



The Impact of Using Digital Storytelling on Enhancing English Vocabulary Acquisition: A Case Study at Al-Nahda School in Maslata, Libya

Sana Abdullah Meelad Abdullah *

English Language Department, Faculty of Education- Maslata, Elmergib University, Libya

أثر استخدام السرد القصصي الرقمي في تعزيز إكتساب المفردات الإنجليزية: دراسة حالة بمدرسة النهضة بمدينة مسلاتة، ليبيا

سنا عبد الله ميلاد عبد الله *

قسم اللغة الإنجليزية، كلية التربية - مسلاتة، جامعة المرقب، ليبيا

*Corresponding author: saabdullah@elmergib.edu.ly

Received: November 25, 2025

Accepted: February 20, 2026

Published: March 08, 2026

Abstract:

Digital storytelling is an innovative pedagogical approach that enhances vocabulary acquisition among young learners. This study examined the impact of using digital storytelling on enhancing English Vocabulary Acquisition mastery through quantitative methods, which are particularly suitable for learners acquiring a second or third language. The research was conducted at Al Nahda School in Maslata, Libya, involving a sample of 30 sixth-grade students. The participants, selected from a middle achievement group with similar learning abilities, were divided into an experimental group and a control group. While both groups initially received traditional instruction, the experimental group subsequently engaged with digital storytelling as an intervention, while the control group continued with traditional methods. Data were collected via pre- and post-tests and analyzed using SPSS version 25. The findings reveal that students who learned through digital storytelling achieved significantly higher vocabulary acquisition and demonstrated superior retention compared to the control group. The mean score of the experimental group rose from 52% in the pre-test to 71% in the post-test. Furthermore, the intervention fostered an interactive learning environment that reduced speaking anxiety and increased student motivation, engagement, and creativity. Students also showed measurable improvements in contextual vocabulary usage, grammatical accuracy, and pronunciation. The results conclude that digital storytelling is an effective and enjoyable approach for enhancing vocabulary and speaking skills in EFL classrooms within the Libyan context.

Keywords: Digital Storytelling, Vocabulary Acquisition, Primary School, EFL.

الملخص

يُعدّ سرد القصص الرقمية منهجاً تربوياً مبتكراً يُعزز اكتساب المفردات لدى المتعلمين الصغار. هدفت هذه الدراسة إلى بحث أثر استخدام سرد القصص الرقمية في تحسين إتقان مفردات اللغة الإنجليزية من خلال أساليب كمية، تُناسب بشكل خاص المتعلمين الذين يتعلمون لغة ثانية أو ثالثة. أُجري البحث في مدرسة النهضة بمدينة مسلاتة في ليبيا، وشمل عينة من 30 طالباً من طلاب الصف السادس. تم تقسيم المشاركين، الذين تم اختيارهم من فئة التحصيل المتوسط ذوي قدرات تعليمية متشابهة، إلى مجموعة تجريبية ومجموعة ضابطة. وبينما تلقت المجموعتان في البداية تعليماً تقليدياً، انخرطت المجموعة التجريبية لاحقاً في سرد القصص الرقمي كأداة تدخل، بينما استمرت المجموعة الضابطة في اتباع الأساليب التقليدية. تم جمع البيانات عبر الاختبارات القبليّة والبعدية وتحليلها باستخدام برنامج SPSS الإصدار 25. كشفت النتائج أن الطلاب الذين تعلموا من خلال سرد القصص الرقمي حققوا اكتساباً أعلى بكثير للمفردات وأظهروا قدرة فائقة على الاحتفاظ بها مقارنة بالمجموعة الضابطة. حيث ارتفع متوسط درجات المجموعة التجريبية من 52% في الاختبار القبلي إلى 71% في الاختبار البعدي. علاوة على ذلك، عزز هذا التدخل بيئة تعليمية تفاعلية قللت من القلق عند التحدث وزادت من دافعية الطلاب ومشاركتهم وإبداعهم. كما أظهر الطلاب تحسناً ملموساً في استخدام المفردات السياقية، والدقة القواعدية، والنطق. وتخلص النتائج إلى أن سرد القصص الرقمي هو نهج فعال وممتع لتعزيز المفردات ومهارات التحدث في فصول اللغة الإنجليزية كلغة أجنبية ضمن السياق الليبي.

الكلمات المفتاحية: سرد القصص الرقمي، اكتساب المفردات، المدرسة الابتدائية، اللغة الإنجليزية كلغة أجنبية.

1. Introduction

In Libya, English has been taught as a second language in the primary education system for many years. Teaching a foreign language is widely recognized as challenging, particularly when students are learning it as a second or third language. Students' difficulties in learning English are often attributed to the limited exposure to native speakers. As a result, many primary school students, especially those living in rural areas, face obstacles in achieving their language acquisition goals.

