means to use word processing, calculations, Software for communication and multimedia (Hsu, 2013, as cited in Smeda, 2014). Schacter and Fagnano (1999) asserts that when technology is used properly, it enhances students' learning, comprehension, and performance. Additionally, it boosts their desire to study, promotes collaborative learning, and cultivates critical thinking and problem-solving skills. (as cited in Pitler, 2006)

DST has become a prominent topic of conversation when discussing the connection between technology and education. Research conducted by Lashari et al. (2022), Sadik, (2008); Hung et al. (2012); Yang & Wu, (2012); Smeda t al., (2014) reported improved student academic achievement. Yamaç & Ulusoy (2016), LoBello (2015), Tanrikulu, F. (2020), Syam, 2022, Sönmez (2023), Munajah (2022), Campbell (2012), and Yang & Wu (2012), repeatedly emphasised the beneficial effects of DST on students' writing proficiency,

digital literacy, self confidence and motivation. The results of these studies highlighted the several benefits of integrating DST into writing instruction. Further research has demonstrated that it can boost student engagement and motivation, retention, self-perception, and creativity, leading to an overall enhancement in writing performance (Choi & Johnson, 2005; Campbell, 2012; Foelske, 2014; Smeda et al., 2014; LoBello, 2015). Tetik and Ozer (2022) claim that using DST increased students' knowledge of writing, including text types and spelling rules. Moreover, DST has been regarded as an effective instrument to assist language instructors. The use of visual imagery, auditory elements, and colours in DST stimulates learners' curiosity and facilitates their comprehension of the texts. Furthermore, DST aids the teachers in establishing a more captivating and engaging atmosphere (Syam, 2022).

Self-efficacy is the belief that an individual has in their ability to perform a specific task. (Bandura, 1997) In a study conducted by Xu et al. (2011) indicated that DST enhances students' writing self-efficacy and promotes an attitude of spontaneous concentration and engagement known as flow. It has been also proved that DST's collaborative nature fosters a sense of unity and cooperation among students, successfully eliminating digital gaps and improving proficiency in the emerging forms of literacy (Chigona, 2013; Yamaç & Ulusoy 2016). Moreover, DST also functions as an efficient educational tool for enhancing language proficiency (Reyes et al, 2012) and fostering constructivist, student-centered learning methods, (Smeda et al., 2014) incorporating active learning, deep learning reflection, project-based learning, and effective technology integration. (Sadik, 2008; Hung et al, 2012; Erdogan, 2021;) The diverse and intricate nature of DST is seen in its capacity to tackle multiple aspects of student-centered education. Scholars emphasized the significance of integrating DST into several disciplines, promoting students' creativity, research skills, and problem-solving skills. (Niemi & Multisilta, 2016). The importance of DST in enabling the development of crucial literacies required in the 21st century, such as information literacy, media literacy, visual literacy, and technical literacy, is also evident (Burmark, 2004, as cited in Robin, 2008; Chigona, 2013;; Niemi & Multisilta, 2016).

Eventually, the combination of many perspectives and findings demonstrates the varied benefits and uses of DST in the field of education. It is a flexible and powerful method that can be applied in many educational settings. The use of DST has the capacity to revolutionize writing instruction, by effectively responding to the evolving needs of students in the 21st century. Scholars such as Alismail & McGuire (2015) urged for the development of 21st century skills in combination with the core academic skills to prepare students for their future careers in the digital age.

Despite the numerous advantages, Obstacles exist when implementing digital storytelling into conventional educational environments. Challenges with equity, namely in terms of technology accessibility and use, the disparity in digital literacy skills among students, copyright issues and time constraints might hinder the efficient implementation of DST (Sadik 2008; Dogan & Robin, 2008; Henderson & Yeow, 2012; Figg & McCartney, 2010; Choi & Johnson, 2005; Yigit, 2020;). In the Algerian educational context, where English language learning has lately gained importance, acquiring good writing and communication command becomes vital. Graham and Perin (2007) stated that writing

proficiency is a real indicator of academic achievement. However, Writing is a cognitive process that involves the generation and organization of ideas, and revision through its process, followed by critical reflection, reorganisation, and rewriting. (Tetik & Ozer 2022) In this digital age, Teachers must require the skills to incorporate technology into writing activities in order to effectively teach writing skills (Syam, 2022). Therefore, the aim of this study stems from the fact of exploring the opportunities offered by Digital storytelling to the EFL writing classroom and the common challenges faced during its implementation based on, real-classroom practices over the course of DST implementation in diverse EFL writing Classroom settings offering richer insights and strategies to overcome the challenges encountered.

