

***Empowering Twenty-First Century Students' Narrative
Writing and Communication Skills through Digital
Storytelling***

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Abstract:

The study investigates students' attitudes toward the integration of a digital storytelling project into a foreign language classroom with a particular interest in improving writing narrative paragraphs and in promoting 21st century communication skills. The research was conducted with 36 students at the University of Ghardaia, Algeria, who volunteered to participate in a four week DST project. The study used both quantitative and qualitative research methods. An online survey was conducted for the quantitative method, and a semi structured interview for the qualitative method to get in depth insights about students' perceptions of the project. The results of the survey were received from 32 students out of 36 while 18 students with low proficiency and confidence in English were selected to take part in the interview. The findings reveal that digital storytelling project in a technological learning environment has great potential to foster

students' communication skills and improve their writing skill when collaborating with peers as opposed to traditional classes.

KEYWORDS: Digital storytelling, Engagement, Learner autonomy, Motivation, 21st Century Skills

1. Introduction

With the rapid expansion of technology and the way students learn, more studies have been conducted on individuals' life skills such as communication, problem solving, critical thinking, and digital literacy (Íspir & Yıldız, 2021). One way to make learning meaningful, motivating and engaging, is the use of digital storytelling (DST), a tool that enables the use of technology in education. In this context, storytelling, a natural way of human communication used to understand complex ideas, concepts or information (Chung, 2006), has emerged as an effective tool to make students active participants in the teaching learning process and exhibit their own work (Robin, 2008).

As an instructional tool, DST enables students to combine digital images and verbal expressions to tell their own stories (Kajder & Swenson, 2004) and interact with the content (Gils, 2005). McLellan (2006) stated that DST is in full alignment with the modern education's requirements since it is built upon visual literacy, collaboration, creativity and problem solving. Kulla-Abbott (2006) stated that through DST, which includes many of the 21st century literacy skills, students learn about narrative writing components better than in a traditional way.

2. Background

Storytelling is one of the most ancient methods of human communication that serves the purpose of entertaining, educating, informing and instructing. It offers the advantage of establishing a direct relationship between the teller and the listener with ideal learning conditions through comprehensible input (Krashen, 1981).

As an educational tool, it is considered as highly effective for enhancing language skills, regardless of the students' age or background (Koyuncu et al., 2023). Being engaging, captivating, and contextual, storytelling makes it one of the best way to acquire the language if compared to traditional textbook-based teaching (Darling-Hammond et al., 2020; Nadeem et al., 2023). It enables students to heighten their listening and communication skills in a relaxed atmosphere, exhibit increased enthusiasm for speaking, writing, and reading (Brewster, Ellis and Girard, 2003) and acquire a vast repertoire of vocabulary and grammatical patterns. However, with the advent of technology, storytelling, once oral, has evolved with technological developments and taken on a new form to become “digital” incorporating digital media like videos, audio files, as well as images (Balko et al., 2011).

Previous studies have proven DST as an effective tool to improve students' language competence. McElfresh (2011), for example, emphasized the implementation of DST to address storytelling to express the need for language students to share their stories and suggested that this process can help students acquire new vocabulary words, grow as writers, and improve their productive skills.

In other studies conducted by Alismail (2015) and McElFresh (2011) it was found that DST develop students' ability to synthesize, analyze, evaluate, and present content in an organized way. In another study, Somdee and Suppasetsee (2013) assert that DST in narrative writing increases students' motivation to write, makes them merge computer technologies with art creation and production, and encourages them to communicate, collaborate and think critically (Alismail, 2015).

3. Statement of the Problem

Writing can be a challenging task for many EFL students when it comes to producing a piece of writing. One common challenge students face is that they are not aware that there are specific structures and conventions to follow while writing different types of discourse. As a result, they struggle to produce well organised pieces that meet their teacher's requirements. Another difficulty students can meet is limited vocabulary knowledge that can hinder students' ability to write. Translation is another challenge as students may be tempted to think first in their own language and then write in the target language. In addition to this, non-native students might be less familiar with specific writing formats.

In order to boost students' writing skill, educators are turning to technology to make students write digital stories. Its integration into language classrooms can offer various benefits: Engagement, collaboration, interaction... Consequently, it is anticipated that the current study will offer a more positive and engaging teaching environment for instructing writing to EFL students through DST.

4. Significance of the Study:

Because, writing plays a crucial role in the academic and lifelong learning of students, educators are continuously in search of new approaches to enhance writing abilities amongst EFL students. This research intends to explore the impact of DST on creative writing skills of first-year students at Ghardaia University. This method, representing a transition from conventional narrative writing instruction to a digital format, can be regarded as an effective teaching strategy for enhancing narrative writing abilities and fostering self-confidence. Unlike traditional writing stories, DST involves integrating different multimedia elements (graphics, audio, text, video clips...), enabling students to be creative, engaged and critical thinkers. By incorporating these elements, students become not only active in the writing process but learn to construct their own learning like: collaborative writing (Rubino et al., 2018), presentation skills (Niemi et al., 2018), reflective writing (Kim, 2021, and digital literacy (Hovious et al., 2021).