However, determining the most appropriate teaching approach largely depends on teachers, as they are most familiar with their students' abilities, needs, and backgrounds. Therefore, it is essential to study students' backgrounds in advance before developing or implementing an effective teaching and learning plan. As the researcher's interest in teaching developed, he became increasingly aware of his responsibility and commitment to maintaining quality and professionalism, as well as the importance of ensuring that students acquire the habit of mastering English vocabulary in accordance with the curriculum. This, in turn, enables students to perform more effectively in future ESL classes.

From ancient times to the present, storytelling has been a popular educational tool for transmitting knowledge from one generation to the next. In recent years, however, storytelling processes, the media used to convey messages, and the target audiences have undergone significant changes. Storytelling is generally recognized as an effective pedagogical model for improving learning outcomes across general, scientific, and technical education (Fhadillah, 2020). In addition, stories serve as a means of preserving and transmitting traditions, heritage, and history to future generations. They capture young learners' attention, introduce new vocabulary, and convey messages more effectively.

Moreover, storytelling is considered a highly effective educational tool for enhancing language proficiency in both first and second languages (Zur et al., 2022). In this context, digital

storytelling plays a crucial role in developing a broad vocabulary repertoire, which supports the four language skills: reading, writing, speaking, and listening in English.

1.1 Problem Statement

Although English is considered a foreign language in Libya, it has become a compulsory subject in all Libyan schools and is taught at all educational levels, from preschool to secondary school. According to the primary English curriculum, the main objective is to equip students with basic language skills that enable them to communicate effectively in a variety of age-appropriate contexts. Furthermore, the curriculum emphasizes the use of diverse teaching strategies to support vocabulary mastery, ensuring that learning is effective, engaging, and relevant.

To communicate successfully in English, students must acquire an adequate range of vocabulary and use it accurately. Therefore, a clear understanding of vocabulary structures is essential for language mastery. In this context, teachers play a crucial role in developing students' linguistic awareness, which is particularly important for young learners acquiring a foreign language. However, mastering English vocabulary at the primary level in Libya remains challenging and can be considered an advanced stage in the language learning process. As a result, there is a clear need for further research into digital storytelling as a teaching and learning tool. This field has recently experienced significant growth in education, as more teachers recognize its potential and explore ways to integrate it into classroom activities. Accordingly, the researcher identified the need to develop innovative and engaging strategies to improve students' vocabulary mastery. In this regard, digital storytelling was selected as an effective instructional approach, as it supports vocabulary development, enhances overall English proficiency, and aligns with the objectives of the Libyan Ministry of Education.

1.2 Research Objectives

This research aims to examine the effects of digital storytelling on vocabulary mastery and to assess how it enhances students' knowledge and motivates them to use the language correctly. Accordingly, this study was designed to achieve the following research objectives:

- a) To demonstrate how digital storytelling can be used effectively during classroom learning as an interactive educational program for primary school students.
- b) To investigate any changes in primary school students' behavior when learning vocabulary mastery through digital storytelling.
- c) To determine students' perceptions of digital storytelling as a tool for developing a comprehensive "word bank" for developing the four skills.

1.3 Research question and hypothesis

In an attempt to understand the use of digital stories to enhance vocabulary mastery among primary school students, a research question and null hypothesis/alternative were formulated, derived from the research question as the main intuition of the study, as follows:

- **Q:** Does the use of digital stories affect the vocabulary mastery of primary school students?
- **H0:** The use of digital stories does not affect improving elementary school students' vocabulary mastery.
- **H1:** The use of digital stories has an effect on improving elementary school students' vocabulary mastery.

1.4 Significance of the Study

The significance of the study stems from the importance of its topic. English Language Teaching (ELT) at the primary level aims to prepare students to master English vocabulary and enable them to perform well in the five key skills: listening, speaking, reading, writing, and grammar. This enables them to communicate effectively, both orally and in writing, both inside and outside of school, for a variety of purposes and situations. Furthermore, the use of digital stories in education promotes and fosters a positive attitude toward vocabulary mastery,

motivating students to choose appropriate materials to acquire vocabulary in various aspects of the target language.

1.5 Limitations of the Study

In this study, the researcher discusses how vocabulary mastery through digital storytelling will significantly affect sixth-grade primary school students in one of the government school in the city of Maslata for the 2023-2024 academic year. The study sample will consist of sixty students who are below average, which will not allow for substantive comparisons based on gender, socioeconomic status, or previous academic achievement.