Despite the Literature targeting the use of DST in Algerian universities, (Hafidi and Mahnane, 2018, Kassous and Sarnou, 2021, Mselem and Abbaci, 2023;), opportunities and challenges of DST implementation in an Algerian context specifically in the writing classroom is somewhat limited, there are fewer studies that suggested potential advantages and obstacles related to DST's implementation to promote language learning. (Nouari 2023) However, lacking long term research and focusing on instant results only without developing specific frameworks for educators to overcome the complexities of integrating Digital Storytelling into EFL writing classrooms. By addressing these gaps, comprehensive insights from teachers' authentic classroom practices is needed to find out what does digital storytelling offer to the EFL writing classrooms and how does it prove to be feasible in an Algerian setting, particularly in situations influenced by diverse backgrounds and technical factors.

3. Research Design:

This study aims at exploring opportunities and challenges faced by EFL teachers during the implementation of DST in EFL writing classrooms and unravelling teachers' adaptive strategies to overcome the challenges and ensure a better DST implementation in the EFL writing classroom. Through an in-depth exploration of teachers' voices and experiences, this study adapts a descriptive qualitative approach, offering deeper insights into the complexities of DST implementation, challenges faced, and suggested strategies based on authentic classroom practices to effectively implement DST in EFL writing classes. This qualitative case study draws on both literature review and semi-structured interviews with EFL teachers from four different Algerian secondary schools.

1.3 Sampling:

The sample for this study consists of seven EFL teachers aged between 28 to 36 years old, belonging to four different Algerian secondary schools with diverse settings both rural and urban. The selection of participants was based on their experience and expertise with DST integration in EFL writing classes and their willingness to participate in the study. The sample was purposive, and participants were selected based on their availability and desire to participate.

2.3 Data Collection:

The data collection method for this study included semi-structured interviews. The literature review provides a comprehensive overview of the literature surrounding the implementation of digital storytelling as an educational tool. The semi-structured interviews were conducted with the seven EFL teachers to gain insights into their experiences and perceptions of incorporating digital storytelling in their writing classrooms. The interviews were audio-recorded with a smart phone after taking their permission and took around 30 to 45 minutes per each teacher. The recordings were later transcribed for analysis.

3.3 Data Analysis:

The data collected from the semi-structured interviews were analyzed using a thematic analysis approach which is the process of detecting and identifying themes or patterns in data that is qualitative. (Maguire & Delahunt, 2017) As Braun and Clarke (2006) claimed, thematic analysis is a versatile and valuable research method that has the capacity to produce an extensive yet intricate account of data. The data was deductively coded and categorized into themes and sub-themes based on the emerging data. The themes were later refined and revised into three main themes in order to serve the research questions. The validity of the current qualitative findings were assessed by the use of a member checking technique, which involved presenting the final product such as major findings, patterns or themes and the researchers' descriptive interpretations to the participants in order to determine their perceptions on the accuracy of the findings. (Creswell, 2018, P. 314)

4.3 Ethical Considerations:

The study follows ethical standards ensuring confidentiality, and maintaining anonymity. The participants were informed of the study's objective, their rights as participants, as well as the confidentiality and anonymity of their data. They were provided with the opportunity to withdraw from the study at any given moment according to their circumstances. (Creswell,2018,P.329)

4. Results

The Results section aims to illuminate the rich insights obtained through thematic analysis, providing a comprehensive understanding of the experiences and perspectives of the seven EFL teachers in the integration of digital storytelling. This section outlines the identified themes and patterns, contributing to the overarching goals of the study. The semi-structured interviews served as the primary mode of data collection, offering an in-depth exploration of teachers' experiences. The dataset encompasses rich narratives, insights, and reflections shared by the participants, providing a nuanced view of the benefits, challenges and strategies to overcome the obstacles encountered in digital storytelling's implementation in EFL writing classrooms. Thematic coding followed a descriptive orientation, aiming to

systematically identify and describe patterns within the dataset. A deductive approach was adopted, aligning with predefined themes derived from the study's research questions presented below.

