



Storytelling Pedagogy in Higher Education: Impacts on Student Engagement and Perceptions

Samira Dishari^{1*}, Mohammad Awad AlAfnan², Marine Levidze³

ARTICLE INFO

Article History:

Received: 01 November 2024

Received in revised form: 26 December 2024

Accepted: 30 March 2025

DOI: 10.14689/ejer.2025.116.08

Keywords

Storytelling, Experiential learning, Digital storytelling, Engagement, Perception

ABSTRACT

Purpose. Storytelling can be an effective educational tool, enhancing students' retention and motivation across various subjects and grade levels. This study aims to advocate storytelling as a potent teaching strategy that targets the higher levels of Bloom's taxonomy, especially in the analysis and evaluation levels, thus profoundly influencing students' engagement and retention. **Methodology.** The Preferred Reporting Items for Systematic Review and Meta-Analyses (PRISMA) criteria were followed while conducting the systematic review, where 11 studies dealt with engagement/motivation and retention while four studies dealt with students' perception. These studies incorporated both quantitative and qualitative data and cases studies and revealed compelling evidence supporting storytelling's pedagogical benefits. **Findings.** Findings came to verify that storytelling, especially digital forms, is crucial in offering students the opportunity to engage

in experience learning. These findings indicate that storytelling not only facilitate active and hands-on learning but also cultivate problem-solving skills and reinforces knowledge retention. Furthermore, participants across the examined studies expressed favorable attitudes toward storytelling, suggesting that it is a well-received and motivating instructional strategy. **Implications for research and practice.** It is recommended to use digital storytelling as a teaching tool for educators in higher education. This study underscores the pressing need for continued research to advance educational methodologies and adapt to emerging challenges in pedagogy. Storytelling can serve as a powerful catalyst for student engagement, encouraging active participation in the learning process. Storytelling can also foster an emotionally resonant and interactive classroom atmosphere, making it a valuable pedagogical approach in both traditional and digital learning environments.

© 2025 Ani Publishing Ltd. All rights reserved.

¹ American University of Middle East, Kuwait,

ORCID: <https://orcid.org/0000-0002-7948-4022>, Email: samira.dichari@aum.edu.kw

² American University of Middle East, Kuwait,

ORCID: <https://orcid.org/0000-0002-5889-4292>, Email: mohammad.al-afnan@aum.edu.kw

³ American University of Middle East, Kuwait,

ORCID: <https://orcid.org/0000-0002-6716-8348>, Email: marine.levidze@aum.edu.kw

*Correspondence: samira.dichari@aum.edu.kw

Introduction

Storytelling as a form of communication between people preceded written language and was the part of the oral tradition, where information, values, and morals passed from one generation to another (Abrahamson, 1998). Today, storytelling is still a powerful channel for communicating ideas and emotions. Books, movies, television programs, and public speeches rely on this communication genre. This interest in narratives exceeds media into several fields, such as law, cognitive science, organizational behavior, and education. Storytelling as a teaching pedagogy also promotes students' critical thinking, engagement, and retention (McDonald, 2009). Conflicts in narratives play a significant role in piquing students' curiosity. This leads to a discussion, especially in paradoxical stories, where understanding these conflicts leads to a better comprehension of content and, thus, better retention where learners can use the new content in their existing schemata.

Storytelling as a teaching pedagogy has always been associated with children's teaching. It is a common practice in kindergarten and elementary classes. Adolescent students are less likely to be exposed to storytelling. Even though many college professors undervalue the use of stories in lectures as a teaching tool because they divert students' attention from the subject matter and serve as "embellishment, not substance" (Wills, 1992). Krupa (2014) identifies a positive role played by the correlation between using storytelling and learners' learning and information retention. If storytelling is suitably used in the classroom, the learner can visualize the content and create connections between prior knowledge and this content to build a new one. In addition, storytelling, based on narration, encourages critical thinking skills and promotes emotional connection, thus leading to better engagement and understanding.

Storytelling in education is used to either assess knowledge or deliver content. When using storytelling to assess new ideas, students use their own words to relate the information channeled through a story. Thus, they engage in higher levels of learning according to Bloom's Taxonomy. The COVID-19 pandemic pushed many universities to swiftly transition from classroom learning to online learning almost overnight. This led to a set of challenges for both teachers and students. Teachers had to exert tremendous effort to create suitable materials and activities and to facilitate their use from both technological and pedagogical perspectives. Instructors who did not use technology in their teaching and evaluation methods typically observe decreased levels of student involvement, resulting in increased dropout rates (Soffer & Cohen, 2019).

Digital storytelling, as defined by scholars, involves the integration of digitized images, texts, sounds, and interactive elements to create narratives. It typically consists of short video-narratives that incorporate multimedia elements like text, sound, graphics, and animation to convey a specific subject to the audience. Digital storytelling has now been accepted as an efficient online teaching method that stimulates students' numerous senses, leading to better comprehension and higher levels of engagement (Lisenbee & Ford, 2017). The fast developments in the media landscape and its easy access to youth led to the collapse of traditional narratives and the rise of digital ones. The users, in this sense, we refer to university students, play a dynamic role in interacting and reshaping communication in the classroom.

All grade levels of teachers struggle to keep their students engaged since the old autoreactive methodology produces passive learners (Adnan & Bahri, 2018). According to Ramsden (1992), "A good lecture requires teachers to use memorable illustrations, stimulate the students' thinking and desire to find out more about the subject and engage their interest" (p. 156). Strategies that encourage participation, connections, and critical thinking are included in active learning and experiential learning. This will make it easier for instructors to meet the different learning demands of their classrooms. Active learning "involves students in doing things and thinking about what they are doing," according to Bonwell and Eison (1991). In other words, students can get experiences by doing and seeing. Telling stories whether oral or digital enables students to see. Therefore, there is no justification for modern educational approaches to be restrained. Now that we face digital and cultural transformation, we must incorporate this pedagogy into our curricula. This review will focus on the importance of digital storytelling as a strategy and technique for improving and increasing student engagement and retention as well as exploring students' perception.

A dire need was therefore felt to comprehensively examine the pedagogical impact of storytelling implementation in higher education contexts, with particular emphasis on its dual role as both an engagement strategy and a knowledge retention tool. Building upon established theoretical frameworks of narrative learning (Abrahamson, 1998) and contemporary engagement theory (Redmond et al., 2018), the current study aimed to provide valuable insights into the application of storytelling as an effective instrument for constructing a student-oriented class design and promoting engagement in higher education programs, the empirical studies were selected, reviewed, and analyzed. Specifically, this systematic review pursued three primary objectives: (1) to empirically validate the cognitive and affective benefits of storytelling pedagogy by analyzing its measurable impacts on student engagement metrics and knowledge retention rates across diverse academic disciplines. (2) to evaluate learner perceptions regarding narrative-based instruction, assessing how storytelling influences motivation, content relevance, and classroom dynamics from the student perspective. (3) to develop actionable frameworks for implementing storytelling techniques in ways that align with modern, student-centered learning paradigms in higher education

It is hoped that the findings of this review will contribute to ongoing scholarly conversations about innovative pedagogies while offering practical solutions for creating more dynamic, student-centered learning environments that leverage humanity's innate predisposition for narrative meaning-making (Clark & Rossiter, 2006). Ultimately, this review seeks to demonstrate how intentional storytelling integration can help higher education institutions meet their dual mandates of knowledge transmission and student engagement in an increasingly digital learning landscape.

Significance of the Review

The significance of this investigation lies in its potential to bridge existing gaps between narrative pedagogy theory and practical classroom applications in higher education. While extensive research exists regarding storytelling in primary education (Egan, 1989; Wills, 1992), its systematic implementation in tertiary education remains underexplored, particularly regarding four areas viz., discipline-specific adaptation strategies, digital

storytelling's evolving role, measurement of longitudinal impacts, and integration with competency-based education models. A need was therefore felt to synthesize current evidence and identify best practices for the faculty developers and curriculum designers, in order to incorporate storytelling techniques that address contemporary educational challenges, including declining engagement in lecture-based courses (Soffer & Cohen, 2019) and gain more transformative learning experiences in post-pandemic higher education (Matsiola et al., 2022).