1.6 Conceptual Framework

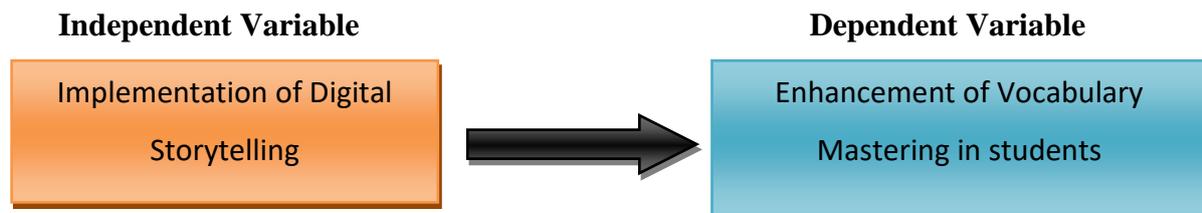


Figure 1: Conceptual Framework

1.7 Operational Definition

The implementation of the study is based on the following operational definition of terms.

- a) (ESL): English as a Second Language.
- b) (MOE): Ministry of Education): A body of education established by the government.
- c) (KSSR): English Language Curriculum for Primary Schools KSSR,
- d) (ELT): English Language Teaching

2. Literature review

2.1 Definition of Digital Storytelling

Stories have been used as an educational medium since prehistoric times, as they encapsulate four crucial aspects of human communication: information, knowledge, context, and emotions (McDougal et al., 2021). Embedding stories as digital media, i.e., digital storytelling, is therefore not only desirable but also almost essential for producing engaging e-learning content.

With advancements in digital audio and video capture technology and editing software, digital storytelling is becoming a part of modern life, making it easier to create innovative e-learning content presented as digital stories. Such innovative content cannot only make courses more attractive but can also lead to deep learning. Creativity and innovation are valued by the modern industry more than ever before, and at times, more than technical skills. Our challenge is to produce an e-learning system that supports creativity and innovation. Trying to "teach" creativity and innovation with traditional lecturing pedagogy would be a contradiction (Maya, L., Sumarni, S., & Suseno, M. (2022). To lead by example, the courses that intend to inculcate the spirit of innovation and creativity should themselves be presented with innovative pedagogy, such as digital storytelling, which will help master the "word bank" so-called vocabulary.

2.2 Theory and Related Model

In the natural cycle of listening, speaking, reading, and writing in a first language or a second language, they must have vocabulary to convey or understand the meaning of the ideas. Even in the process of EFL learning, learners have more vocabulary to learn. The importance of vocabulary learning is emphasized by a French proverb that says, "Word by word the book is made".

Words are the basic elements of a language. By learning the lexical items, we start to develop knowledge of the target language. Words are vital to communication with others and understanding what one is reading or speaking. Therefore, students should enhance and master the vocabulary to understand the English language. Also, because of the necessity of vocabulary in the four language skills, students should have enough vocabulary to improve them, as clearly mentioned by Thornbury (2002). “Without grammar, every title can be conveyed, but without vocabulary, nothing can be conveyed”.

As a result, the Language Arts component is introduced right from Year 1 to give pupils more opportunities to engage in and enjoy stories, poems, songs, rhymes, and plays written in English. The focus is on basic literacy, which is developed through early reading, writing, listening, and speaking activities.

The Educational Technology Division, Ministry of Education (MOE) has always been at the forefront in the integration of technology in teaching and learning. Several programs for teacher development have been implemented. Training for the Media- Library Teachers and ICT Coordinators as change agents in schools is being conducted .

Moreover, these specialist teachers would train other teachers in their schools on the integration of digital materials in teaching and learning. Specifically for English Language instruction, several programs were conducted with MOE’s smart partners on developing podcasts (audio materials) for listening, as well as videos and other digital materials for teaching language skills .

Theorists (e.g. Miller & Gildea, 1987; Nagy & Anderson, 1984) assert that vocabulary growth during a learner’s lifetime occurs indirectly through language exposure rather than through direct teaching, and that reading, rather than oral language, is the major contributor to individual differences in learning vocabulary.

Furthermore, the cognitive and social development theories of Jean Piaget and Lev Vygotsky are important to the analysis of what is developmentally appropriate to expect of students’ personal narrative skills. Gardner’s Multiple Intelligence theory is referenced to support the contention that writing a personal narrative is easier when students are presented with alternatives to the linguistic-based traditional composition model. The stages of development can be described according to age in the following table:

Table 1: Piaget Stages of Development

Stage	Age	Major Features
Sensorimotor	0 – 2 years	Infants use their bodies to form cognitive structures
Preoperational	2 – 7 years	Use of symbols; rapid language growth
Concrete operational	7 – 11 years	Can reason about physical objects

Stage 1: Introduction to topic and vocabulary:

The teachers provide a platform to enrich vocabulary by tying literacy with context using ICT tools. Teachers guide pupils in the discussion of the topic. PowerPoint slides and an interactive whiteboard are used to engage pupils in the initial stage of this lesson design .