1.4 Research Question 1: What benefits does the integration of DST in the EFL writing classroom offers for students?

Theme 1: Benefits of Using DST in EFL Writing Classrooms

1.1.4 Improved Engagement and Motivation

All Participants supported the idea that the incorporation of digital storytelling significantly increased students' engagement and motivation. Participant 4 articulated that *"there was an obvious effect on students' motivation"* since he observed that his *"...students were more motivated."* And Participant 2 recorded *"higher"* motivation level of his students which further emphasized the noticeable transformation in his students' motivational levels. Participant 6 also witnessed that his students were *"...really enthusiastic and engaged..."* and noted an *"...increased engagement and motivation..."* among them. Obviously the most prominently mentioned benefit was the increase in students' motivation and engagement in writing tasks compared to traditional writing tasks as it was further stated by Participant 1 who stressed the fact that *"mobile applications that students used to create digital stories have improved their engagement and motivation in the writing process remarkably than before. The interactive and user-friendly elements of the Digital storytelling apps kept them focused on task and created a positive and enjoyable experience."*

Participant 5 who explained: *"Even the most uninterested students started participating..."* underscoring the inclusive influence of digital storytelling. Participant 5 further admitted that: *"The writing process became more engaging and fun with the inclusion of multimedia components in writing tasks."* Participant 3 who echoed the same sentiment stating that students were more excited and interested in writing using digital storytelling than with the conventional writing lessons. *"the degree of enthusiasm that I honestly didn't see in traditional methods"* (Participant 3) This further indicates the transformative impact that DST had on students' motivation and engagement.

Participant 6 shared the same expression and stated that with the use of various multimedia elements in the creation of the digital stories process *"had really sparked their (students) attention"*. On the same path, participants 7 declared that *"Because of the multimedia environment, students were more involved, especially the auditory and visual learners. The final projects were of somewhat a nice quality since their excitement for the task increased."* He further reported that their overall *"interest in writing assignments"* increased compared to traditional sessions." This undisputed acknowledgment among teachers establishes the prominent role of digital storytelling in fostering heightened engagement and motivation among students, surpassing the levels observed in conventional writing methods.

2.1.4 Writing Skills Development

Digital storytelling led to notable improvements in students' writing skills, including organization, structure, spelling, grammar and overall accuracy. Participant 1 encapsulated the transformative impact, noting, *"...the visual elements used have remarkably improved their*

storytelling skills and led to a more enhanced narrative writing skills when it comes to the overall structure and organization...” This observation was confirmed by Participant 2 who remarked an improvement: *“in terms of organization, structure and language accuracy.”* within his students’ compositions. Participant 3 noticed that his students made *“less spelling and grammatical mistakes”* since they had to undergo the process of “writing and rewriting the scripts again and again” to fit it in the digital story, stated participant 3.

The participants consistently noted improvements in writing proficiency, with Participant 4 recording the development of *“stronger writing,”* which indicates a shift in the students’ writing skills. Participant 5 observed an enhanced *“comprehension of the story’s structure”*, indicating a nuanced understanding of narrative elements. Moreover, Participant 6 expressed satisfaction, noting, *“...an amazing improvement”* in his students’ writing skills and story composition specifically. Participant 7 who reinforced the idea, stating that students’ writing witnessed improvements in accuracy, and *“...their narrative structure improved compared to previous attempts in traditional writing sessions.”*

Collectively, these insights emphasize the multi-faceted impact of digital storytelling on fostering a notable progression in students’ writing skills, encompassing both technical aspects and the overall narrative composition.

3.1.4 Increased Creativity

Based on Participants’ insights, the integration of digital storytelling emerged as a powerful means of releasing the boundaries of creativity within the EFL writing classroom, as vividly expressed by Participant 3:

“It felt like I have opened the door and invited beautiful and creative minds to the classroom. The day students presented their digital stories in class felt like a talent show. I was really impressed and enjoyed every minute. The students were enthusiastically watching each other’s stories and commenting on them.”

A recurring sentiment among the participants highlighted the transformative impact of the multimedia nature of digital storytelling on elevating students’ creativity. Participant 3 elaborated on this aspect, noting that *“students enjoyed the opportunity to incorporate images, personal drawings, and self-created films into their digital narratives, leading to a noticeable increase in their artistic skills”*. Participant 2 approved, emphasizing how the multimedia dimension of digital storytelling *“...added a creative vision...”* to students’ expression. Participants 1, 4, and 6 echoed the same sentiments, noting considerable improvements in students’ creativity. They acknowledged that digital storytelling platforms and websites played a vital role in enhancing students’ creative capacities, with Participant 4 providing a specific example: *“We utilized the user-friendly ‘AutoDraw’ website to assist students in creating their imaginative drawings, adding a creative and unique step to their digital stories.”*

These insights collectively highlight the deep impact of digital storytelling in fostering students’ creativity and creating a vibrant and enriched creative atmosphere, where students are active creators, demonstrating their imaginative skills through multimedia storytelling.