This review is also significant as it explores storytelling as a timeless and powerful pedagogical tool, particularly in higher education. This review highlights its modern application, emphasizing how digital storytelling can improve student engagement, retention, and critical thinking—key components of Bloom's taxonomy, particularly in analysis and evaluation. Wu and Chen (2020) assert that this approach fosters deeper engagement with the content, introduces innovative presentation styles, and enables learners to articulate and connect their prior knowledge with new material in a more interactive, dedicated, and meaningful manner. By systematically reviewing 11 studies on storytelling's impact on engagement and four studies on student perceptions, this research provides empirical support for its effectiveness in higher education. The findings confirm that digital storytelling facilitates experiential learning, allowing students to interact with content more dynamically. This is especially relevant in today's digital age, where multimedia tools can make learning more immersive and relatable.

For high school and college students—primarily belonging to Generation Z (those born after 1995) - the review findings are particularly valuable, as they highlight the importance of integrating digital storytelling into education. As digital natives, Gen Z students are highly proficient in using and creating audiovisual content. Modern teaching methodologies should reflect this shift, moving beyond traditional text-heavy instruction, which can lead to disengagement. By incorporating digital storytelling into lessons, educators can foster greater student involvement while simultaneously enhancing critical digital literacy skills. For educators, this study offers valuable insights and compelling evidence into adopting storytelling as an innovative teaching strategy. In higher education. It bridges traditional oral narratives with contemporary digital methods, suggesting that storytelling is not just an ancient practice but a relevant and transformative educational approach. Ultimately, this research advocates for integrating digital storytelling in higher education to foster deeper student engagement, improve knowledge retention, and enhance critical thinking skills.

Theoretical Background

Storytelling's origins can be found in the Indo-European term "Ueid," which denotes the perception of an object or vision, as Benjamin (2006) stated. According to him, this phrase is mainly associated with oral and written traditions, many of which were shown in cave paintings. For example, the Lascaux Caves in the Southern French Pyrenees Mountains include images of hunting practices and ceremonies back to 15,000 B.C. The Mesopotamian epic of Gilgamesh is the first narrative ever written down and, in most cases, the first literary masterpiece. It describes the many journeys that Gilgamesh and his companion Enkidu undertook in their quest for immortality. The fables of Aesop, which date back to around 200 BCE, were passed down orally for many years before being written

down. Aesop's Fables, a collection of myths, fables, and political parables, frequently employed animals as metaphors for virtues or vices. Similarly, the written Old Testament was first communicated orally over a long period before being committed to writing. In historical contexts, storytelling stood as the primary tool through which people in their communities could safeguard and pass on their cultural legacy. As highlighted by [Abrahamson \(1998\)](#), civilizations owe their survival to storytelling, which can be regarded as the cornerstone of the teaching profession. Throughout the years, storytelling has transformed, and during the 1980s, it became widely embraced in the shape of spoken philosophical narratives. Steve Jobs, the former Chief Executive Officer of Apple Inc., was celebrated for his adeptness in storytelling. Whether making announcements or introducing new products, he leveraged his storytelling ability to captivate audiences globally. Jobs had a knack for connecting with listeners emotionally by conveying authenticity through his narratives.

[Gardner \(2011\)](#) Multi Intelligence Theory also considers storytelling an essential learning tool as it addresses verbal intelligence. In Gardner's Multiple Intelligences (MI) hypotheses, the goal is to place students in scenarios that are representative of "real life," which downplays the significance of the intelligence quotient (IQ). Ideas offer a fresh viewpoint on learning theory. Gardener lists kinesthetic, musical, verbal/language, logical, interpersonal, and intrapersonal as among the minimum of seven fundamental bits of intelligence. Every learner learns differently and distinctively. Undoubtedly, one among them is a language that allows for the utilization of classic storytelling. Using these tales efficiently can enhance students' language competency in presenting, dramatization, narrative proficiency, and communication. This approach encourages teachers to perceive their students as unique individuals with diverse learning preferences and styles.

The way that narrative affects cognition is the foundation of its educational effectiveness. Storytelling whether oral, written or digital, has become an effective and engaging tool in anthropology, economics, cognitive psychology, and teaching. Theoretical research in cognitive fields, for instance, has shown that using a methodology that puts the content beyond students' cognitive reach and results in a high cognitive load is one reason students struggle to understand scientific concepts ([Avraamidou & Osborne, 2009](#)). Students struggle to synthesize material and resort to rote memorizing when the notion does not connect with their everyday experiences. Whereas story telling can help close the knowledge gap between facts and comprehension, because storytelling can provide students with an experience of learning that reduces depersonalization, enhances motivation, improves cognition, and evokes emotion, it has increased value in education.

Theoretically, storytelling is always based on narration, which engages the emotional part of the brain, as a result of which storytelling is closely associated with brain function showing a neurological standpoint ([Carr & Cheryl Ann, 2011](#)). Neurologist Paul MacLean proposes that the human brain is divided into three separate areas: the limbic system, the neocortex, and the reptile brain. These three interrelated biological entities have memory, subjectivity, a sense of place and time, and specialized intellect. [Johnson and Taylor \(2006\)](#) assert that the brain is fundamentally a social organ, structured to gain knowledge through shared experiences for stories carry information across the entire brain when they are recounted (p. 11).

According to Freud (1957) theory, the mind is divided into three parts: the ID, which takes care of biological requirements; the ego, which promotes logical thought; and the superego, which emphasizes social norms and limitations. The superego and ego both have unconscious functions. When seen through the Freudian lens, storytelling is recognized as the most potent form of human communication because it fosters cognitive and emotional empathy. Carr and Cheryl Ann (2011) have pointed out that digesting tales requires the cooperation of the conscious and unconscious minds. The unconscious superego moderates specific desires, sentiments, and emotions that may come from the conscious ID when stories are spoken (Carr & Cheryl Ann, 2011). The limbic system and the interplay of emotions and sensations result in synapses that support memory retention.

Another theoretical dimension of storytelling is that its narrative technique is closely linked to andragogy. Malcolm S. Knowles (2012) used "andragogy" to characterize the six adult learning process areas. The first category is the need to know, which includes understanding the abilities needed for daily living. The learner's self-concept, which falls under the second category, helps learners make decisions. The third category emphasizes the importance of the learner's experiences. It suggests that adults learn better when they connect the material taught in the classroom and their own experiences. The fourth area, "readiness to learn," focuses on the importance of education and encourages being ready for learning. The fifth type, attitude to learning, sees education as the outcome of addressing problems. The last category, "motivation to learn," includes learning to advance one's job or income. These six characteristics have much to do with storytelling, especially regarding the importance of learners' experiences.

Literature Review

Storytelling has emerged as a powerful pedagogical tool that enhances experiential learning by boosting motivation, stimulating emotional connections, and improving cognitive engagement. Its ability to make academic content relatable to students' daily lives has been demonstrated across various disciplines. Miley (2009) study in accounting education revealed that narrative techniques significantly improved student attitudes and motivation, highlighting storytelling's capacity to revitalize classroom dynamics. According to Miley (2009), there is a longstanding role for a compelling story in teaching, providing a refreshing dimension to engage students and alter the pace of a class (section: Conclusion, para. 1). Similarly, Cameron (2012), in an empirical study, emphasizes the positive influence of storytelling in fostering curiosity in learning. The positive feedback students provided indicates how effective this technique is: one student said that it "keeps me interested in the course," and the other mentions that it "made a seemingly boring subject surprisingly interesting and relevant." Still, another said it "put the learning material into perspective" (p.62).

Likewise, Gobeil and Phillips (2001) observe that when accounting situations are given in narrative form instead of an explanatory manner, low-knowledge students showed enhanced motivation and cognitive engagement. In assessing how well storytelling evokes feelings, Lévy-Bruhl (2018) believes that memories are particularly vivid and accurate in oral societies. Using storytelling as a tool is an excellent way to support the growth of critical thinking abilities. Abrahamson (1998) observes that modern students struggle to combine their courses into a coherent "functioning unit of knowledge and expertise."