Stage 2: Authentic Learning Experiences:

Pupils go through an authentic experience or go on a learning journey. This learning experience helps them to internalize the information they gather and serves as a platform for forming meaningful ideas or concepts. Peer interaction is a means for the pupils to articulate their experiences and thought processes .

Stage 3: Creation of Digital Story (Multimedia):

Using the information and resources gathered during the authentic activities, pupils proceed to create digital stories. These stories are the outputs of their learning experience .

Stage 4: Presentation and Assessment:

- Pupils save their creations in the computer network shared folder for their peers to assess based on a checklist. Peers to provide feedback by ticking or crossing appropriate boxes with the criteria listed, and write comments for their classmates .
- Pupils save their work in the computer network shared folder for the teacher to assess the digital story based on a set of rubrics. Teachers provide feedback for improvement.
- Pupils present their digital stories to the class. The teacher facilitates learning by asking (6) questions to elicit responses from the creators on the reasons behind the text, images, or audio recordings. The teacher and peers are to give feedback for further improvements to the stories based on a checklist provided.

Stage 5: Editing:

Pupils take ownership of their learning by editing their digital stories, incorporating the feedback given by peers or teachers. Depending on the time frame, pupils may edit their creations as many times as they want (which brings them to stage 4 again). This can be shown in the following figure:

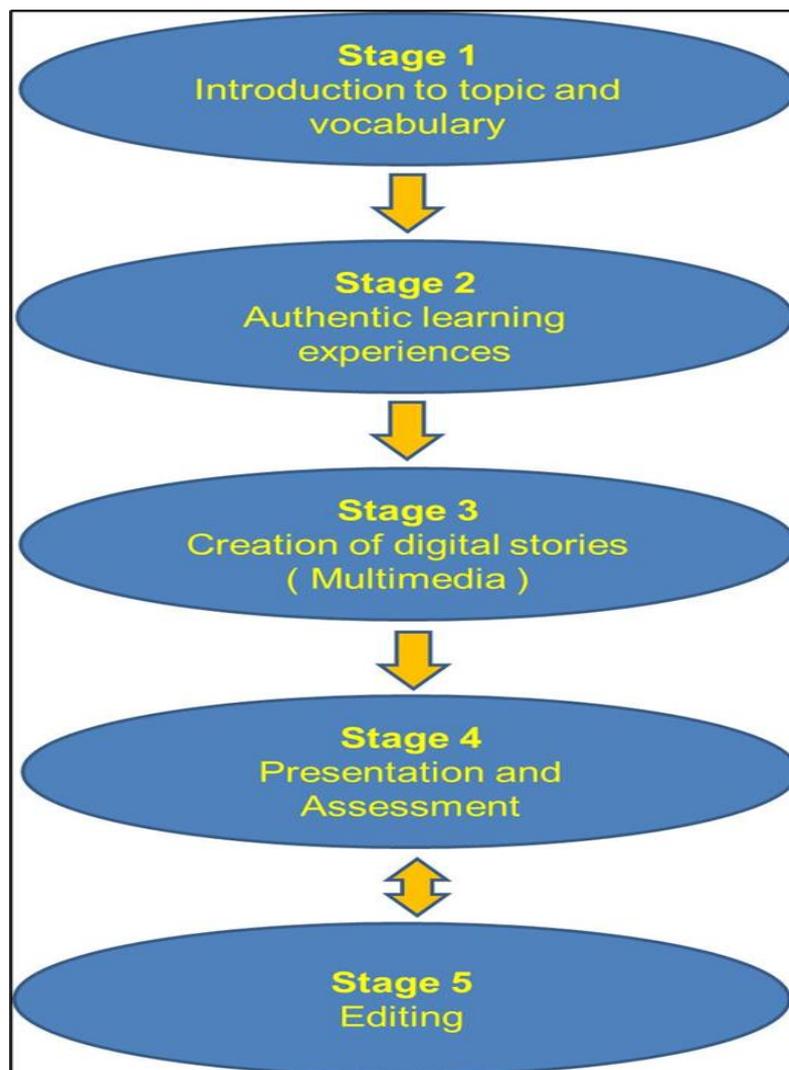


Figure 2: Lesson Design Flow of Digital Storytelling

We are in an age where every document can be turned into a digital and electronic format, a practice made available through reading gadgets that have helped students enormously, and one of it the digital storytelling. Why do technologies foster meaningful learning? Jonassen. (2008) believes that the appropriate use of technologies requires pupils to think and reason. The thinking that may be fostered is causal reasoning, analogical, expressive, experiential thinking, and problem solving. Technology allows pupils to express their thought processes through a consolidation of images, text, animation, and sound.