5. Objective of the Study

The general objective of this study was to examine the impact of the DST on writing narrative paragraphs by EFL students at Ghardaia University, Algeria. It is hoped that the findings from this study will provide detailed, in-depth insights and information on how DST can be used in higher education to improve students' writing and motivate them to be more creative while using technology.

6. Purpose of the Study

The purpose of this study is to

- examine the extent to which technology-supported instruction in narrative production can assist students in enhancing their storytelling writing skills, and investigate the possible role of DST in boosting students' motivation to compose narrative paragraphs.
- assist educators in enhancing the essence of teaching and learning by employing specific digital technologies in their classrooms.
- highlight the connection between the implementation of DST in educational settings and the enhancement of 21st century skills.

7. Research Questions:

The study aims to understand the impact of DST on students' writing skill. Therefore, it seeks to answer the following three research questions:

RQ1. To what extent can digital storytelling promote 21st century skills?

RQ2. To what extent did the creation of digital stories enhance students' communicative competence in writing?

RQ3. To what extent did the digital stories approach facilitate the understanding of structural elements of a story as opposed to the traditional approach?

8. Literature Review

8.1. Brief History of DST

Although DST stresses the importance of using computer technology with 21st century students, it is not a recent method (Sylvester & Greenidge, 2011). DST has been used by Ken Burns, in the documentary *The Civil War*, cited as one of the first models of this genre (Sylvester & Greenidge, 2011). In his documentary, Burns used first-person accounts that served to reveal the heart and emotions of

this tragic event in American history, as well as narration, archival images, modern cinematography, and music (Sylvester & Greenidge, 2009). As for DST, known formerly as "short narrated films", it comes from a production workshop conducted by Dana Atchley, Joe Lambert, and his wife Nina Mullen at the *American Film Institute* in 1993 under the name of Digital Media Center in San Francisco. After that, they changed this center as Center for Digital Storytelling in 1998 in Berkeley (Lambert, 2003). The center was responsible for assisting both children and adults in sharing personal narratives through creative writing and digital media technology.

Daniel Meadow, another pioneer in DST and a distinguished author and educator, saw digital stories as concise personal multimedia narratives that emanate from an individual's emotions (Woletz, 2008). He believed that the fundamental worth of these stories, crafted by individuals, resides in their visual representation and the capacity to disseminate stories across electronic platforms worldwide (Lambert, 2013).

8.1.1. Definition

Several definitions of DST have been made, but all of them revolve around a specified kind of theme or even a topic and usually contains a point of view. Reinders (2011) defined DST as a modern way of storytelling.

In a similar vein, Shin and Park (2008, p. 418) characterized DST as "a method of narrative creation utilizing digital technology as a means of expression." The majority of narratives within a DST setting, which have gained popularity in the educational sector, are

typically delivered in a digital format accessible via a computer (Mirza, 2020).

In the realm of education, Robin (2016) asserted that by creating personal or informative narratives, students shift from being passive consumers of media to active creators, thereby enhancing their ability to communicate effectively. Robin (2016) defined DST as the art of crafting a short narrative through a blend of various digital media, which includes images, written text, audio, and videos. These narratives focus on a specific topic and often reflect the author's viewpoint, typically lasting between two to ten minutes. They are stored in a format that can be uploaded to the internet and accessed on any device capable of playing video files.

8.2. Types of Digital Stories

Although there are many different types of DST in the literature (Emert, 2013), most of the studies divided it into three categories as far as content is concerned: personal, historical and instructional stories.

- **Personal stories:** Personal narratives focus on important events in people's lives, carry emotional weight, and are meaningful to both the author and the audience. They illustrate particular characters or places, while delving into themes of exploration, success, and life's obstacles.
- **Historical stories:** This category encompasses significant historical events. Narratives and story scenarios may incorporate historical speeches, images, and articles from newspapers and magazines related to past occurrences.
- **Instructional stories:** Instructional narratives are designed to inform or direct the audience about a particular concept or procedure. They can

be employed to convey information in diverse areas, such as mathematics, science, the arts, technology, and medical education.

8.3. Characteristics and Elements of Digital Storytelling

8.3.1. Characteristics of DST:

Handler-Miller (2008) contends that DST is rooted in traditional storytelling, blending fiction with reality by incorporating modern communication methods and various devices to enhance the narrative. Handler-Miller (2008) further argues that it engages the audience through immersive experiences, thereby making the stories seem authentic. Consequently, the primary distinction between traditional storytelling and DST is found in the medium utilized. "While traditional narratives are conveyed through a singular medium—either oral or written—DST employs a variety of media, including digital platforms such as websites, videos, social media, podcasts, and applications, all interconnected to support the central narrative (Rodriguez, 2007). Another significant feature of DST is its interactivity. This interactivity distinguishes DST as a unique genre, allowing users to click, select, comment, or affect outcomes, in contrast to traditional storytelling, which typically follows a one-way communication model (from storyteller to audience). In conclusion, engaging with DST involves navigating both discourse and technology, which can foster numerous activities that engage and motivate students in language learning.