Without narrative, educational knowledge is usually delivered fragmentarily, leading to “isolated learning that rarely is connected for the student through the curriculum.” By enabling students to create mental images, sounds, and feelings associated with the tale, storytelling serves as a “container” that accommodates a variety of learning styles. This type of involvement improves long-term memory retention. Abrahamson (1998) also underlines that adding emotion to events makes them more memorable. He suggests that knowledge has significant and long-lasting impacts on the learner’s life and the larger society when woven with inspiration, fulfillment, and fascination, producing a moving and illuminating experience. Previous events that are firmly emotional are frequently the ones that stick with us the longest

This aligns with Johns (1997) assertion that “Human beings are naturally predisposed to hear, remember, and tell stories” which highlights the effectiveness of storytelling because they incorporate a variety of components, including settings, attitudes, moral quandaries, choices, resolutions, and more (p. 390). He compares fact-based lectures with narrative to demonstrate the efficacy of this method. Stories, as opposed to typical lectures, which go linearly like a “steamroller,” naturally relate to the thoughts and knowledge of the audience, creating internal coherence through relationships between the characters, narrative, and location (p. 390). He cites research showing a “growing body of work in the cognitive sciences” underlining the interrelationships between narratives, memory, and comprehension. He says that lists of words and statistics read faster and are easier to remember when they are part of a story rather than as stand-alone assertions. Storytelling is a strategy that shows sensitivity to developmental phases, as Friedberg (1994) points out. It may elicit thoughts, identify misunderstandings, and build ordered meaning. Signs of receptivity to the material may be evident when teachers use stories to help pupils retain the material (Abrahamson, 1998). When students feel disengaged from the content and are unable to link it to anything significant in their lives, they get disengaged and find it difficult to remember the knowledge. By reducing disengagement, instructors may build relationships with their students and decrease passive learning. This makes the classroom more welcoming and gives students more context. It is fascinating how narrative may quietly and frequently work underneath students’ conscious awareness to interest them.

According to Simmons (2006), learning is a social process. Teachers who integrate meaningful elements from real life into the classroom gratify experiential learning by allowing students and teachers to “play the same music.” The act of telling a tale may create a “playful experience.” As Simmons (2006) puts it, these kinds of experiences can help students and instructors “develop a deeper sense of cooperation, collaboration, and common purpose” (p. 136). According to him, using narrative as an instructional method can help achieve this. Students can interact with problems from stories that reflect their lives issues. Every educator may benefit from using the personal storytelling component as a helpful teaching tool. According to Clark and Rossiter (2006), narratives help students make connections between academic material and real-world experiences, which helps them understand the “larger social and cultural structures that shape their lives and their meaning-making” (p. 31). Case studies that employ stories introduce students to the actual world. “Knowledge to be passed on could be made more faithfully memorable than by any other means if one could code it and embed it in a story form,” according to Egan (1989). Simmons (2006) also states that using narrative as an instructional method can help achieve

this. Students can interact with problems from stories that reflect their lives issues. Case studies that employ stories introduce students to the actual world. "Knowledge to be passed on could be made more faithfully memorable than by any other means if one could code it and embed it in a story form," according to Egan (1989).

The need to address students' disengagement has become urgent during the COVID pandemic when most educational institutions had shifted online. Low engagement levels and poor self-regulation in online learning environments had been identified as key factors contributing to higher student attrition (Soffer & Cohen, 2019). Engagement, broadly defined, includes social, cognitive, behavioral, and emotional dimensions. In classroom settings, social engagement involves forming meaningful connections, which fosters a stronger sense of belonging (Redmond et al., 2018). Cognitive engagement, often referred to as intellectual engagement, helps students grasp complex concepts (Pittaway & Moss, 2014). It is reflected in activities such as critical thinking, integrating ideas, justifying decisions, and developing deep understanding (Redmond et al., 2018). Behavioral engagement is demonstrated through active participation in learning tasks, such as asking questions and contributing to discussions (Fredricks et al., 2004; Pittaway & Moss, 2014; Redmond et al., 2018). Emotional engagement pertains to students' perceptions and feelings about their learning environment (Redmond et al., 2018).

Recently, innovative approaches for encouraging students' learning have appeared in interactive digital storytelling videos (Shelton & Parlin, 2016). Digital storytelling refers to using multimodal digital tools to tell a story. Incorporating digital tools in classrooms has revolutionized education and learning by promoting student collaboration and fostering motivation to actively participate in the learning process rather than simply consuming knowledge passively. Specifically, incorporating digital audio and video technology effectively engages learners by utilizing tools they are familiar with in their daily lives (Matsiola et al., 2022). According to Lisenbee and Ford (2017), digital storytelling has been found to effectively stimulate students' various senses, resulting in higher levels of engagement and improved comprehension of academic material.

However, storytelling as a teaching pedagogy has always been associated with children's teaching. It is a common practice in kindergarten and elementary classes. Adolescent students are less likely to be exposed to storytelling. Even though many college professors undervalue the use of stories in lectures as a teaching tool because they divert students' attention from the subject matter and serve as "embellishment, not substance" (Wills, 1992), new research has indicated that using stories, especially digital ones can enhance students' learning experiences even in secondary and college level as noted by Simmons (2006). High school and college students, typically belonging to Generation Z, which refers to anyone born after 1995, are characterized by their digital literacy (Prensky, 2001). They are adapted to the utilization and creation of audiovisual content. Therefore, there is no need for modern teaching methodologies to be limited in the contemporary higher education setting. Students may become distant and disengaged if instruction mainly relies on written context. Utilizing digital storytelling approaches in the educational process can enhance the development of critical digital literacy.

Based on the extant literature and to operationalize the objectives of the study, two specific research hypotheses were formulated in this study:

- H1:** *The strategic incorporation of storytelling methodologies in higher education curricula significantly enhances student engagement (behavioral, cognitive, and emotional) and improves long-term knowledge retention compared to traditional lecture-based instruction.*
- H2:** *University students demonstrate positive receptivity toward storytelling-based pedagogies, perceiving them as effective tools for making complex concepts accessible, increasing content relevance, and fostering deeper learning connections.*

To substantiate these hypotheses, the review employs rigorous selection criteria for empirical studies, focusing on peer-reviewed research from the past two decades that utilizes both quantitative measures (e.g., retention test scores, engagement metrics) and qualitative assessments (e.g., student feedback, instructor observations). The analysis specifically examines studies that implement various storytelling formats - including traditional oral narratives, case study narratives, and digital storytelling platforms - across different academic disciplines in university settings.

Research Methodology

Research design

This systematic review was conducted following the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) guidelines (Moher et al., 2015). The outcomes of the systematic selection process are illustrated in a PRISMA flowchart in Fig. 1 (Moher et al., 2015). The review encompassed several key steps: conducting comprehensive searches for storytelling-related papers across various databases and academic platforms such as ProQuest and Scopus and Clarivate inclusion criteria, selecting studies that met these criteria, refining the selection to highlight the most pertinent research, creating a systematic map by extracting data from the chosen papers, and performing an in-depth analysis. To reduce potential bias, authors independently executed these procedures and compared their selections to reach a consensus.

Eligibility criteria

To ensure a comprehensive and targeted review of the literature, this study employed a systematic search strategy with clearly defined eligibility criteria. Both eligibility criteria and search strategy were carefully designed to ensure the relevance and quality of the included studies. The inclusion criteria specified that only peer-reviewed papers published between 2019 and 2024 would be considered. Furthermore, eligible studies needed to focus explicitly on the use of storytelling - whether digital or traditional - for teaching purposes in higher education contexts. Studies centering on storytelling as a form of assessment were excluded. Additionally, a wide range of storytelling modalities was considered, including picture descriptions, movie clips, textbooks, and digital narratives. Only studies published in English were included in the final selection.

Numerous factors contribute to the establishment of these inclusion criteria. Initially, academic papers published within the past five years are the most likely to represent the most recent developments in using stories to facilitate learning in higher education. Second, by limiting the context to higher education, the authors aim to challenge the perception that storytelling is ineffective for adults and only suitable for children,

providing a clearer perspective on its use in classroom design. Third, the selection of papers published in English is more likely to gather valuable contributions from various experts committed to sharing their research with a global audience. Finally, the studies reviewed covered current styles of storytelling in teaching, including picture descriptions, stories in movie clips, textbook stories, and digital stories. These styles reflect the influence of the internet and media while still valuing traditional oral storytelling.

The multidisciplinary search involved using various keyword combinations, which resulted in variations between databases. To accommodate the diverse terminology associated with our review, Boolean operators such as "AND" and "OR" were used. Articles that did not satisfy the inclusion criteria were excluded. The researchers approved the final selection of the articles based on the independently selected articles. Four primary keyword combinations were utilized across all database searches: "Storytelling engagement", "Storytelling motivation", "Storytelling retention" and Students' perception." The search was restricted to peer-reviewed articles published in English, including qualitative, quantitative, and case study research designs. Only studies focusing on university students were considered. The American University of the Middle East (Kuwait) library database system was used to retrieve relevant publications.