4.1.4 Enhanced Digital Skills

The transition from hesitant technology users to skilled digital storytelling creators was apparent in the experiences shared by Participants 1, 5, and 7. According to Participant 7: "*the students who were most confused, delivered nice digital stories despite their weakness in using technology*" which indicates that less technically proficient students gained some digital competence in terms of using software to produce their digital stories, Participant 1 observed that his students preferred using different software and multimedia tools "*...interchangeably...*" demonstrating students' efficiency in using different software and multimedia tools resulting in a "*...successful and enjoyable creation of digital stories...*" (participant 1)

On the other hand, the majority of students in Participant 2's class displayed familiarity with digital tools and a considerable degree of proficiency in video editing tools and technologies. The participant stated: "*I focused on guiding students through the writing process, and they led the technology part*" indicating that the teacher maintained a guiding role only granting students autonomy in managing the technical components, he further stated that his students enjoyed presenting their remarkable digital skills and techniques in their narratives, even recommending applications admitting that the teacher acquired proficiency in using them with the students' assistance.

Furthermore, participant 3 witnessed "*stunning*" results and was impressed with students' technical competency stating, "*Surprisingly, once I gave them the basics, the majority of the students showed more competence with technology, consequently they were able to finish the assignment on their own. And I was so proud with how proficient they were with the digital tools.*" Participant 4 stated that he taught students visual literacy since it is considered an important component of digital storytelling and for the sake of delivering better visuals that convey the meaning of the story, besides teaching them to ethically use resources and avoid copyright infringement which evidently resulted in "*amazing results*" as he declared. Following the same path, participant 6 incorporated a digital literacy session and created a "*tech-savvy student support program*" that facilitated the acquisition of digital skills among students, empowering them to "*... use digital tools to create better digital stories...*".
Participant 6

Overall, these experiences confirm the beneficial influence of the digital storytelling integration process accompanied with a technology-proficient peer support programs and training in improving students' digital proficiency.

5.1.4 Encouraged Collaborative problem-solving Skills, Peer learning and Communication Skills

Digital storytelling emerged as an opportunity to promote collaborative learning, peer support, and effective communication among students, a sentiment that was shared by almost all participants. Participant 1, 2, 3 and 4 stated that students manifested cooperation during the process of creating their digital stories and that the participants encouraged collaboration among students in order to learn from each other, exchange feedback and for the sake of creating a "*supportive environment*" where students could "*help each other to use the apps effectively.*" (participant 1) Notably, participant 2, 3, 5 and 7 demonstrated collaborative problem-solving and peer learning by seeking support from their technically competent

colleagues and school experts to solve the technology integration challenges that they faced. Participant 3 for instance explained: *“I quickly looked for assistance from the school's technology specialists.”*

Participant 6 stated: *“we also initiated a “tech-savvy” student support program, where “tech-savvy” students teach and guide others.”* indicating an attempt of encouraging collaborative problem-solving among students, and peer learning which is demonstrated in the creation of a supportive environment where less proficient students learn from their peers a certain skill which is in this case effectively managing and using digital tools, consequently promoting effective communication and cooperation among students. Similarly, Participant 7 collaborated with a colleague to solve issues related to technology tools access in a rural school setting. However, when different problems persisted, he adapted different solutions such as using Project-based learning to address multiple challenges faced during the process of implementation. Consequently, cultivating students' collaborative and cooperative skills, fostering more communication among students and allowing for peer learning.

participant 7 shared.” *they were supporting each other and working collaboratively and showing me their progress every now and then, it also encourage dependent researching and learning even some of the students who were most confused delivered nice digital stories despite their weakness...”*. In this context, the adaptation of a project-based digital storytelling approach yielded fruitful outcomes, transforming the learning environment into a more student-centered approach. This not only fostered cooperation, communication, peer learning, and problem-solving, but also facilitated research-driven learning among the students. Participant 3 stressed the notion of peer learning through the peer assessment methods where students engaged in assessing one another and addressing each others' mistakes encouraging more learning to happen from peers. *“I encouraged self-assessment, and peer reviews which provided a comprehensive and inclusive assessment...It did not only assess individual performance, but also developed a culture of peer learning and self-reflection during the digital storytelling process.” Participant 3*

Based on these insights, it can be deduced that digital storytelling facilitated collaborative problem-solving, peer learning, and effective communication, while also fostering an inclusive environment, where students actively participated in assisting one another. Such initiatives led by the teachers tackled technological obstacles and encouraged a student-centered learning method. These efforts also nurtured skills beyond the digital domain, like collaboration, communication, and independent researching and learning. The results demonstrate a significant and positive influence on both educators and learners in the context of using digital storytelling in EFL writing classes.