8.4.2. Elements of Effective Digital Stories

Lambert (2007) identifies seven elements of effective digital stories.

They include:

8.4.2.1. Point of View

The aim of DST is to empower students to leverage the power of personal expression. As a result, the narratives crafted by students ought to reflect their individual experiences and perspectives. It is essential to employ the first-person pronoun "I" instead of the third-person viewpoint. This approach allows the narrative to highlight the author, rather than simply conveying information about a topic.

8.4.2.2. Dramatic Question

A story that holds the attention of the audience has a problem or question that is resolved by the end of the story.

8.4.2.3. Emotional Content

The most effective digital stories evoke an emotion and pleasure from the audience.

8.4.2.4. Economy

DST consists of a two to seven minute vignette limiting the script to a single double-spaced page. Limiting the digital story to one single page makes it manageable in an educational setting as far the construction process is concerned and practical to be viewed in one session. However, the curricular objective in the language arts classroom is to encourage writing and storytelling.

8.4.2.5. Pacing

Effective digital narratives are distinguished by the use of pauses and the modulation of pace to maintain the audience's engagement. Consequently, it is crucial to find a balance between brevity and pacing, as students might be inclined to compress an extensive script into a two-minute digital story by delivering it as quickly as possible, thereby sacrificing pacing.

8.4.2.6. The Gift of one's voice

The practice of DST enables students to capture recordings of themselves narrating their personal scripts. The pitch, inflection, and the voice of the storyteller are crucial components that enhance the impact of a digital narrative.

8.4.2.7. Soundtrack

Lambert (2007) contends that the integration of music into narratives is a crucial component, as it can enhance and emphasize the accompanying storyline, thereby adding complexity and depth to the tale. Nevertheless, it is vital to take copyright issues into account when music is utilized. Therefore, students must verify that the musical pieces they intend to incorporate can be legally downloaded and utilized for educational purposes.

8.4. Digital Storytelling in the Educational Setting

As an educational tool, DST provides students with the opportunity to improve their digital literacy, write scripts, perform research, enhance their communication skills, and collaborate with their peers (Robin, 2016). Research conducted by Wu and Chen (2020) has shown that various studies on DST as a teaching method reveal that students achieve a more profound comprehension of the subject matter through the creation of a digital story. By incorporating technology into their narratives, students not only enrich their stories but also cultivate their creative thinking and communication abilities (Kim & Li, 2021), while learning to experiment with sequencing, pacing, and multimedia components in a nurturing and interactive setting (Miller, 2019; Symrnaiou et al., 2020).

Consequently, the application of DST in education transcends conventional literacy. It prepares students with the essential 21st-century skills required to thrive in a technology-oriented society (Yang et al., 2022; Tabieh et al., 2021).

8.5. Benefits of Digital Storytelling in Education

Educators have identified a number of educational benefits of DST listed below:

Increases students' engagement

Digital storytelling can totally hook students in several ways. It makes them share personal experiences, get feedback and use all types of multimedia, allowing them in this way to be creative and learn tech skills useful for their future. According to Davies (2004) students exhibit significant motivation, engagement, and interest in DST in contrast to conventional teaching methods because they feel involved in the learning process and seem to regard the novel approach as fun, and captivating (Kajder 2004). Additionally, numerous studies consistently demonstrate the strong correlation between students' engagement and favorable educational outcomes, including improved academic achievement (e.g., Sadik, 2008).

Allows online sharing

Students are excited when it comes to sharing their work with a larger audience (Robin, 2008) which results in a feeling of ownership, autonomy and achievement.

Fosters deep learning and digital literacy

Several studies on the use of DST in higher education conducted by Porter (2004) revealed that DST project enhances not only students' mastery of various forms of literacy but promotes deep-

learning, motivates students to learn more deeply as well because they see the task as interesting and realistic.

Improves creative thinking

Prior to creating a digital story, students have to go through the process of evaluating and selecting information for their story, organise their ideas in a logical thinking to create a coherent narrative, and overcome any arising technological or creative challenges, all of which are effective to foster creative thinking skills as found out Yang, Chen and Hung's study (2022).

Enhances motivation

DST can boost motivation in many ways. Firstly, students find that learning with technology can be fun, engaging and enjoyable. Secondly, working independently provides them with a sense of autonomy and pride since their work will be shared with classmates. According to Shelton, Archambault, and Hale (2016), DST creates a positive atmosphere in language learning and increases motivation for learning unlike lecture based lessons. In the same vein, Suwardy, Pan, & Seow (2013) found out in a study that digital narratives allow students to engage actively in language learning tasks, foster motivation for learning, and cultivate favorable attitudes towards the course (Suwardy, Pan, & Seow, 2013).