Findings

Storytelling is a versatile educational approach that accommodates a wide range of learners due to their diverse learning styles, as noted by Boris (2017). Visual learners who grasp information through images or videos, hands-on learners who thrive on experiential learning, and auditory learners who depend on listening can all find storytelling valuable. Narratives offer vibrant imagery, emotional associations, and the expressive voice of the storyteller, catering to the needs of visual, auditory, and kinesthetic learners, enabling them to understand, remember, and actively participate in the learning process. Consequently, storytelling has demonstrated effectiveness in promoting motivation and retention. On one side, experimental case studies, systematic reviews, and commentaries have examined the effects of digital, written, or oral storytelling on students' engagement. On the other side, and from a constructivist standpoint, the authors also examined students' perceptions of this tool.

The initial search yielded 149 articles, distributed as follows: 50 for "Storytelling engagement", 49 for "Storytelling motivation", 39 for "Storytelling retention", 11 for "Students' perception". After removing 19 duplicate entries and 3 non-English publications, 127 articles remained for preliminary screening. The screening was conducted manually by the sole researcher, prioritizing inclusivity while adhering to the study's objectives. The first screening phase assessed whether the research population consisted of university students, leading to the exclusion of 43 articles that focused on other educational levels or non-student populations. A subsequent review of abstracts (or full texts when abstracts were insufficient) resulted in the removal of 48 additional articles, primarily because they centered on teachers' perceptions rather than students' and were used as tools for assessment. The remaining 36 publications underwent a full-text review. Of these, 18 were excluded for being non-empirical (e.g., theoretical discussions, historical analyses, or opinion pieces). The final selection comprised 15 empirically validated studies, as illustrated in the PRISMA flow diagram (Figure 1). 11 studies dealt with

engagement/motivation and retention. Four studies dealt with students’ perception. It is worth mentioning that motivation and engagement referred to the same concept and studies that aimed to verify the presence of engagement during story telling yielding positive display of retention and deep learning (Figure 1). This rigorous screening process ensured that only high-quality, relevant, and empirically grounded studies were included, strengthening the validity of the review. The focus on student-centered research provides a clearer understanding of how storytelling influences engagement, motivation, retention, and perception in higher education contexts. The key considerations were:

- Transparency: Manual screening minimized algorithmic biases.
- Precision: Exclusion of non-student and non-empirical studies refined the analysis.
- Reproducibility: Detailed documentation supports future replication.

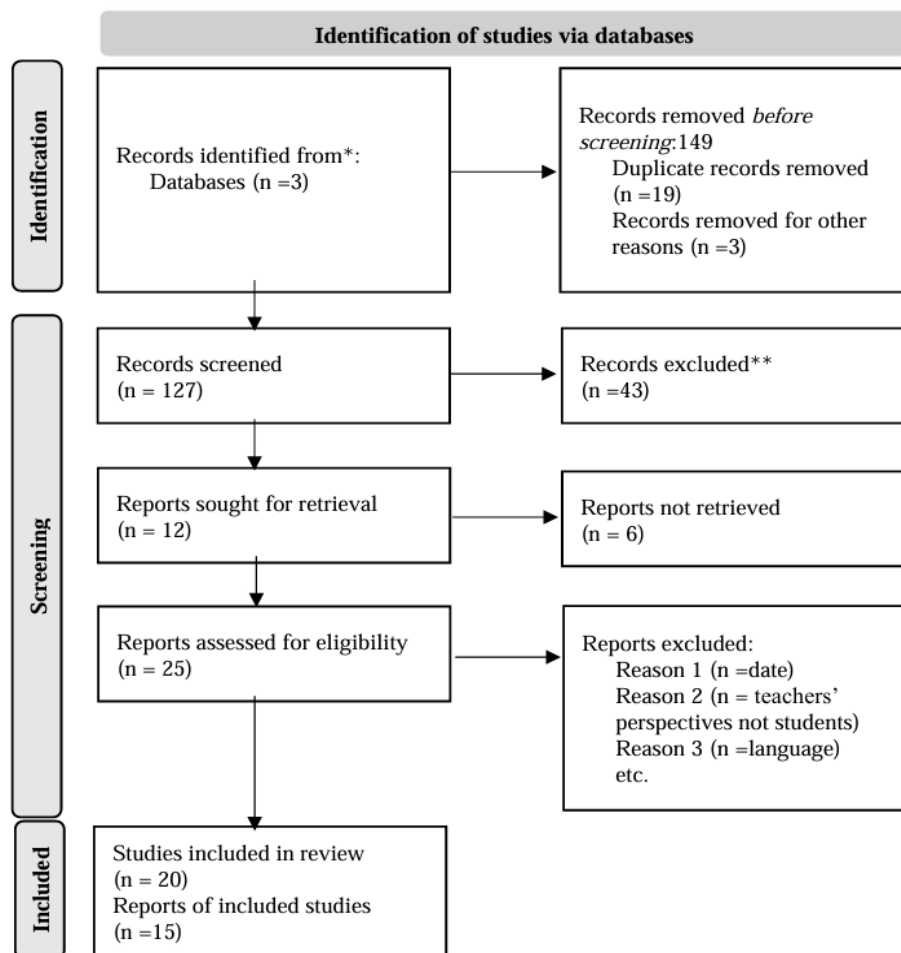


Figure 1: Study flow diagram using the Preferred Reporting Items for Systematic reviews and Meta Analyses (PRISMA)

The following studies were analyzed to explore the impact of storytelling on students' engagement and retention.

Studies about students' engagement and retention

[Hisey et al. \(2022\)](#) concentrated on using interactive story telling trailers (ISLTS) to engage students. In response to the studies that reported a lack of student engagement in online learning, which in turn contributed to poor academic performance, this study was conducted to examine the role of Interactive storytelling lecture trailers (ISLTS) in the realms of cognitive, emotional, behavioral, and student-instructor engagement. The perceptions of students regarding the effects of ISLTS on their online learning, participation, and performance were investigated through studies. The results suggested that ISLTS elevated students' emotional, behavioral, and student-instructor engagement. In summary, this study demonstrates the use of ISLTS as an online learning engagement tool for enhancing students' performance in lower cognitive thinking levels and their interests.

[Chaudhury \(2023\)](#) study came in response to the COVID-19 pandemic when online learning was mainly practiced. Lack of motivation was one of the challenges teachers faced in addition to others, such as disruption due to internet issues. The learning design of storytelling was introduced to a sample of 200 upper-level international trade course students, which included asynchronous elements such as apps like Adobe Spark. The Sway learning model, developed on a weekly basis using a narrative approach, began each week with a concise introduction to the topic or issue at hand. This was followed by commentary that highlighted the importance of the assigned readings, videos (including instructor-recorded content), podcasts, and web links that formed the week's narrative. As most activities were conducted through the learning management system (Moodle), a wealth of data was available to evaluate student engagement and performance. The data indicated that engagement, measured by accessing or downloading materials on Moodle, partially completing Moodle activities, attending synchronous sessions, and participating in live activities, was on average comparable to previous years when teaching was conducted in person. In addition, the course under consideration demonstrated a higher level of engagement than other courses that implemented alternative asynchronous methodologies, such as prerecorded lectures, reading lists, and others. This approach accomplished the specified learning objectives, as evidenced by the grade distribution and student feedback.

In the same direction, [Hassan and McKee \(2022\)](#) study investigated the effectiveness of storytelling, a teaching tool aimed at reducing disengagement during online classes. Various unfavorable outcomes resulted from the absence of direct visual contact, such as monotonic lectures with minimal interaction, a lack of engagement, and a decrease in student attendance. The students, the slides, and the lecturer form a complete triangle in the teaching design of on-campus lectures. However, in online classes, the lecturer's visual contact is limited, as facial expressions are absent, which makes it difficult for lecturers to assess students' comprehension or determine their level of engagement. The researchers in this study investigated the effective use of storytelling as a learning instrument in higher education, in conjunction with creating visuals and sketches to bolster the teaching material. One academic endeavored to confront these obstacles using a storified approach

through PowerPoint presentations. The approach shifted the teaching style of university professors from being authorities to rather a facilitator, bringing more engagement in the classroom and constructing instructions based on students' feedback.