6.1.4 Boost in self-confidence and the sense of Accomplishment

The participants' reflections indicated that the implementation of digital storytelling served as a tool for fostering students' self-confidence and self-efficacy. Participant 3 reported that his students progressed from being reluctance to active participation, ultimately becoming more confident individuals who proudly shared their

stories online. "I created a website where students could share their final digital stories and receive nothing but constructive feedback, I observed how students' engagement had increased and their sense of pride was higher whenever they received positive comments on their achievements." stated Participant 3. This also highlights the beneficial influence of granting students the opportunity to share or publish their stories with their peers or online in order to increase students' confidence levels and enhance their self-efficacy fostering a deeper sense of achievement, especially when rewarded with positive feedback on their achievements as it is apparent in the case of participant 3.

Participant 2 shared, "they were very excited and motivated to arrogantly show their stories at the end and see their classmates' stories too to judge and compare which one was the best." emphasizing students' enthusiasm and highlighting their sense of accomplishment in sharing their stories and eagerly assessing their classmates' work. This shift demonstrates a visible rise in students' confidence and a positive development in their self-perception of being successful digital story creators

In accordance with this viewpoint, Participant 6 noticed improvements in students' self-assurance as writers. "...they have also developed their confidence as writers..." The use of the digital storytelling not only enhanced their abilities but also cultivated a profound sense of achievement.

2.4 Research Question 2: What obstacles do teachers encounter in implementing DST in EFL writing classrooms?

Theme 2: Challenges of Implementing DST in EFL Writing Classes

1.2.4 Technology Obstacles

While discussing the benefits, teachers also noted common challenges faced during the implementation process. The main prevalent challenges were technology barriers, including issues with access, and varying digital skill levels. Participant 2 acknowledged the inherent challenges presented by the technological side of DST, stating, "The technology aspect was a little challenging for me." This candid admission revealed the initial obstacles encountered by the teacher when establishing the foundation of the technology integration and highlighting the teachers' technological deficiency. Participant 7 expressed a similar perspective, stating, "the process itself was difficult at first since I was novice and didn't have much knowledge on Digital storytelling..." This underlines the crucial importance of teacher's prior knowledge on DST, emphasising that poor comprehension and command of DST tools can hinder the implementation process for both the teachers and, as a result, the students.

On the other hand, participant 2 emphasised students' reluctance towards DST implementation. stating, "to be honest, when I first told my students that they will work with apps and make digital stories most of them were hesitant and confused and drained me with questions not only because of the digital storytelling tools, but they were also unfamiliar with the DST concept itself." This indicates that students' hesitancy was not only due to the use of digital storytelling tools, but rather because the students were unfamiliar with the concept of DST itself which created a sense of reluctance and hesitancy towards its implementation as a

whole emphasizing the importance of familiarizing the students with the technical term of DST, then the tools to be used before implementation.

The ability to anticipate and overcome obstacles was a crucial component of the experience. As predicted Participant 2: *"technology challenges were expected, and they occurred,"* emphasising a realistic perspective on the implementation process. This recognition of unavoidable outcomes framed difficulties as necessary parts of the journey rather than as unexpected obstacles. On the other hand, Participant 3 reported, *"Well... my first challenge was connection problems."* which indicates the school's weak technology infrastructure and failure to offer basic internet services for undefined reasons. Participant 5 and 7 reported facing *"devices and technology access"* due to the schools' restriction of using *"smartphones"* mentioning the rural context of the school and the difficulty of technology integration in such areas which sheds light on another critical technological challenge that hinders the implementation of DST in EFL writing classrooms highlighting the need for a stronger technology infrastructure and equitable, inclusive learning for remote school settings.

Besides facing technology integration obstacles, Participant 1 highlighted another significant obstacle in managing the DST applications, expressing that *"managing the apps appeared somewhat challenging for them."* This insight illuminates the early challenges faced by students as they dealt with the technical difficulties involved in using digital apps inside the DST framework. Furthermore, Participant 4 and 6 said that they faced different levels of digital literacy among students. *"I have struggled with problems of pupils' technological skills."* shared participant 4 which indicated the lack of students' basic digital skills including effective use of devices, software applications and online tools in general which was stressed by Participant 4 and 7 too who reported another aspect of digital deficiency including visual literacy and ethical use of different media available online which was demonstrated by Participant 4 who assumed that, *"Creating a digital story also required a high level of visual literacy; I saw several students choose pictures that weren't appropriate for their narratives and most of them belonged to their copy-right owners."* Indicating the misuse of media to convey the story's meaning that represents a crucial element of creating a successful digital story, another ethical issue that appeared in the later participant's experience which is the incorporation of copy-right media without seeking permission from the owner or plagiarism of content, an unethical practice that participant 4 and 7 emphasized on avoiding and radically eliminating with their students by providing alternative more ethical solutions.