8.6. Impact of Digital Storytelling on Students' Digital Literacy

A wide body of studies revealed that DST bears a positive impact on students' digital literacy. Robin (2016) claimed that students' technology literacy was enhanced as students texts, images, audio, and video into their digital stories. Thang et al. (2014) found

out that DST enhanced not only students' digital literacy but also on language literacy, communication literacy, and media literacy. As a result, DST can be used as a pedagogical tool to promote writing narratives, enhance technological, visual and media literacies (Churchill, 2020) and develop students 21st century skills, such as collaboration, critical and creative thinking, and problem-solving (Niemi and Multisilta, 2016).

8.9. The Seven Steps for Digital Storytelling

The process of DST can be broken into seven steps.

Step one:

Teacher divides the class into small groups and asks each group to brainstorm the story, topic, event, or problem they would like to work on.

Step two:

Each group is asked to bring pictures using a digital camera or the Net.

Step three:

Students develop scripts by writing descriptions and arranging the pictures in a chronological order. The script should tell the story in the author's own voice with the purpose of making it memorable through various media. It needs to tap the viewer's emotion or life. In this step, students are encouraged to work together throughout the whole process, share knowledge and improve design skills, review and discuss ways to improve the quality of their work.

Step four:

After creating a written narrative, students starts recording with an emotional tone rather than reading the written words.

Step five:

Students gather, create, or edit images to facilitate the understanding and empower the message they want to convey. To extend students' technical and communication skills, Adobe Photoshop Elements, a photo editing software, can be used to edit photos.

Step six:

Students view the story sequence before recording and the recording can be done via a camera, a microphone, smartphone, or tablet.

Step seven:

After checking the quality of images, tone of voice, and recording, students submit their work for assessment.

8.10. Assessing Digital Storytelling

After creating digital stories, it is essential to assess students' work more effectively and objectively and determine whether the goal has been achieved. One way to assess student's work is to use a rubric, a form of assessment that includes a set of criteria (Boase, 2013) and provides the teacher with a consistent tool to measure many different facets of the DST like: narration, technical proficiency, creativity, multimedia tools (pictures, sound, and video), grammar, voice, tone and theme (Morra, 2013). Since learning is best experienced when shared with others as asserted by Vygotsky's (1978), any assessment rubric should be constructed in terms of reflection and feedback through discussion on the part of both teachers and students.

9. Research Methodology Design

In this study two methods research design were used to collect data: quantitative and qualitative. Two instruments: questionnaire, semi-structured interview were used to answer the following questions:

RQ1. To what extent can digital storytelling promote 21st century skills?

RQ2. To what extent did the creation of digital stories enhance students' communicative competence in writing?

RQ3. To what extent did the digital stories approach facilitate the understanding of structural elements of a story as opposed to the traditional approach?

9.1. Data Collection Instruments

This study adopted mixed-methods design: a survey (quantitative method) and a semi structured interview (qualitative method). The survey was designed to investigate and understand the impact of DST on students' learning and academic writing while the semi structured interview provided deeper insights about students' experience and perception of the DST project as far as writing enhancement is concerned.

9.1.1. Survey:

When collecting the data, the researcher used an online survey (Appendix A) as the primary tool to gather information among first year students of English at the University of Ghardaia regarding their perceptions in using DST in class with a focus on the acquisition of 21st skills and narrative writing as a result of their involvement in the DST project.

The questionnaire encompassed a number of 36 participants who were informed that all information obtained from the survey would be anonymous. The questionnaire was made of 5 sections and employed a five-point Likert scale ranging from "Strongly Agree," to "Strongly Disagree."

Through the survey, the researcher was to elucidate the students' educational experiences through five aspects: engagement, knowledge transfer, collaboration, autonomy, writing enhancement.

9.1.2. Interview:

In addition to the questionnaire, the researcher used a qualitative study technique by conducting a semi-structured interview (Appendix B) as it provides an opportunity for an in-depth exploration of participants' experiences, perceptions, and challenges and allows for a flexible conversation whereby participants are encouraged to express their views candidly.

The semi- structured interviews were conducted through virtual meetings via Zoom. The participants (n= 18) who participated in the interviews were struggling writers. All the participants were informed about the objectives of the study and provided consent to be recorded.

The interview, which lasted between 25 and 35 minutes for each participant, was conducted in a stress free atmosphere allowing the participants to express their thoughts and insights freely with 5 open- ended questions. All the questions in the interviews focused on the students' overall experience with DST, their level of engagement, their perceived improvement in writing skills, and their perception of the impact of the task on their communication skills.

9.2. Site and participants

The study was conducted in the department of English at Ghardaia University, Algeria with 36 students. All the participants were enrolled in the 2nd year. The students who participated in this study are aged between 17 and 20 and had been studying English for 8 years. The research was implemented by mid- October, 2025 after dividing the class into small groups (ranging from three to four members). Prior to launching the study, all the participants were informed about the project, its significance, its importance and implications in providing effective instruction.