Quantitative research conducted by Ehrlich et al. (2020) was also conducted to investigate the value of storytelling in the higher education classroom. In particular, they examined whether the pedagogy of storytelling can assist freshman seminar class students in developing new knowledge and constructing discussions and engagements. The sample consisted of two sections of a Freshman First-Year Seminar classroom at a liberal arts university in the Midwest. Twenty-four students in the first section completed an online survey. The remaining 17 students in the other section participated in a focus group specifically related to the online storytelling posts. Triangulation was achieved by combining quantitative data from the online survey with qualitative data from the focus group discussions and literature. Garrison et al. (2010) observed in the literature that collaboration in an educational experience generates knowledge through self-efficacy, which leads to an environment in which the learning that occurs through storytelling is shared with others. The research concluded that the use of community inquiry and constructivism led to an increase in classroom engagement through the use of storytelling. Students generally did not perceive that they required guidance in storytelling; however, they did perceive that storytelling benefited their overall experience.

Furthermore, Hava (2019) research aimed to examine the influence of digital storytelling on the motivation and satisfaction of students in EFL education. Over nine weeks, a group of 60 pre-service teachers developed three digital stories on subjects, including sports, nature, and countries, in this pre-experimental study. Data was collected using a motivation scale and a digital storytelling satisfaction questionnaire. Students were assessed on their attitude, personal use, and self-confidence at the start and end of the implementation process. After participating in digital storytelling, students demonstrated substantial enhancements in their self-confidence and personal use. Furthermore, digital storytelling was discovered to be beneficial for acquiring vocabulary, writing, and speaking abilities in EFL education. Matsiola et al. (2022) considered that the young generation is accustomed to audiovisual material. Implementing digital storytelling in the classroom may improve their learning journey, retention, and academic progress. The case study presented included thirty-eight students from the School of Journalism at the Aristotle University of Thessaloniki who were commissioned to illustrate a team sport in a video format. They could employ any software and apparatus they desired to produce the audiovisual production, provided that they adhered to the general instructions provided by the teachers. They were requested to complete a short questionnaire and participate in two focus group discussions following the completion of the projects as part of an embedded mixed research design. The second of the four research questions that the study sought to address, which examined the perception of digital storytelling production, aligns with the objective of this review. The results were consistent with our hypotheses, as the participants enthusiastically embraced using technological tools like Digital Story to generate and disseminate information.

Yan and Zhao (2019) conducted a systematic review that demonstrated the efficacy of storytelling for enhancing oral proficiency in EFL secondary and higher education classes. Twelve papers were chosen from 300 papers available on academic websites (e.g.,

Mendeley) and databases (e.g., ProQuest). The papers were related to EFL instruction, oral proficiency, and storytelling. The context of half of them was secondary, while the other half was higher education. In both contexts, teachers and students swapped roles in storytelling, leading to a degree of autonomy and engagement among students and creating a learning design that stimulated oral proficiency. To explore the impact of storytelling on student engagement and illicit students' positive perceptions, the following studies were analyzed.

Quantitative research conducted by Ehrlich et al. (2020) was also conducted to investigate the value of storytelling in the higher education classroom. In particular, they examined whether the pedagogy of storytelling can assist freshman seminar class students in developing new knowledge and constructing discussions and engagements. The sample consisted of two sections of a Freshman First-Year Seminar classroom at a liberal arts university in the Midwest. Twenty-four students in the first section completed an online survey. The remaining 17 students in the other section participated in a focus group specifically related to the online storytelling posts. Triangulation was achieved by combining quantitative data from the online survey with qualitative data from the focus group discussions and literature

The objective of Chen (2023) was to investigate the impact of multimodal digital storytelling presentations on the emotional responses of high and low achievers in an EFL context. A cohort of fifty-two sophomore students from a private university located in central Taiwan was assigned the task of creating two digital narratives over the course of a 14-week research period. The first story was to be created using PowerPoint, while the second story was to be created using Book Creator. The data collection process included reflective journals and two questionnaires that assessed digital storytelling's enjoyment and positive/negative affective states. The findings indicated that Book Creator outperformed PowerPoint in terms of the quality enhancement of digital narrative presentations. High-achieving pupils reported experiencing more positive emotions and a greater sense of enjoyment than their low-achieving peers.

The case study conducted by Rodgers and Ní Dhonnchadha (2023) focused on a digital storytelling (DST) project involving 12 first-year Biotechnology students at the National University of Ireland, Galway. Students enrolled in this four-year degree program undertake a curriculum that includes, in addition to a range of major science courses, the study of either French or German during the initial three years. The aim of the French component of this program is to augment students' linguistic competencies within a biotechnology context through the implementation of a varied multimodal language learning activities. These activities encompass text analysis, discussions, role-plays, grammar activities, communication games, multimedia lab work, a reflective journal, and a digital storytelling project. The program allocates three hours each week for this component. The principal objectives of the DST initiative were to support students in improving their proficiency in the French language, with a specific emphasis on the acquisition of specialized vocabulary pertinent to forensic science and DNA. Students were required to collaborate in groups to create a three-minute digital story in French that was inspired by a forensic case employing DNA profiling. A comprehensive data collection approach was utilized to evaluate the educational potential of this teaching and learning activity. This approach included student questionnaires, semi-structured group interviews,

and an in-depth analysis of the digital stories (DSs) created. The findings demonstrate how Digital Storytelling (DST) can be integrated as an instructional tool in Language for Specific Purposes (LSP) classrooms within higher education. Moreover, the study highlights DST's capacity to improve students' language skills in this specialized context and to foster the development of transferable skills essential for effective communication in an increasingly globalized world.

A 2024 study by Romero investigated how digital storytelling improves the writing skills of EFL (English as a Foreign Language) students in higher education. The research examined three digital storytelling platforms – Story bird, Story jumper, and storyboard – using a student survey to assess satisfaction, challenges faced, and tool preferences. The results showed that students overwhelmingly favored digital storytelling over conventional writing methods. They highlighted its benefits, including boosting creativity, ease of use, and making the learning process more interactive and enjoyable. Tyrou (2022) case study delved into the influence of digital storytelling (DS) on undergraduate Italian Language and Literature students at the University of Athens, assessing both their attitudes and learning outcomes. The study centered on 48 students enrolled in an Italian foreign language course, capturing their theoretical understanding and hands-on experiences with DS as an innovative pedagogical tool. The participants, comprising 8 male and 40 female L2 learners, offered valuable perspectives on integrating technology into language acquisition. A striking finding was that 87.2% of students had never previously crafted digital narratives in a second language, highlighting the novelty of the approach. Additionally, the majority (77%) were first-year students, suggesting that DS could be particularly impactful in the early stages of language learning. Following the DS activities, student feedback was overwhelmingly positive, as evidenced by responses to a post-course questionnaire. This survey evaluated their acquired knowledge, practical experience, and personal reflections on using digital storytelling. The findings underscored two key outcomes: (1) DS proved to be a highly effective tool in foreign language instruction, enhancing engagement and creativity; (2) active participation in the storytelling process fostered deeper personal investment, leading to more meaningful learning experiences. The study not only reinforced the pedagogical value of DS but also suggested its potential for broader application in language education curricula, particularly for motivating early-stage learners. By merging narrative techniques with digital media, DS appears to bridge the gap between linguistic competence and creative expression, offering a dynamic alternative to traditional language teaching methods.

Studies about students' perception of storytelling approach

Romero-Ivanova et al. (2021) conducted a study with high school pre-teacher education students to encourage the use of digital storytelling in classrooms and examine students' perceptions of this instructional method. The primary aim was to understand how pre-teacher candidates analyzed, interpreted, and found meaning in their peers' digital stories by applying the seven elements of digital storytelling. These elements are point of view, dramatic questions, emotional content, the gift of voice, the power of the soundtrack, economy, and pacing. The authors used students' artifacts – such as digital stories, storytelling guides, and reflections or peer reviews – to capture authentic student voices and perspectives, ensuring these insights were not influenced by external viewpoints. The

authors, as educators, are merely the instruments of analysis. As a result of all the analysis, the authors of this paper were the first to provide teachers of varying grade levels with hands-on tools for incorporating digital storytelling into their classrooms. Secondly, the findings emphasized that digital storytelling, as a pedagogical and learning practice, can spark more profound discussions within the classroom that extend beyond the confines of instructional settings and into the community and beyond.