Basically, the digital storytelling actually the practice of combining personal narrative with multimedia to produce a short autobiographical movie, continues to expand its creative uses in classrooms around the world. Grabe (2004) suggested the active use of text, graphics, sound, or animation in the classroom to help students acquire and synthesize information an activity that facilitates meaningful learning. Therefore, teachers should guide students to construct their thoughts through various activities that target problem solving, decision making, goal setting, managing and preventing conflict, and achievement. Technology-based environments enhance constructive interactions between learners and instructors to share meanings and develop new, more powerful meanings (Hoffman, D. L., & Novak, T. P. (1998).

Moreover, the digital storytelling create collaborative environment where students actively participate, share ideas, and take responsibility to complete academic goals. In fact, using a variety of attractive teaching strategies, such as digital stories, is another way to improve student attitudes towards and engagement in reading classes to enhance their vocabulary. The concept of digital storytelling was propagated by Suleiman, W. A. (2011). These concepts began with the assumption that every child has a story to tell. They found that technology can be manipulated and used to express or share stories more meaningfully. Lambert and Athele listed seven characteristics of digital storytelling as shown in the following table:

Table 2: Characteristics of digital storytelling

1. Audience	Story that caters to specific audience.
2. Purpose	Story must have purposes (information, instructions, entertainment, etc).
3. Content	Content must be meaningful.
4. Voice	Story was presented through certain perspectives. The voice of the presenter enriched the narration of story.
5. Technology	Technology was used as presentation tools.
6. Communication	Good story connects with the audience.
7. Economy	Short but comprehensive story.

In fact, it's no longer just pen, paper, brush, and canvas; digital storytelling is reviving the ancient practice of storytelling. Moreover, media production is a new experience for Libyan classrooms

2.3 Previous Studies

According to previous studies that other researchers had conducted concerning digital storytelling strategy to uphold reading skill and enrich vocabulary, Maya and Al-Haleem (2021) emphasises that effectiveness of using digital storytelling as an instructional tool to develop young learners' vocabulary. The study results revealed significant improvements in young learners' average scores on both the pre- and post-tests. This indicates that the use of digital storytelling as a tool to enhance young learners' vocabulary mastery was highly

effective. The study also demonstrated that digital storytelling is an instructional tool for engaging young learners in vocabulary acquisition .

Maya, Sumarni, & Susino, (2022) examined how young learners perceived the application of digital storytelling in vocabulary learning. In-depth interviews and closed-ended questionnaires were used to investigate the use of digital storytelling in the classroom. The study sample included 23 fifth-grade students at an elementary school in Tuban, East Java. Qualitative data from the interviews and questionnaires conducted with young learners revealed that they found digital storytelling more engaging, exciting, and motivating for improving their vocabulary development. Accordingly, EFL teachers are advised to provide digital storytelling suitable for young learners.

Sembiring, and Simajuntak, (2023) investigated digital storytelling as an alternative teaching technique for developing vocabulary knowledge among EFL learners using a comparative research design. The participants were aged 13-14 years old and studied in Grades 7 A and B at Parong Bong Junior High School (SMP N 3). Pre-test, treatment, and post-test were used to collect study data. From the pre-test results, it can be seen that the participants' initial abilities were in the weak category with a score below 69. Based on the preliminary results, this study aimed to prove that the research had a significant impact on the students' post-test performance compared to their pre-test performance. The study results indicated that the use of digital storytelling helped learners in the experimental class develop and enhance their vocabulary knowledge. Throughout the treatment period, learners who learned using DST outperformed those who did not. Furthermore, it was observed that the group that learned using DST had a positive opinion about the use of digital storytelling in the classroom. The results also demonstrate the effectiveness of digital storytelling in engaging students in the learning process.

According to Mardhiah et al.'s (2024) study, they used a case study of eight individuals. Information was gathered by observing a lecturer who integrated both digital narratives and local folktales into his classroom instruction at an Indonesian school. To obtain more comprehensive data and in-depth information, students were also interviewed about their experiences and opinions. The study explored the integration of digital narrative techniques with traditional local folktales to enhance speaking proficiency among EFL students, aiming to provide important insights into creative language teaching methodologies that leverage technology and local culture. The results showed that digital narratives had a significant impact on students' speaking proficiency, highlighting the potential of adding culturally rich narratives to language teaching. This study adds to the pedagogical discourse by highlighting the potential of digital narratives as a catalyst for enhancing speaking proficiency, particularly for EFL students in Indonesia.