9.3. Results:

Table 1. Students' Perception of Engagement

Statements	SA	A	N	D	SD
1. I was willing to work through challenges and persevere when facing a problem.	55. 11%	43%	1. 89%	0%	0%
2. The DST project made the subject matter relevant.	46. 57 %	44. 85%	8.58%	0%	0%
3. During the whole process, I have applied, created and demonstrated my understanding.	30. 42%	43. 87%	25.71%	0%	0%
4. Through the DST project, I managed to make meaning of what I was studying.	46. 65%	38.57%	14.78%	0%	0%

According to Table 1, the first statement received a favourable response from students, with 51.11% strongly agreeing, 43% agreeing, and 1.89% remaining neutral. This indicates that students learnt how to overcome the challenges when facing a problem during the teaching learning process through DST. For the second question, the responses were 46.57 % strongly agree, 44. 8% agree, and 8.58% neutral. This suggests that students felt the tool relevant to the content of a writing course through the use of DST. In response to question three, the results were 30.49% strongly agree, 43.87% agree, and 8.51% neutral,

indicating that some students neither agreed nor disagreed. This low percentage reveals that very few students believed they were able to apply what they learnt. Question four garnered responses of 45.71% strongly agree, 40% agree, 8.57% neutral, and 5.71% disagree. The results show that the majority of students are aware of what they are doing in class while very few felt less confident in their understanding of English when using DST.

Table 2. Students' Perception of Knowledge Transfer

Statements	SA	A	N	D	SD
1. Creating DST helped me apply what I have learned in class.	57.59%	33.41%	9%	0%	0%
2. Creating DST enabled me identifying real-world problems and solve them.	51.25%	39.75%	9%	0%	0%
3. Through the creation of DST, I managed to use knowledge of more than one discipline.	56.55%	34.45%	9%	0%	0%
4. By creating a DST, I managed to test my understanding of all the elements needed to write a narrative piece of writing.	61.55%	28.45%	10%	0%	0%
5. I found the DST project an interesting tool to bridge the gap between academic skills to real world contexts.	54.12%	37.25%	8%	2%	0%

According to the data presented in table two, question one revealed that 54.59% of respondents strongly agreed, 33.41% agreed, 9% remained neutral. This indicates that only very few students felt they could not apply what they have learnt in class while the majority of students believed that DST enhanced their knowledge transfer and learnt how to put in practice what they learnt in class. Moving on to question two, the responses indicated that 51.25% strongly agreed, 39.75% agreed, and 9% remained neutral, suggesting that DST resulted in making students face real life problems and solving them. Additionally, question three garnered responses of 56.55% strongly agreeing, 34.45% agreeing, and 10% neutral. This implies that while few students did not feel that DST enabled them to surf from one

discipline to another, while most of them felt that creating a video made them use ICT, technology, images, social media,.... For question four, the responses were 61.55% strongly agreeing, 28.45% agreeing, and 10% neutral. The majority of students believe that DST assisted them in grasping the elements of writing necessary to write an effective paragraph such as coherence, unity although few students indicated that the DST tool did not clarify them about writing or improve their writing style. Subsequently, question five received responses of 54.12% strongly agreeing, 37.25% agreeing, 8% neutral, and 2% disagreeing. This result shows that 2% believed that DST bridged the gap between academic skills and real life situations while most students felt that it was an out of the box activity that made them see the connection between the class and real life situation.

Table 3. Students' Perception of Collaboration

Statements	SA	A	N	D	SD
1. From beginning to end I was engaged in discussion and group work.	59.75%	33.25%	7%	0%	0%
2. I learnt to be an active communicator and interdependent and developed my communication skills.	52.47%	37.12%	9%	0%	0%
3. Working in small groups made me build essential social and critical thinking skills beyond just individual effort.	60.01%	37.15%	3%	0%	0%
4. I became an active listener by accepting peers' views and sharing diverse perspectives..	61.25%	27.56%	11.19%	0%	0%
5. Individual accountability was promoted through the division of tasks.	54.31%	35.69%	10%	0%	0%

From table 3 above, question one garnered a response of 59.75% strongly agree, 33.25% agree, and 7% neutral. This indicates that students perceive DST as an excellent tool to promote collaboration. As for question two, students responded with 52.47% strongly agree, 37.12% agree, and 9% neutral, asserting that DST constitutes an appropriate pedagogical method to enhance

communication skills and interdependence. Furthermore, question three elicited responses of 60.01% strongly agree, 37.15% agree, and 3% neutral. A majority of students articulated that DST resulted in the empowerment of social bond and enhancement of critical thinking as opposed to individual work. Question four received, 61.25% strongly agree, 27.56% agree, and 11.19% This suggests that the use of DST enabled students to acquire skills like active listening, getting feedback, and sharing others' views. They stated that they acquired skills that are not taught in a traditional class. Lastly, 54.31% of students strongly agreed, 35.69% agreed, and 10% were neutral in their responses to the last question. According to the findings, students developed a sense of belonging to a group or community through individual contribution and investment.