Shemy (2023) noted that digital storytelling (DST) stands out as an innovative and impactful pedagogical tool, offering significant benefits in reinforcing conceptual understanding and engagement. This study investigates master's students' perceptions of DST as a means to strengthen their grasp of practical concepts within the Instructional Technology program at the Arab Open University in Oman. Employing a mixed-methods approach, the research collected quantitative data through a questionnaire administered to 67 students, supplemented by qualitative insights from semi-structured interviews with 10 participants. The findings revealed that students viewed DST as an effective, engaging, and constructive learning aid, facilitating deeper comprehension of course material. Notably, participants rated DST most favorably in three key areas: knowledge retention ($M = 4.186$, $SD = 0.7371$), contextual application of concepts ($M = 4.051$, $SD = 0.7558$), and problem-solving skill development ($M = 4.023$, $SD = 0.7531$). Conversely, perceptions were less positive regarding DST's utility in analytical and discussion-based tasks ($M = 2.056$, $SD = 1.209$). The majority of students endorsed DST as an enjoyable and highly effective tool for mastering complex subject matter. They emphasized its role in reinforcing long-term knowledge retention, fostering active interaction with content, and enabling the practical application of concepts across diverse scenarios. Additionally, DST was credited with enhancing problem-solving abilities in instructional design and significantly boosting motivation to learn.

In that direction Tanrıkulu (2020) study explored university students' perceptions of how collaborative digital storytelling (DST) influences their writing skills in an academic setting. Adopting a qualitative research approach, the study followed an action research model to investigate the impact of DST in a writing course. The participants consisted of 61 first-year students from the Department of Turkish Education, divided into two separate classes. Over the course of the study, students produced two distinct digital stories: the first was developed individually, while the second was created collaboratively. Students were actively engaged in both the production and peer-review stages of their digital narratives. To gather insights, the researcher relied on multiple data sources, including student diaries, researcher observations, and focus group interviews. The collected data was then analyzed using NVivo 12, a qualitative data analysis software, where responses were systematically coded, categorized into themes, and further broken down into sub-themes for deeper interpretation. The findings reveal that students perceived collaborative DST as beneficial for enhancing their writing abilities. Specifically, they reported improvements in both the internal (content, coherence, creativity) and external (structure, grammar, style) aspects of their written work. Additionally, the multimedia elements of digital storytelling, along with the scriptwriting process, were found to positively contribute to writing development by bridging technology with traditional writing skills. Overall, the study suggests that collaborative digital storytelling serves as an effective pedagogical tool for fostering stronger writing competencies in academic contexts.

The empirical study conducted by [Lazareva and Cruz-Martinez \(2020\)](#) analyzed the impact of a collaborative digital storytelling project on student engagement and perceptions. The data were gathered via an online survey administered to students, comprising an interdisciplinary cohort of undergraduate students from a Nordic university (N = 22) and a university located in Southern Europe (N = 21). The findings of this study corroborated our hypotheses that the digital storytelling initiative significantly enhances students' cognitive, emotional, and behavioral engagement. The students predominantly indicated that the experience exerted a favorable affective influence on them. The students were able to articulate their viewpoints with greater freedom and confidence, as they perceived this assignment format to be less anxiety-inducing than a traditional frontal presentation in the classroom setting. In contemporary education, the integration of technology has become pivotal in enhancing learning outcomes and academic performance, particularly in higher and postgraduate education.

Discussion

The integration of storytelling in higher education has demonstrated significant benefits across various disciplines, enhancing engagement, retention, and emotional investment in learning. The studies reviewed highlight the significant role storytelling can play in enhancing student engagement, motivation, and learning outcomes in higher education, particularly in online and hybrid learning environments. Storytelling pedagogy has impacted positively students' motivation and retention. [Hisey et al. \(2022\)](#) demonstrated that Interactive Storytelling Lecture Trailers (ISLTs) effectively improved cognitive, emotional, and behavioral engagement in online courses. By incorporating narrative elements into lecture previews, students exhibited greater interest and participation, reinforcing the idea that storytelling can bridge the engagement gap often observed in digital learning spaces.

Similarly, [Chaudhury \(2023\)](#) found that a structured narrative-based learning model, incorporating asynchronous tools like Adobe Spark and Moodle, sustained student engagement at levels comparable to in-person instruction. The success of this approach suggests that storytelling provides a cohesive framework that helps students connect with course material more meaningfully than traditional asynchronous methods, such as pre-recorded lectures. This aligns with [Hassan and McKee \(2022\)](#) findings, which emphasized that storytelling, combined with visual aids, counteracts the disengagement caused by the lack of face-to-face interaction in online classes. By shifting the instructor's role from a lecturer to a facilitator, storytelling fosters a more interactive and student-centered learning experience.

Moreover, [Hava \(2019\)](#) research on digital storytelling in EFL education revealed not only positive impact on students' motivation, but also on their self-confidence and language acquisition. The creative and participatory nature of digital storytelling not only enhanced vocabulary and communication skills but also increased learner satisfaction, further supporting its pedagogical value. [Matsiola et al. \(2022\)](#) found that digital storytelling (DS) resonated strongly with journalism students, who enthusiastically embraced audiovisual tools to craft narratives, reinforcing the idea that modern learners thrive with multimedia-rich, interactive content. Similarly, [Yan and Zhao \(2019\)](#) systematic review highlighted storytelling's effectiveness in improving oral proficiency in EFL

classrooms, where role-switching between teachers and students fostered autonomy and deeper engagement. Ehrlich et al. (2020) further supported these findings, showing that storytelling in freshman seminars facilitated knowledge construction and peer discussions, suggesting its utility in foundational courses. Chen (2023) study on multimodal storytelling revealed that tools like Book Creator elicited stronger emotional responses than traditional PowerPoint, particularly among high achievers, indicating that well-designed digital narratives can enhance motivation and enjoyment in learning. The case studies by Rodgers and Ní Dhonnchadha (2023) and Tyrou (2022) emphasized storytelling's cross-disciplinary applicability, from biotechnology to foreign language acquisition. Students in these studies reported increased creativity, personal investment, and linguistic confidence, underscoring DS's role in making abstract or complex content more relatable. The research by Romero-Ivanova et al. (2021) research further validated these outcomes, with EFL students preferring digital storytelling for its interactivity and creativity-boosting effects over conventional writing exercises.

As for reviewed studies investigating university students' perceptions of storytelling as a pedagogical tool similar positive finding were made. Digital storytelling (DST) proved to be an engaging, effective, and transformative learning tool across various academic disciplines. Romero-Ivanova et al. (2021) found that pre-teacher education students not only embraced DST but also engaged in deeper analytical discussions when applying the seven elements of digital storytelling. This suggests that DST fosters critical thinking and peer learning, extending its impact beyond the classroom into broader educational and community contexts. The study highlights that when students actively create and evaluate digital narratives, they develop a more nuanced understanding of storytelling as both a pedagogical strategy and a means of personal expression. Similarly, Shemy (2023) research with master's students in Instructional Technology revealed overwhelmingly positive perceptions of DST, particularly in enhancing knowledge retention, contextual application, and problem-solving skills. The quantitative data underscored DST's effectiveness in making complex concepts more accessible, while qualitative feedback emphasized its motivational benefits. However, the lower ratings for analytical and discussion-based tasks suggest that DST may be more effective for conceptual reinforcement than for fostering debate - a nuance that educators should consider when integrating storytelling into curricula.

Tanrikulu (2020) study further reinforced these findings, demonstrating that collaborative DST significantly improved students' writing skills, particularly in content development, coherence, and creativity. The multimedia nature of DST helped bridge traditional writing instruction with digital literacy, suggesting that storytelling can serve as a scaffold for academic writing development. The peer-review component also fostered a collaborative learning environment, where students benefited from collective feedback and iterative refinement of their work. Lazareva and Cruz-Martinez (2020) interdisciplinary study added another layer of evidence, showing that DST enhances cognitive, emotional, and behavioral engagement. Students reported reduced anxiety compared to traditional presentations, indicating that storytelling provides a more inclusive and confidence-building assessment format. This aligns with broader educational research advocating for alternative, student-centered assessment methods that reduce stress while promoting deeper learning.

Collectively, these studies underscore that storytelling whether digital, oral, or multimodal - transforms passive learning into an active, student-centered experience. It is not merely an entertainment tool but a powerful instructional strategy that fosters deeper engagement, strengthens instructor-student connections, and improves academic performance. It bridges gaps in engagement, particularly in online and hybrid settings, while fostering creativity, emotional connection, and critical thinking. The consistent theme across these studies is that storytelling - especially in digital and collaborative formats - resonates strongly with university students, offering a dynamic alternative to conventional lecture-based instruction. Students perceive DST as not only enjoyable but also pedagogically valuable, enhancing retention, creativity, and engagement. However, its effectiveness varies depending on the learning objectives: while it excels in conceptual reinforcement and skill-based tasks, it may require supplementary strategies for analytical or debate-driven learning.