We agree with previous studies that used digital stories to enrich vocabulary mastery. However, what distinguishes this study from the previous study is that this study addressed the Libyan case, considering that education in Libya has been deprived of learning the English language for a long time, which necessitated the need for the intervention of digital stories in language learning, which increases the improvement of students' performance, as it provides a flexible educational environment, enabling them to work collaboratively and think about various issues, while building reading, writing, thinking and technology skills.

3 .Research Methodology

This part explains the design and implementation of the methodology that will be used to investigate how this research can obtain accurate data, which relies on a research instrument to answer the research question. Besides, this chapter also shows more about how the instruments were used to utilize quantitative methods on the participants to master the vocabulary through digital storytelling.

3.1 Research Design

In this study, the researcher will utilize the quantitative methods. This is simply because quantitative research design is a research method used extensively to studying human behavior and habits, which is pretty much suitable on pupils' nature in learning second or third.

Table 3: The Details of the Research Sampling

Class	Year 6
Gender	Male 16 & Female 14
Age Group	11 years old
Learning Abilities	Average Level

In this study, the respondents will be divided into two groups:

- The Control Group – (15 students).
- The Experimental Group-(15 students).

The control group did learn a list of vocabulary by attending face-to-face lessons, while the experimental group learned the same list of vocabulary by using games. Both groups were homogeneous in terms of age, gender, and the level of English. Detailed background information about the subjects was collected, such as gender and academic results.

3.3 Research Instrument

This research was an experimental study based on the usage of digital storytelling in vocabulary mastering according to the Year 6 English language syllabus. Therefore, the digital stories are selected according to the level of pupils, so that they can respond and provide feedback based on their behavior. While answering the research instruments will have to complete a questionnaire giving their background information, the Pre-Test, and the Post Test.

The digital stories are selected from the Kinder site Project (www.kindersite.org), which is an international project-Internet site founded in the U.K. It has a global objective to provide free access to primary schools around the world for good educational and entertainment content as an aid to early introduction to EFL, in a secure environment. It offers hundreds of direct links to content in the form of games, songs, and stories that teachers and students can use in the primary English classroom.

The three stories are selected according to the degree of difficulty (suitable for 11-year-old students). Taking into account the textbook for that grade, each digital story is classified into two categories: topics and topic-related vocabulary, as shown in the following table.

Table 4: The Selected Digital Stories

The digital stories	Topics	Vocabulary relevant to topic
The Adventures of Debbie-Duck	Animals and Family	Fish, cat, bird, dog, mouse, chicken, sheep, cow.....etc Mother, father, sister, brother, aunt, uncle, cousin.....etc
The Butterfly Trail	Places and Animals	The country side, city, village, home, forest, the park.....etc Worms, ants, awl, butterflies, lady bird, grasshopperetc
Count With Moby the Mouse	Numbers and Colors	One, two, three, four, five, six, seven,.....etc White, black, red, yellow, brown, blue.....etc

3.4 Validity and reliability

The validity of the vocabulary test was confirmed through expert judgment by three English language lecturers at Libyan universities. They reviewed the test items and the methodology used in the data collection process, ensuring that they reflected relevant vocabulary and were appropriate for the students' proficiency level. Their feedback was used to refine the test items and learning activities to ensure content validity. In addition, reliability was assessed through expert evaluation and pilot testing. An English language teacher analyzed the test for ambiguity and inconsistencies, leading to a review of unreliable items. A pilot test conducted with a similar group of students provided statistical measures of reliability, such as Cronbach's alpha, which confirmed the consistency of the test across different administrations, yielding a reliability coefficient of 0.75, indicating a very good level of internal consistency.

3.5 Data Collection and Analysis

In this study, the researcher divided participants into two groups: the experimental group and the control group. Each group was asked to complete a questionnaire containing basic information. Participants from both groups were also asked to complete two sets of questionnaires related to digital story vocabulary. In addition, the experimental group was asked to complete a set of questionnaires after the treatment period.

The school administration was informed of the research objectives before conducting the study during the teaching and learning process. A consent letter was prepared for the students' parents for data collection purposes. After the necessary documentation was completed, the next stage the lesson and data collection process was implemented.

The data collection tools used were a questionnaire, a pre-test, and a post-test, which were analyzed using SPSS. Furthermore, the test was divided into three sections:

1. Data collection from the questionnaire

A questionnaire for basic information about student profiles, using a set of bilingual questionnaires to solve the problem. The test will be divided into two sections: The first section contains seven items to test students' knowledge of the vocabulary they learned during the experiment. The second section was designed to test students' ability to understand general "yes/no" questions in English and develop new vocabulary about verbs, colors, animals, places, and numbers .

2. Data collection from the pre-test:

The first section contains seven items to test students' knowledge of the vocabulary they learned during the experiment.

3. Data collection from the post-test:

The second section was designed to test students' ability to understand general "yes/no" questions in English and develop new vocabulary about verbs, colors, animals, places, and numbers.