Table 4. Students' Perceptions of Autonomy

Statements	SA	A	N	D	SD
1. I became aware of my own strengths and weaknesses.	32.28%	31.77%	30.24%	5.71%	0%
2. I was aware of how to tackle the assigned task throughout the whole process.	51.37%	31.55%	14.21%	2.87%	0%
3. I learnt how to retrieve information from various sources on my own.	42.96%	36.23%	19.23%	1.58	0%
4. Because the method was novel, I developed a positive attitude towards independent.	38%	47.72%	13.25%	1.58	0%
5. I developed strategies to overcome challenges and tried new ones when needed.	40%	36.27%	20.88%	2.85	0%

Regarding students' perceptions of autonomy dimension, 32.28 % strongly agreed and 31.77% agreed that when working on the project they became more aware of their weaknesses and strengths while 30.24% could not decide yet. The results revealed that a small proportion of 5.71% disagreed. In terms of cognitive involvement (statement two), 51.37% strongly agreed and 31.55 % agreed that working on the made them aware of the importance of achieving an outcome through a process. Conversely, a smaller percentage (14.21 %) were neutral. Of the remaining students,

2.87 % disagreed about statement two. As for retrieving information from different sources, the findings suggest that the majority of students learnt how to do research, how to use and distil information with 42.96 % strongly agreeing and 36.23% agreeing while 19.23% remained neutral. The low percentage of students who disagreed (1.58 %) suggests that only a small minority of students did not feel they acquired the skill of researching, analysing and retrieving information. The findings regarding students' views about the novelty of the tool, 38% strongly agreed and 47.72% agreed that they developed a positive attitude towards independent learning while 13.25% remained neutral, and 1.58% strongly disagreed that DST promoted their independent learning. Results on overcoming challenges and being persistent in overcoming them (statement five), 40% of respondents strongly agreed and 36.27% agreed that DST was an effective method in helping students overcome all the challenges encountered during the process. Furthermore, they affirmed that they were able to manage to find a strategy to solve any issue related to the creation of the video. Still, 20.88% could not express their views regarding developing strategies to overcome any challenges. However, 2.85% disagreed with the claim stated in statement five.

Table 5. Students' Perception of Writing through Digital Tool

Statements	SA	A	N	D	SD
1. The DST project digital storytelling is a powerful tool to boost revision and editing.	71.73%	24.27%	2%	2%	
2. I felt my writing fluency enhanced.	56.27%	40.95%	2.78%	3%	
3. The project developed my organizational skills	46.97%	43.19%	6.84%	3%	
4. Creativity and self expression were fostered throughout the process of video creation.	54.12%	39.87%	6.01%	0%	
5. I became more aware of the importance of audience	45.48%	49.43%	3%	2%	

Based on Table 5, 71.73% of respondents strongly agreed that the DST activity was a powerful educational tool to enhance the writing skill with 24.27% who agreed that it compelled them to consider all the elements of narrative writing. A low proportion of students (2%) were undecided, and the percentage of those who did not think it was powerful tool was 2% as well. On writing fluency enhancement, 56.27% strongly agreed and 40.95% agreed that the use of technology, images,... enabled them to express themselves freely and be creatively as opposed to traditional classes, rendering the writing experience more enjoyable and engaging. Only 2.78% of the respondents could not decide while 3% disagreed. For statement three, 46.97% students strongly agreed and 43.19% agreed that through the DST activity they learnt to organise their thoughts, structure their writing, revise it, edit it, use images with the audience in mind while 6.84% were unsure whether they strengthened some of the organizational skills required in such a type of activity. Only 3% of students disagreed with statement two. To statement four, a great majority of students 54.12% strongly agreed that DST contributed effectively to creativity and self-expression, and 39.87% agreed that being authentic, video creation made them more engaged in taking risks and participating in a novel experience though 6% were unsure, or could not take a decision. As for audience awareness, the majority of respondents (45.48% strongly agreed and 49.43% agreed) that working on DST made them aware that audience is crucial as it drove them to tailor their message, choose the most used platform, and choose the appropriate content.

9.4. Discussion

9.4.1. Quantitative data

Engagement Enhancement

The findings of this study for the first research question indicate that students' perception regarding engagement fluctuate between strongly agree and agree. In other words, students felt that their engagement level heightened significantly. With DST as a teaching method, students are motivated to work in a practical environment using a method customised to their needs and challenges. This finding corroborates the studies of Van Gils (2005) who found out DST increases motivation and the engagement level of students. These results confirm the value of DST as engaging, exciting and a novel way of learning the language with the use of various communication skills.

Learning Transfer

Being learning centered, DST integrates an instructional activity in an exciting learning environment requiring the use of several skills. This teaching approach not only enhances students' interest and motivation but allows the transfer of learning which is in line with modern learning theories. The findings of this study for the second question affirms that DST is an effective method learning transfer since students are making use of several discipline and working on their own on a real task after receiving guidance from their instructor to create a digital story. Furthermore, the findings are in line with the study of Garrard (2011) who observed that DST supports constructivist learning and is a perfect tool to apply what has been in class in real world scenarios.