For educators, these findings suggest that integrating storytelling into higher education can: (1) increase engagement - by leveraging multimedia and narrative techniques, DST captures student interest and sustains motivation. (2). enhance skill development - writing, critical thinking, and problem-solving skills are strengthened through the creative and iterative processes of storytelling. (3). reduce anxiety - offering alternative assessment formats like DST can create a more inclusive learning environment, particularly for students who struggle with traditional presentations.

Conclusion

The findings of this systematic review underscore the pressing need for continued research to advance educational methodologies and adapt to emerging challenges in pedagogy. One such challenge, starkly highlighted during the COVID-19 pandemic, was the abrupt transition to online learning, which often reinforced traditional teacher-centered approaches rather than fostering collaborative, student-centered environments. This shift has amplified the necessity for innovative technological and pedagogical integrations that promote interactive and engaging learning experiences. This review sought to empirically validate the efficacy of storytelling as a dynamic instructional tool for knowledge dissemination and enhancing student engagement. An analysis of 15 selected studies - incorporating both quantitative and qualitative data and cases studies - revealed compelling evidence supporting storytelling's pedagogical benefits. The findings indicate that storytelling not only facilitates active and hands-on learning but also cultivates problem-solving skills and reinforces knowledge retention. Furthermore, participants across the examined studies expressed favorable attitudes toward storytelling, suggesting that it is a well-received and motivating instructional strategy.

Storytelling serves as a powerful catalyst for student engagement, encouraging active participation in the learning process. Beyond its cognitive advantages, storytelling fosters an emotionally resonant and interactive classroom atmosphere, making it a valuable pedagogical approach in both traditional and digital learning environments. As education continues to evolve, further research should explore the scalability of storytelling techniques across diverse learning contexts, ensuring their effective integration into modern educational frameworks. Ultimately, storytelling emerges not merely as a supplementary teaching aid but as a transformative educational practice that bridges the

gap between instruction and engagement, offering a sustainable solution to contemporary pedagogical challenges.

Limitations and recommendations

While this systematic review provides valuable insights into the effectiveness of storytelling as an educational tool, several limitations must be acknowledged. First, the scope of the review was restricted to 15 studies (11 on engagement and 4 on student perceptions), which may not fully represent the diverse applications of storytelling across different academic disciplines and cultural contexts. A broader sample size could have strengthened the generalizability of the findings. Therefore, it was likely that there might be some critical papers eluding us. Second, despite various approaches and types of stories used (such as fables, fairy tales, and personal experiences), and a proliferation of digital storytelling tools, there is a gap in the literature to inform how it has been designed and developed as well as implemented in education (Quah & Ng, 2021). Besides, only few studies examine the impact of different story types and formats on the same group of learners. Additionally, while the review followed PRISMA guidelines, most of the included studies relied on self-reported data or qualitative assessments, which may introduce biases such as social desirability or subjective interpretations. More rigorous experimental designs with control groups and longitudinal tracking could provide stronger empirical evidence.

Another limitation is the emphasis on digital storytelling, which, while innovative, may not be universally accessible due to technological and infrastructural barriers in under-resourced educational settings. The review did not extensively address traditional oral storytelling methods, which remain relevant in many cultures. Finally, the review did not deeply examine potential drawbacks of storytelling, such as over-reliance on narrative techniques at the expense of critical analysis or factual accuracy. Future research should investigate potential challenges and limitations of storytelling as a pedagogical tool to ensure balanced implementation. Despite these limitations, the review offers a foundational understanding of storytelling's educational benefits while highlighting areas for further exploration.

While this review contributes to the growing body of literature on storytelling in academia, it also underscores the need for further empirical investigation. Recommendations for future research include to focus on: (i) Narrative typologies in education – a deeper examination of the types of stories (e.g., anecdotal, metaphorical, data-driven) that most effectively foster engagement and comprehension across different disciplines. (ii) Long-term academic outcomes – the extent to which storytelling influences measurable academic performance, critical thinking skills, and long-term knowledge retention among university students. (iii) Comparative methodologies – studies comparing digital storytelling with traditional oral storytelling to determine their respective strengths in various learning contexts. (iv) Instructor training and implementation barriers – the challenges educators face in adopting storytelling techniques and the professional development needed to maximize their pedagogical impact.

By addressing these gaps, future scholarship can refine best practices for storytelling in higher education, ensuring that this timeless pedagogical approach continues to evolve in

alignment with contemporary educational demands. Ultimately, storytelling should not be viewed merely as a supplementary technique but as a foundational strategy that bridges cognitive and affective learning, fostering deeper connections between students and course material.

Among the 21st-century skills educators have been trying to incorporate into teaching designs during the last decade, using technology has become a priority for both learners and educators. Among these innovative approaches, digital storytelling has demonstrated significant potential as an effective instructional strategy, even within higher education settings. In light of that, if included in the teaching design, the pedagogical storytelling model can significantly contribute to enhance student engagement. Storytelling does not need to be intricate; it can be as straightforward as sharing past experiences, and as Ramsey (2000) points out, "with a bit of refinement, storytelling can be employed effectively for instructional purposes" (p. 497).

Acknowledgment.

The authors are grateful to the journal's anonymous referees for their helpful suggestions for improving the quality of the article.

Disclosure statement

No potential conflict of interest was reported by the author(s)

References

- Abrahamson, C. E. (1998). Storytelling as a Pedagogical Tool in Higher Education. *Education* 3-13, 118, 440. <https://api.semanticscholar.org/CorpusID:140392567>
- Adnan, & Bahri, A. (2018). Beyond effective teaching: Enhancing students' metacognitive skill through guided inquiry. *Journal of Physics: Conference Series*, 954, 012022. <https://doi.org/10.1088/1742-6596/954/1/012022>
- Avraamidou, L., & Osborne, J. (2009). The Role of Narrative in Communicating Science. *International Journal of Science Education*, 31(12), 1683-1707. <https://doi.org/10.1080/09500690802380695>
- Benjamin, B. (2006). The case study: storytelling in the industrial age and beyond. *On the Horizon*, 14(4), 159-164. <https://doi.org/10.1108/10748120610708069>
- Bonwell, C. C., & Eison, J. A. (1991). *Active Learning: Creating Excitement in the Classroom*. ERIC Digest. <https://files.eric.ed.gov/fulltext/ED336049.pdf>
- Boris, V. (2017). What Makes Storytelling So Effective For Learning? <https://www.harvardbusiness.org/what-makes-storytelling-so-effective-for-learning/>
- Cameron, C. (2012). Corporate villains: taking the bore out of law. *Accounting Research Journal*, 25(1), 56-66. <https://doi.org/10.1108/10309611211244537>
- Carr, A. N., & Cheryl Ann, C. A. (2011). The use and abuse of storytelling in organizations. *Journal of Management Development*, 30(3), 236-246. <https://doi.org/10.1108/02621711111116162>