To sum up, the different challenges faced in incorporating DST into EFL writing classrooms, including technological obstacles, limited access, students' lack of familiarity with DST concepts, and varying levels of digital literacy, highlights the complex nature of integrating technology as a whole and DST in particular into EFL writing classrooms. However, these issues emphasise the significance of not just resolving the technical aspects, but also considering the educational and ethical aspects of implementing DST. Educators must carefully negotiate these obstacles, giving priority to the requirement for extensive teacher proficiency and strategic planning to guarantee a successful and ethically right learning experience for both teachers and students.

2.2.4 Class Management Challenges

Adding to the previously emerging challenges, there were reports of other obstacles with managing and organizing DST implementation in the classroom due to factors such as crowded classrooms specific to rural contexts and time constraints. Teacher 7 declared, "...the second problem faced was the big number of students and the few computers available in the IT room ..." indicating the hindrance that may face teachers when implementing DST in circumstances like this, emphasizing the importance of acquiring class management techniques, problem-solving skills, and in-depth planning to ensure a better implementation experience. Participant 7 further admitted adapting a "careful" integration of DST in the classroom ensuring good alignment with the curriculum objectives and a strategic maintenance of educational focus. The mentioned challenges, such as overcrowded classrooms and time constraints, highlight the necessity for educators to apply strategic DST course planning measures to overcome hurdles and guarantee a successful implementation of DST in various classroom settings.

3.2.4 Assessment Difficulties

Assessing digital stories posed an issue for some Participants like Participant 7 who stated, "I struggled in assessing their final work and to give individual scores." the later had mentioned in the data that he adapted a Project-Based Digital Storytelling approach which involved students' collaborative digital stories projects, therefore, assessing individual contribution posed a challenge for this teacher. On the other hand, and based on some participants' Experiences, determining assessment criteria was difficult, especially for those less comfortable assessing technology skills, as Teacher 2 described: "While the tech part is not my strong point, I appreciate the students' effort, and we learn together." This perspective underlines a wider problem about the complex challenge of developing accurate evaluation criteria, particularly for teachers who are less competent in technology assessment. This also emphasises the necessity for training and thorough assistance in this field.

3.4 Research Question 3: How do educators manage to strategically overcome obstacles and effectively implement DST in EFL writing classrooms?

Theme 3: Teachers' Adaptive Solutions to Overcome Implementation Challenges

Participants used a variety of strategies to overcome the encountered obstacles. Those who were less familiar with technology or those who faced technical problems embraced collaborative problem-solving techniques by seeking help from "more competent colleagues" (participant 2), "IT experts" (participant 3, 5, 7), and even technologically proficient students. (Participant 6) This collaborative problem-solving approach is crucial, and highlights the need for a supportive professional community within institutions. On the other hand, offering alternative "offline resources" (participant 3, 5, 7), consequently fostering an inclusive learning environment and promoting equal opportunities for learning where all students could participate. This adaptive solution guarantees that any obstacles associated with internet accessibility do not hinder the progress of DST implementation. Participant 6 and 7 agreed on implementing digital literacy courses at the very beginning and establishing students' assistance programs for technical proficiency were significant steps to improve

overall digital competence. (Participant 6) Participants 4, 6 and 7 argued that facilitating seminars and training sessions for both educators and students played an essential part in ensuring a successful implementation. These proactive actions demonstrate teachers' recognition of the need of adequately preparing both teachers and students for successful integration of DST.

Moreover, through encouraging collaboration among peers and adopting project-based learning for large classes, participant 7 had not only addressed time constraints and managed large classes but also created an atmosphere that encouraged cooperation and students' autonomy stating: *"Using peer Collaboration has worked well. Students developed their cooperative and collaboration skills as they worked in small groups and learned from each other to create digital stories, adapting a project-based learning method also proved to be effective in saving time and reducing teacher-centeredness"*. As for overcoming assessment difficulties, the majority of the participants embraced a multimodal assessment method, incorporating diverse evaluation criteria and focusing on both content and the effective use of digital tools by incorporating rubrics for creativity, storytelling proficiency, and the successful integration of digital elements, in addition to promoting peer assessment, and self-reflection among students, which demonstrated a comprehensive and inclusive assessment approach.