Overall, a great majority of students believe that DST can facilitate learning transfer by presenting concepts in real-world contexts in multiple ways (text, images, audio) and help them solve problems.

The third research question aimed to investigate the effectiveness of DST as a technology-centred method for developing EFL students' abilities to practice writing in a non-conventional way through creating short digital stories. The survey data indicated that DST facilitated students' writing narrative paragraph in various aspects, such as setting, characters, plot, coherence, unity, mechanics, grammar, and vocabulary enhancement. Based on the data obtained from the results, it can be assumed that it had a positive impact on students, especially those who found writing was a difficult skill that cannot be overcome. Working in groups gave them an impetus to learn, share, and work on the task. The results in this study corroborate the positive impact of DST found in other studies by Zakaria and Abdul Aziz (2019) who indicated that DST enhanced students' narrative writing skills in all aspects, including vocabulary, grammar, and content.

In sum, according to the results obtained in this study, the participants felt not only more confident in terms of finding ideas, arranging them in chronological order, organizing a plot, highlighting a conflict, climax, and resolution but expressed high level of happiness and enjoyment, which was supported by qualitative data.

Collaboration

According to the data, DST provided participants with opportunities to enhance collaboration, which played a significant role in knowledge construction. This study indicates that while creating digital stories,

participants engaged in a process where leadership and responsibility were collectively shared among group members to achieve a common goal. Recognized as a powerful tool, DST not only facilitated collaboration and the construction of students' knowledge but also proved beneficial in fostering team building and enhancing various interpersonal skills, such as asking questions and articulating ideas more effectively (Hafner & Miller, 2011). In this context, it is anticipated that the digital storytelling activities implemented in the present study will aid students in acquiring the collaborative skills that are essential in today's environment.

Autonomy

The findings indicate that the participants perceived the technology-based project as a means to unlock new opportunities for fostering autonomy, thereby creating an environment that enabled them not only to take in charge their own learning but also construct knowledge independently. Being inherently student-centered, the DST project allowed them to select their own content and format when creating digital stories. According to the analysis of the interviews, the majority of participants concurred that the task was engaging and provided them with experience in utilizing tools that were appropriate for their needs. The transition to independent learning transformed the students' roles, making them more motivated and accountable for their own education, even outside the classroom, as noted by Sadik (2008). As such, the responses from participants align with various studies conducted by Halfner & Miller (2011), which suggest a correlation between learner autonomy and motivation. Therefore, by assigning

students a DST project, educators promoted independence, creativity, and self-directed learning at students' learning pace.

9.4.2. Qualitative data

This study aimed to investigate the efficacy of DST as a technology based method for promoting EFL students' abilities to promote 21st century communication skills and practice writing in a non-conventional way by creating short digital stories.

To gain a thorough understanding of participants' insights about DST as a pedagogical tool, individual interviews were conducted after the survey by the researcher. The semi structured interview which was carried out to gather reliable information provided compelling evidence of DST efficacy as a teaching tool in writing. All participants' answers were audio recorded, then transcribed for further analysis.

The interview which comprised 5 questions covered two main areas: writing enhancement and communication skills. The questions were framed in a way to verify whether interviewees' responses corroborate the data obtained from the survey.

Data obtained from interviews revealed a number of things regarding students' attitudes towards writing. Firstly, after reading the students' transcribed responses, the analysis of the interview data showed that all the participants' responses to the interviews indicated that DST motivated their writing dramatically. Secondly, the data affirmed that DST helped them discover their voice, build confidence, and improve the structure of their writing. Struggling students who lacked the ability to brainstorm ideas, organise them in a chronological order with coherence, unity, vocabulary, and grammar

in mind, seem to be more confident when dealing with writing. Furthermore, eight interviewees asserted that the assignment made them aware of the importance of audience, revising editing their work since their work will be presented and posted. Two participants confessed that sharing stories compelled them to address all issues related to narrative writing prior to submitting their product. Thirdly, digital literacy helped them improve their story by adding images and voice to convey the message of their stories. According to most of the interviewees, DST, collaborative by nature, has empowered both their interpersonal skills as they had to take a role, work on the task, share ideas, offer and accept peers' feedback. In addition to the elements cited above, the assignment made them aware of the importance of taking into account the audience, revising and editing any piece of work prior to presenting or posting it. The results in this study, then, corroborate the positive impact of DST found in other studies by Zakaria and Abdul Aziz (2019) who indicated that DST enhanced students' narrative writing skills.

Drawing from the interview data, the participants acknowledged that they would not have been able to achieve the task without collaborative efforts, especially the struggling students who found writing difficult, challenging, and boring at the beginning of the project. Working in groups, exchanging ideas with peers increased their motivation, enhanced their engagement and fostered their interpersonal skills. Collaborating with peers not only boosted their confidence but made the experience more enjoyable and transformed a technical task into a stress free creative experience. Regarding their attitudes towards writing, most of the interviewees expressed that their

confidence greatly emerged from the fact that the task allowed struggling students get support from more able students who were willing to share their knowledge.