- Chaudhury, P. (2023). Asynchronous learning design—Lessons for the post-pandemic world of higher education. *The Journal of Economic Education*, 54(2), 214-223. <https://doi.org/10.1080/00220485.2023.2174233>
- Chen, H.-J. (2023). Multimodal digital storytelling presentations in EFL contexts: learning outcomes, positive/negative affects, and perception between high-/low-achieving learners. *Innovation in Language Learning and Teaching*, 18(2), 181-196. <https://doi.org/10.1080/17501229.2023.2255977>
- Clark, M. C., & Rossiter, M. (2006). "Now the Pieces are in Place...": Learning through Personal Storytelling in the Adult Classroom. *New Horizons in Adult Education and Human Resource Development*, 20(3), 19-33. <https://doi.org/10.1002/nha3.10258>
- Egan, K. (1989). Memory, imagination, and learning: Connected by the story. *Phi Delta Kappan*, 70(6), 455-459. <https://www.researchgate.net/publication/234763056>
- Ehrlich, D. M., Ehrlich, J. A., & Haberyan, A. (2020). Storytelling in a First-Year Seminar. *InSight: A Journal of Scholarly Teaching*, 15, 105-121. <https://doi.org/10.46504/15202006eh>
- Fredricks, J. A., Blumenfeld, P. C., & Paris, A. H. (2004). School Engagement: Potential of the Concept, State of the Evidence. *Review of Educational Research*, 74(1), 59-109. <https://doi.org/10.3102/00346543074001059>
- Freud, S. (1957). *A general selection from the works of Sigmund Freud*. <https://www.worldcat.org/oclc/1244790793>
- Friedberg, R. D. (1994). Storytelling and Cognitive Therapy with Children. *Journal of Cognitive Psychotherapy*, 8(3), 209-217. <https://doi.org/10.1891/0889-8391.8.3.209>
- Gardner, H. E. (2011). *Frames of mind: The theory of multiple intelligences*. Basic books. <https://psycnet.apa.org/record/2004-18831-000>
- Garrison, D. R., Cleveland-Innes, M., & Fung, T. S. (2010). Exploring causal relationships among teaching, cognitive and social presence: Student perceptions of the community of inquiry framework. *The Internet and Higher Education*, 13(1-2), 31-36. <https://doi.org/10.1016/j.iheduc.2009.10.002>
- Gobeil, J., & Phillips, F. (2001). Relating Case Presentation Style and Level of Student Knowledge to Fact Acquisition and Application in Accounting Case Analyses. *Issues in Accounting Education*, 16(2), 205-222. <https://doi.org/10.2308/iace.2001.16.2.205>
- Hassan, T., & McKee, G. T. (2022). Encouraging Student Engagement Through Storytelling. In *Lecture Notes in Networks and Systems* (pp. 1009-1020). Springer International Publishing. https://doi.org/10.1007/978-3-030-93904-5_97
- Hava, K. (2019). Exploring the role of digital storytelling in student motivation and satisfaction in EFL education. *Computer Assisted Language Learning*, 34(7), 958-978. <https://doi.org/10.1080/09588221.2019.1650071>
- Hisey, F., Zhu, T., & He, Y. (2022). Use of interactive storytelling trailers to engage students in an online learning environment. *Active Learning in Higher Education*, 25(1), 151-166. <https://doi.org/10.1177/14697874221107574>
- Johns, A. M. (1997). *Text, Role and Context*. Cambridge University Press. <https://doi.org/10.1017/cbo9781139524650>
- Johnson, S., & Taylor, K. (2006). *The neuroscience of adult learning*. <https://search.worldcat.org/title/255184615>

- Krupa, J. J. (2014). Scientific Method & Evolutionary Theory Elucidated by the Ivory-billed Woodpecker Story. *The American Biology Teacher*, 76(3), 160-170. <https://doi.org/10.1525/abt.2014.76.3.3>
- Lazareva, A., & Cruz-Martinez, G. (2020). Digital Storytelling Project as a Way to Engage Students in Twenty-First Century Skills Learning. *International Studies Perspectives*, 22(4), 383-406. <https://doi.org/10.1093/isp/ekaa017>
- Lévy-Bruhl, L. (2018). *Revival: How Natives Think* (1926). Routledge. <https://doi.org/10.4324/9780203705490>
- Lisenbee, P. S., & Ford, C. M. (2017). Engaging Students in Traditional and Digital Storytelling to Make Connections Between Pedagogy and Children's Experiences. *Early Childhood Education Journal*, 46(1), 129-139. <https://doi.org/10.1007/s10643-017-0846-x>
- Malcolm S. Knowles, E. F. H. I., Richard A. Swanson. (2012). *The Adult Learner: The definitive classic in adult education and human resource development* (7th ed.). Routledge. <https://doi.org/10.4324/9780080964249>
- Matsiola, M., Spiliopoulos, P., & Tsigilis, N. (2022). Digital Storytelling in Sports Narrations: Employing Audiovisual Tools in Sport Journalism Higher Education Course. *Education Sciences*, 12(1), 51. <https://doi.org/10.3390/educsci12010051>
- McDonald, J. K. (2009). Imaginative instruction: what master storytellers can teach instructional designers. *Educational Media International*, 46(2), 111-122. <https://doi.org/10.1080/09523980902933318>
- Miley, F. (2009). The storytelling project: innovating to engage students in their learning. *Higher Education Research & Development*, 28(4), 357-369. <https://doi.org/10.1080/07294360903046892>
- Moher, D., Shamseer, L., Clarke, M., Ghersi, D., Liberati, A., Petticrew, M., Shekelle, P., Stewart, L. A., & Group, P.-P. (2015). Preferred reporting items for systematic review and meta-analysis protocols (PRISMA-P) 2015 statement. *Systematic reviews*, 4(1), 1-1. <https://doi.org/10.1186/2046-4053-4-1>
- Pittaway, S. M., & Moss, T. (2014). "Initially, We Were Just Names on a Computer Screen": Designing Engagement in Online Teacher Education. *Australian Journal of Teacher Education*, 39(7). <https://doi.org/10.14221/ajte.2014v39n7.10>
- Prensky, M. (2001). Digital Natives, Digital Immigrants Part 1. *On the Horizon*, 9(5), 1-6. <https://doi.org/10.1108/10748120110424816>
- Quah, C. Y., & Ng, K. H. (2021). A Systematic Literature Review on Digital Storytelling Authoring Tool in Education: January 2010 to January 2020. *International Journal of Human-Computer Interaction*, 38(9), 851-867. <https://doi.org/10.1080/10447318.2021.1972608>
- Ramsden, P. (1992). *Learning to Teach in Higher Education*. Routledge. <https://doi.org/10.4324/9780203413937>
- Ramsey, M. (2000). Monocultural Versus Multicultural Teaching: How to Practice What We Preach. *The Journal of Humanistic Counseling, Education and Development*, 38(3), 170-183. <https://doi.org/10.1002/j.2164-490x.2000.tb00077.x>
- Redmond, P., Heffernan, A., Abawi, L., Brown, A., & Henderson, R. (2018). An Online Engagement Framework for Higher Education. *Online Learning*, 22(1). <https://doi.org/10.24059/olj.v22i1.1175>

- Rodgers, O., & Ní Dhonnchadha, L. (2023). The DNA of Digital Storytelling: A Case Study from a Higher Education LSP Classroom. *The EuroCALL Review*, 30(1), 63-77. <https://doi.org/10.4995/eurocall.2023.17232>
- Romero-Ivanova, C. L., Cook, P., & Faurote, G. (2021). Digital stories, material transformations: reflections of education students in a pre-teacher program. *English Teaching: Practice & Critique*, 20(2), 245-260. <https://doi.org/10.1108/etpc-07-2020-0066>
- Shelton, B. E., & Parlin, M. A. (2016). Teaching Math to Deaf/Hard-of-Hearing (DHH) Children Using Mobile Games. *International Journal of Mobile and Blended Learning*, 8(1), 1-17. <https://doi.org/10.4018/ijmbl.2016010101>
- Shemy, N. S. (2023). The Power of Digital Storytelling: Students' Perceptions about Its Utilization in Developing Practical Understanding in an Instructional Technology Context. *International Journal of Information and Education Technology*, 13(9), 1439-1444. <https://doi.org/10.18178/ijiet.2023.13.9.1947>
- Simmons, S. R. (2006). "A Moving Force": A Memoir of Experiential Learning. *Journal of Natural Resources and Life Sciences Education*, 35(1), 132-139. <https://doi.org/10.2134/jnrlse2006.0132>
- Soffer, T., & Cohen, A. (2019). Students' engagement characteristics predict success and completion of online courses. *Journal of Computer Assisted Learning*, 35(3), 378-389. <https://doi.org/10.1111/jcal.12340>
- Tanrikulu, F. (2020). Students' perceptions about the effects of collaborative digital storytelling on writing skills. *Computer Assisted Language Learning*, 35(5-6), 1090-1105. <https://doi.org/10.1080/09588221.2020.1774611>
- Tyrou, I. (2022). Undergraduate Students' Perceptions and Attitudes about Foreign Language-Related Digital Storytelling. *International Journal of Education (IJE)*, 10(01), 41-55. <https://doi.org/10.5121/ije.2022.10104>
- Wills, J. E. (1992). Lives and Other Stories: Neglected Aspects of the Teacher's Art. *The History Teacher*, 26(1), 33. <https://doi.org/10.2307/494084>
- Wu, J., & Chen, D.-T. V. (2020). A systematic review of educational digital storytelling. *Computers & Education*, 147, 103786. <https://doi.org/10.1016/j.compedu.2019.103786>
- Yan, G., & Zhao, X. (2019). A review of the use of storytelling to improve students' oral proficiency in EFL teaching. *European Journal of English Language Teaching*. <https://doi.org/10.5281/zenodo.3334120>