Then, the researcher and the teacher of English checked and evaluated the test scoring system. After Scoring, the researcher analyzed the achievement levels of the students about their vocabulary. Students' vocabulary mastery levels were categorized as follows:

Table 5: Category by level

Score	Category
85 – 100	Excellent
75 – 84	Very good
65 – 74	Good
50 – 64	Moderate
≤49	Weak

The analysis process involved several steps. First, the central tendency of the pre- test and post- test scores was calculated using descriptive statistics. This was followed by a normality test to check for the distribution of data. Finally, the paired samples t-test, an inferential statistic, was used to test the significance of the difference between the pre-test and post-test results. These steps add depth to the analysis and enable researchers to perform a robust assessment of the effect of the intervention on students' vocabulary mastery.

4. Findings and Discussion

4.1 Descriptive Statistics

The pilot phase was implemented over four different sessions to maximize the pedagogical benefits of teaching vocabulary through short stories. In the first session, the researcher introduced the lesson objectives, provided an overview of the materials and methods, and conducted a pre-test to determine baseline vocabulary levels. In the second session, the focus shifted to familiarizing students with the concept, purpose, and genres of short stories. Students then participated in a 20-minute silent reading of *The Adventures of Dippy-Duck* and *The Butterfly's Trail*, followed by a 30-minute exercise during which they translated the texts into Arabic and identified unfamiliar vocabulary.

The third session was dedicated to consolidation, during which students discussed and analyzed new vocabulary. In this step, the researcher facilitated the process by inviting students to write words on the board and participate in word-matching exercises to reinforce learning. Finally, the intervention concluded with a post-test administered under timed conditions to measure vocabulary levels. This sequential approach ensured that each step built upon the previous one, promoting gradual and effective vocabulary learning through continuous engagement and active learning.

4.1.1 Descriptive Statistics for Pre-Test

Descriptive statistics for the pre-test scores of the two groups, analyzed using SPSS version 25, showed that the mean score was 52%. This indicates that students had an average level of vocabulary proficiency according to the taxonomic level.

4.1.2 Descriptive Statistics for Post-Test

Post-test scores showed a significant improvement for the experimental group, with the mean score reaching 71%, placing students at a "good" level of vocabulary proficiency. This increase from the mean pre-test score of 52% to the mean post-test score of 71% indicates that the experimental group students possessed a richer vocabulary through the use of short stories (Meelad, 2024).

4.2 Hypothesis Testing

4.2.1 Statistical Results of the Reading Pre-Test

The reading section of the test was designed to serve as the pre-test on the reading skill ability of the participants. The mean scores of both the experimental and control groups were compared and analyzed by applying an independent sample t-test, as shown in Table 6. The purpose was to determine if there was any meaningful difference between the two groups' reading skill ability before the treatment. As shown in the statistical analysis, there was no significant difference between the two groups' reading skill ability before the treatment was put into practice (Meelad, 2024).

Table 6 : Independent simple T-test to compare the mean scores of Reading skill pre-test

Group	N	Mean	Significant	t
Control	15	8.12	0.13	1.23
Experimental	15	8.62		

The results presented in the previous table indicate that the calculated t-value for the current study was 1.23, which is lower than the critical value of 1.96. In addition, the p-value was 0.13, which exceeds the significance level of 0.05. Therefore, the difference between the experimental and control groups in terms of their reading skill ability prior to the treatment was not statistically significant. This finding suggests that both groups were statistically equivalent before the implementation of the treatment (Grabe, 2004).

4.2.2 Statistical Results of the Recall Test

Following the treatment period, participants in both the experimental and control groups completed a recall test specifically designed based on the short stories presented during the instructional sessions. The purpose of this test was to determine whether there was a statistically significant difference between the two groups in their ability to recall the short stories. This aligns with the theoretical framework suggesting that narrative structures enhance memory and cognitive processing (McDougal et al., 2021). The results of the recall test are presented in the following table.

Table 7: Independent Sample T-test to Compare the Mean Scores of the Recall Test.

Group	N	Mean	Significant	t
Control	15	8.71	0.035	3.45
Experimental	15	12.32		

The previous table shows that the calculated t-value for the current study is 3.45, which exceeds the critical value of 1.96. In addition, the p-value is 0.035, which is less than the significance level of 0.05, indicating a statistically significant difference between the two groups. Accordingly, the null hypothesis is rejected, and the alternative hypothesis (H1) is accepted. This result indicates that the use of digital storytelling had a significant positive effect on primary school students' vocabulary mastery (Maya & Al Halim, 2021).