In addition to motivation, collaboration and writing enhancement most of the participants affirmed that DST allowed them to develop a comprehensive set of 21st-century skills ((using software for video/audio),, narrative writing,, critical thinking, visual communication, and project management).

10. Conclusion

The purpose of this study was to highlight the efficacy of DST assignment in EFL. The results show that most students expressed positive views on DST and stated that working on creating video stories was both interesting and useful for English learning. The participants in the study reported that their positive experience was certainly due to the fact that working in groups, collaborating, and sharing views was of great support. They stated they took every opportunity to ask for feedback from their peers or instructor. Sharing ideas, getting feedback and writing several drafts made them aware of the importance of seeing writing as a process.

The results have also shown the strong relationship between the use of DST and the development of 21st-century skills (teamwork, collaboration, innovation, creativity and digital literacy) which contributed to students' motivation and engagement to create digital stories. Furthermore, based on the results, it was revealed that DST, as a novel tool, provided students a break from the traditional way of teaching, fun, motivation, and lifelong learning.

All in all, DST implementation in language teaching offered more advantages and variation than traditional approaches by making learning experience personalized and related to real life, and by offering students opportunities to reinforce digital skills they already possess (Some of the participants' work can be accessed through the links provided in Appendix C).

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Appendices

**Appendix A
Online Survey**

Digital Storytelling Creation Survey

Introduction

Digital storytelling serves as a potent medium for both education and self-expression. We are eager to learn about your experience with digital storytelling! Kindly take a few minutes to convey your thoughts and feedback.

Read the statements and tick: SA (strongly agree), A (agree), N (neutral), D (disagree), SD (strongly disagree)

SECTION ONE: Students' Perceptions of Engagement

Statements	SA	A	N	D	SD
1. I was willing to work through challenges and persevere when facing a problem.					
2. The DST project made the subject matter relevant.					
3. During the whole process, I have applied, created and demonstrated my understanding.					
4. Through the DST project, I managed to make meaning of what I was studying.					

SECTION TWO: Students' Perceptions of Knowledge Transfer

Statements	SA	A	N	D	SD
1. Creating DST helped me apply what I have learned in class.					
2. Creating DST enabled me identifying real-world problems and solve them.					
3. Through the creation of DST, I managed to use knowledge of more than one discipline.					
4. By creating a DST, I managed to test my understanding of all the elements needed to write a narrative piece of writing.					
5. I found the DST project an interesting tool to bridge the gap between academic skills to real world contexts.					

SECTION THREE: Students' Perceptions of Collaboration

Statements	SA	A	N	D	SD
1. From beginning to end I was engaged in discussion and group work.					
2. I learnt to be an active communicator and interdependent and developed my communication skills.					
3. Working in small groups made me build essential social and critical thinking skills beyond just individual effort.					
4. I became an active listener by accepting peers' views and sharing diverse perspectives..					
5. Individual accountability was promoted through the division of tasks.					

SECTION FOUR: Students' Perceptions of Autonomy

Statements	SA	A	N	D	SD
1. I became aware of my own strengths and weaknesses.					
2. I was aware of how to tackle the assigned task throughout the whole process.					
3. I learnt how to retrieve information from various sources on my own.					
4. Because the method was novel, I developed a positive attitude towards independent.					
5. I developed strategies to overcome challenges and tried new ones when needed.					

SECTION FIVE: Students' Perceptions of Autonomy

Statements	SA	A	N	D	SD
1. I am able to find, evaluate, and use information from different digital sources.					
2. I am able to analyze digital content and use effectively use hardware, software, and various digital tools.					
3. Thanks to the project, I am able to use technology, share ideas, work with others, and express myself.					
4. I saw my researching, creating content, collaborating on digital platforms, and adapting to technological changes skills fostered.					
5. The project enabled me to consume information responsibly and empowered me to seek credible and reliable sources.					

Thank you for your time and feedback!

Appendix B

Interview Guide

Preamble prompt:

- The interview is voluntary, you can stop the interview at anytime
- The interview will be audio recorded. You are encouraged not to state any identifiable information, such as your name or names of others
- If there are any questions that you do not feel comfortable answering, you can ask to skip the question
- Are there any questions you have before we start the interview?

The objective of the interview is:

- to explore participants' experiences, perceptions, and challenges of DST project
- to gain a thorough understanding of participants' insights about DST as a pedagogical tool.
- to corroborate findings with data obtained from the survey

Interview questions

1. How did sharing your story with others affect your motivation?
2. What skills do you think digital storytelling helped you develop?
3. How did collaborating make the project more or less enjoyable for you?
4. How did digital storytelling help you improve your writing skills?
5. How did using digital tools affect your confidence in writing?

Thank you for your time!

Appendix C

Students Digital Storytelling Links

<https://youtube.com/shorts/TCGlb-rPIMs?si=qocVGqEyCF6zUUPE>

<https://vm.tiktok.com/ZMAwGnGm5/>

<https://multibriefs.com/briefs/tesol/>