To sum up, Participants adopted various strategies to overcome challenges, including obtaining support from colleagues, IT specialists, and technologically proficient students. Embracing collaborative problem-solving strategies, providing offline resources as alternatives, and cultivating an inclusive learning atmosphere were essential measures. Participants highlighted the need of organising workshops, training sessions, and embracing project-based learning to ensure effective implementation. A variety of assessment procedures that incorporate different evaluation criteria were adopted to achieve a thorough and inclusive assessment.

5. Discussion

Based on this study's research questions and the teacher's valuable insights multiple significant themes were revealed addressing the incorporation of Digital Storytelling (DST) in EFL writing classrooms. This discussion section will be a further interpretation of the findings and an exploration of the recognised advantages, challenges, and strategies applied by teachers to overcome obstacles offering an in-depth understanding of the implications for both teachers and students.

1.5 Benefits of Using DST in EFL Writing Classrooms:

This initial theme emphasised the opportunities offered by DST on various aspects of students' learning experiences. All participants consistently reported enhanced engagement and motivation As noted in the previous literature by Syam (2022), Tetik and Ozer (2022) and Hung, et al, (2012) The integration of multimedia elements, interactive features, and user-

friendly platforms led to increased enthusiasm among students, surpassing conventional writing methods. Aligning with the findings of Yamaç & Ulusoy (2016), LoBello (2015), Tanrikulu, F. (2020), Syam, 2022, Sönmez (2023), Munajah (2022), Campbell (2012), and Yang & Wu (2012), the study suggests enhancements in writing proficiency, including aspects such as organisation, structure, spelling, grammar, and overall accuracy. Furthermore, The implementation of DST also promoted heightened creativity as mentioned in the literature by LoBello (2015); Campbell (2012) and Niemi & Multisilta (2016), Affording students an avenue to demonstrate their imaginative skills through multimedia storytelling which is in line with the multimodal theory and the inclusion of “plurality of texts” which is an instructional and educational strategy that celebrates the inclusion of diverse learning materials and modes permitting learners to embrace techniques that facilitate their comprehension and active participation in the learning process. (The New London Group,1999:61).

Moreover, the incorporation of DST has led to an improvement in digital competence among students, (sadik, 2008; Niemi & Multisilta, 2016) transforming them from hesitant technology consumers to skilled producers. Finally, echoing the results of previous literature by Niemi & Multisilta (2016), Hung et al, (2012), Yamaç & Ulusoy 2016, DST encouraged collaboration and promoted the development of cooperative problem-solving skills, peer learning, independent researching, and effective communication among students, consequently cultivating a student-centered learning environment that prioritizes the need for students' engagement and activity a tenet that is linked to fundamental concepts of learner-centeredness and contextualized learning-by-doing (Papert & Harel, 1991; Dewey, 1938), and Vygotsky's Zone of Proximal Development (ZPD) which is an integral part of his socio-cultural theory of learning, explaining how learning and development is the result of social and cultural influences. (Vygotsky, 1978. As cited in Abtahi, 2021). According to the participants' classroom observations, the students developed self-confidence and writing self-efficacy (Xu et al, 2011) as they became more open to writing and proudly sharing their stories with peers and online.

2.5 Challenges of Implementing DST in EFL Writing Classes:

The second theme focuses on the obstacles faced by educators while implementing DST in their diverse EFL writing classrooms. A common challenge that arose was the presence of technological barriers, such as difficulties with technology access, students' equal accessibility to online content, differing levels of proficiency. (Dogan & Robin, 2008; Dreon et al., 2011; Sadik, 2008). Teachers observed that students displayed a lack of enthusiasm and uncertainty towards DST, The complexity of incorporating Digital Storytelling (DST) into language education is highlighted by the challenges of technology integration, limited device accessibility (Dogan & Robin, 2008), and varying levels of digital literacy among students. Teachers also faced challenges in managing their classes, including crowded classes and limited class time (sadik, 2008). The participants also highlighted facing challenges associated with assessing individual contributions and establishing assessment criteria.

3.5 Teachers' adaptive solutions to overcome challenges:

Teachers applied adaptive strategies to effectively implement DST in response to the challenges. They actively adopted collaborative problem-solving techniques, seeking assistance from colleagues who possessed greater expertise, IT department specialists, and students who were proficient in technology. To overcome challenges associated with internet accessibility, it was essential to provide alternative offline resources and create an inclusive learning environment. Emphasising the implementation of digital literacy courses at the beginning and establishing student assistance programmes for technical skills were identified as important steps to enhance overall digital competence. Conducting seminars and training sessions for teachers and students played a vital role in preparing both students and teachers for the incorporation of DST. Project-based learning has proved to be effective in addressing class management difficulties and promoting collaboration and self-reliance among students.