5. Conclusion

This study aimed to evaluate the effectiveness of using digital storytelling in enriching vocabulary mastery among primary school students in the city of Maslata, Libya. Using an experimental design with pre- and post-tests, the research demonstrated significant improvements in students' vocabulary mastery after using digital storytelling. Initially, the pre-test showed an average vocabulary level, with a mean score of 52%. This baseline guided the development of a targeted lesson plan incorporating repeated story reading and digital interaction (Jonassen, 2008).

The post-test showed a substantial increase in the mean score to 71%. Statistical analysis confirmed the intervention's success, with a t-value of 3.45 far exceeding the critical t-table value of 1.96, indicating a significant improvement in students' vocabulary mastery (Sembiring & Simajuntak, 2023). Therefore, the findings confirm that digital short stories are an effective tool for enhancing vocabulary mastery among students at the public primary school in Maslata, Libya. Beyond vocabulary improvement, this method fosters confidence and motivation in English language learning (McDougal et al., 2021). These results encourage teachers to integrate digital storytelling into their teaching strategies to creatively and effectively boost vocabulary. Furthermore, the study underlines the value of cultivating a reading culture to support students' language development (Fhadillah, 2020).

6. Recommendations

This study suggests integrating digital storytelling into teaching through creative and engaging methods to enhance students' interest and vocabulary development (Maya et al., 2022). Students are encouraged to read regularly, especially digital short stories, to enhance their language skills (Zur et al., 2022). Future research should use larger samples and longer time periods to improve validity and compare various teaching approaches (Mardhiah et al., 2024). The short duration of the current study also limits insights into long-term vocabulary development. Addressing these gaps in future research would provide a deeper understanding of the longitudinal benefits of using digital storytelling in language learning contexts.

Compliance with ethical standards

Disclosure of conflict of interest

The authors declare that they have no conflict of interest.

References

- [1] Fhadillah, M. N. (2020). Pentingnya meningkatkan semangat minat membaca siswa melalui perpustakaan. *AloEs: Al'adzkiya International of Education and Social*, 1(1), 10–15.
- [2] Grabe, W. (2004). Research on teaching reading. *Annual Review of Applied Linguistics*, 24, 44-69.
- [3] Hoffman, D. L., & Novak, T. P. (1998). Bridging the digital divide: The impact of race on computer access and internet use. Vanderbilt University.
- [4] Jonassen, D. H. (2008). Instructional design as design problem solving: An iterative process. *Educational Technology*, 48(3), 21-26.
- [5] Mardhiah, A., Kamaliah, N., Helmiyadi, H., & Lathifatuddini, L. (2024). Enhancing Indonesian EFL learners' speaking skills through digital storytelling based on local folktales. *SAGA: Journal of English Language Teaching and Applied Linguistics*, 5(2), 81-93.
- [6] Maya, L., & Al Halim, M. L. (2021). The effectiveness of digital storytelling for young learners' vocabulary mastery. *Karangan: Jurnal Bidang Kependidikan, Pembelajaran, dan Pengembangan*, 3(2), 67-72.
- [7] Maya, L., Sumarni, S., & Suseno, M. (2022). Digital storytelling to support young learners' English vocabulary development. *Jurnal Bahasa Lingua Scientia*, 14(1), 145-163.
- [8] McDougal, E. R., Syrdal, H. A., Gravois, R., & Kemp, A. F. (2021). The power of story: Using storytelling to increase students' confidence and competence in applying marketing concepts. *Marketing Education Review*, 31(2), 119–124.
- [9] Miller, G. A., & Gildea, P. M. (1987). How children learn words. *Scientific American*, 257(3), 94-99.
- [10] Nagy, W. E., & Anderson, R. C. (1984). How many words are there in printed school English? *Reading Research Quarterly*, 19(3), 304-330.
- [11] Sembiring, D. L. B., & Simajuntak, D. C. (2023). Digital storytelling as an alternative teaching technique to develop vocabulary knowledge of EFL learners. *Journal of Languages and Language Teaching*, 11(2), 211-224.
- [12] Suleiman, W. A. (2011). Digital storytelling to sharpen language skills. *In Proceedings of the 3rd International Conference of Teaching and Learning (ICTL)*, Malaysia.
- [13] Thornbury, S. (2002). Don't mention the war! Taboo topics and the alternative textbook. *It's for Teachers*, 3, 35-37.

- [14] Zur, S., Hestiana, H., & M, Z. (2022). Students' interest in reading English texts. *KnE Social Sciences*, 7(8), 148–157.

Disclaimer/Publisher's Note: The statements, opinions, and data contained in all publications are solely those of the individual author(s) and contributor(s) and not of **CJHES** and/or the editor(s). **CJHES** and/or the editor(s) disclaim responsibility for any injury to people or property resulting from any ideas, methods, instructions, or products referred to in the content.