To ensure a thorough and all-encompassing evaluation of students' work, a range of assessment methods were utilised, such as multimodal assessments, rubrics, peer assessments, discussions and students' self-reflections. These solutions are highly in line with the theory of multimodal literacy emphasizing the incorporation of a variety of texts into the educational system and curriculum. (The New London Group,1999:61) in order to equip students with the necessary skills and knowledge to navigate the 21st century world of multimedia information and technology.

To summarise, the thematic analysis presents a detailed comprehension of the opportunities and challenges associated with the use of DST in EFL writing classrooms. Teachers' adaptive strategies highlight the dynamic nature of pedagogical approaches, emphasising the significance of collaboration and problem-solving skills, digital literacy, project-based digital storytelling approach , multimodal materials and assessment inclusion to cope with the challenges of incorporating DST into the EFL writing classroom. The findings have implications for the development of curriculum, training of teachers, and ongoing improvement of educational practices to meet the ever-evolving needs of students in the digital age.

6. Conclusion

The present small-scale qualitative study has examined the integration of Digital Storytelling (DST) in Algerian EFL secondary schools specifically during writing classes. It aims at providing a thorough understanding of the opportunities and challenges associated with this evolving pedagogical approach (DST). The investigation, guided by three main research questions, revealed significant opportunities linked to the implementation of DST. These opportunities included increased student engagement, motivation, and writing skills, as well as the development of creativity, digital literacy, self-efficacy and collaborative skills among peers. However, the research revealed ongoing difficulties and obstacles such as technical deficiency, student reluctance towards the use of the innovative DST tool in writing classes due to unfamiliarity with the tool and the concept itself (DST) , difficulties with

managing large-size classes, and some complications in assessment procedures. These challenges required teachers to demonstrate adaptability and creative problem-solving skills. In order to address these challenges, teachers strategically used collaborative problem-solving approaches, with a specific focus on improving students' digital literacy among their students by providing alternative, user-friendly material options, and offline choices besides conducting workshops and training sessions. They also integrated project-based learning approach to encourage collaboration, peer learning, and save classroom time. Additionally, implementing multimodal assessments for an equal, and inclusive evaluation. These adaptive strategies enabled the incorporation of DST and also aligned with contemporary multiliteracy theories allowing for multi-modal expression and representation (The New London Group, 1996), which characterize the dynamic nature of literacy in the digital era.

The findings have significant implications extending to the development of educational policies, the refinement of teacher training programs, and the ongoing evolution of instructional methods, striking a careful balance between pedagogical innovation and practical feasibility. Situated in the wider body of research on incorporating technology in EFL writing education, this study contributes significantly by emphasising the transformative potential of DST, and providing detailed insights into the challenges encountered when applying it in authentic pedagogical contexts. The findings build upon the existing research by exploring educators' adaptive strategies, offering practical guidance for addressing real-classroom obstacles. As digital tools and multimedia texts evolve, pedagogical strategies must also progress to ensure that students possess the literacy skills required to engage and evaluate emerging information contexts. The continuous evolution of technology and culture requires ongoing educational research that combines theory and practice. This research is crucial to ensure that these educational methods remain adaptive, relevant, and effective in constantly evolving classroom settings.

7. Limitations and Future Research

The study is limited by the small sample size and its exclusive emphasis on EFL teachers in Algerian secondary schools. This choice was made due to the lack of teachers' availability and their general resistance towards using the DST tool in EFL writing lessons, which undermines the capacity to apply the current findings to a broader population. The selection of participants for in-depth interviews was limited by factors such as the presence of teachers who consistently used digital storytelling into their writing classrooms throughout the research period. Furthermore, the resistance displayed by certain teachers against incorporating DST in EFL writing sessions presented an additional constraint. The resistance observed in this context is mostly influenced by differences in individuals' technological proficiency and pedagogical beliefs, which in turn affects the extent to which particular teachers are ready to participate. Although there have been extensive attempts to involve diverse participants, the size of the sample still remains limited.

In order to address these limitations and strengthen the understanding of the implementation of Digital Storytelling (DST) in EFL writing classes, future research should give priority to larger and more diverse samples. An examination of various cultural settings might offer detailed observations on how contextual factors impact difficulties and adaptive

approaches. An in-depth analysis of the effects of DST on student learning experiences, including diverse research approaches such as classroom observations and student perspectives, would contribute to a more comprehensive view, providing valuable knowledge for the wider field of technology integration in language education as a whole.

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