Teachers' Perceptions of AI-Assisted Digital Storytelling in Malaysian Lower Secondary ESL Classrooms

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ABSTRACT

The integration of artificial intelligence (AI) into digital pedagogy has opened up opportunities for improving English as a Second Language (ESL) instruction through AI-assisted digital storytelling (AI-DST). However, past research rarely addresses the intersection between teachers' perceptions, classroom practices, and institutional support for AI-assisted digital storytelling, leaving a gap in understanding how AI-DST is positioned within the Malaysian lower secondary ESL curriculum. This qualitative study explores ESL teachers' perceptions of AI-DST, investigates how it is used or intended to be used in Malaysian lower secondary classrooms, and examines curriculum documents to evaluate the extent of institutional support. Data were obtained through semistructured interviews with lower secondary ESL teachers, as well as document analysis of national curriculum and policy documents such as the Digital Education Policy (DEP, 2023) and the English Language DSKP. Interview data were analysed thematically, whereas document analysis concentrated on policy alignment, pedagogical expectations, ethical considerations, and assessment structures. The findings reveal that teachers usually view AI-DST positively, emphasising its capacity to boost student engagement, reduce learning anxiety, and support vocabulary acquisition and idea development, particularly among low-proficiency learners. However, challenges such as limited device accessibility, inconsistent internet connectivity, time constraints, and insufficient professional training remain. Although there are few explicit references to AI-DST, there is indirect institutional support in the form of curriculum flexibility, infrastructural projects, ethical norms, and performance-based assessments.

Keywords: AI-Integration, AI-Assisted Digital Storytelling, Malaysian ESL Classrooms, English Language Acquisition, Digital Instructional Strategies

INTRODUCTION

The rapid development of digital technologies has had a considerable impact on instructional practices, including English as a Second Language (ESL) teaching and learning. In recent years, artificial intelligence (AI) has gained popularity as a potent educational tool capable of elevating instruction through personalisation, automation, and interactive learning experiences. Within this continually evolving landscape, digital storytelling (DST) has begun to gain popularity as an instructional approach that combines narrative writing with multimedia elements such as text, graphics, audio, and video to aid language learning. The use of AI into digital storytelling, also known as AI-assisted digital storytelling (AI-DST), represents a significant advancement that opens up new avenues for engagement, scaffolding, and learner support in ESL classrooms. The advent of generative AI further expands DST's potential, with tools like ChatGPT and Midjourney supporting learners in creating more sophisticated digital narratives (Cao et al., 2023).

In an era where technological and social practices intersect, storytelling has emerged as a powerful educational tool, empowering students to contextualize language use by creating virtual narratives (Compagnoni, 2025). Digital storytelling has received significant attention for its ability to boost learner engagement, creativity, and multimodal literacy, especially among students who struggle with traditional text-based language activities. The introduction of AI technologies combined with DST enhances this approach by allowing for features like automated feedback, idea production, adaptive support, and personalised learning methods. As a result, AI-DST

shows potential in tackling common issues in ESL classrooms, such as poor motivation, limited proficiency, and various learner needs.

In Malaysia, national initiatives such as the Digital Education Policy (DEP, 2023) and the Dokumen Standard Kurikulum dan Pentaksiran (DSKP) guide the incorporation of digital technology into education. These documents place an emphasis on digital literacy, creative production, and the appropriate use of developing technology, such as artificial intelligence. However, while policy guidelines broadly advocate technologyenhanced learning, detailed guidance on the pedagogical use of AI-assisted digital storytelling is lacking. This has resulted in a situation in which teachers are encouraged to experiment with digital technologies but may lack clear curricular guidance and professional support for successfully integrating AI-based pedagogies in ESL classrooms.

However, not many studies have looked into teachers' perceptions, classroom practices, and readiness to incorporate AI-assisted digital storytelling, particularly in Malaysian lower secondary ESL classes. Understanding teachers' perspectives is crucial for assessing the practical viability of AI-DST implementation, since they play a vital role in interpreting the curriculum and making instructional decisions. Furthermore, examining curriculum and policy texts with teachers' perspectives provides a more complete picture of how institutional goals relate with classroom realities.

Existing research repeatedly shows that AI-assisted digital storytelling incorporates multimodal composition, adaptive scaffolding, and personalised feedback features that improve engagement, vocabulary acquisition, creativity, and communication skills. These findings align with Malaysia's national curriculum expectations, particularly the DSKP's emphasis on communicative competence, creative language use, and multimodal text production, as well as the DEP's emphasis on digital literacy and responsible technology use. However, the literature does not completely examine how these pedagogical affordances interact with curriculum demands in real-world classroom settings, particularly from the perspective of teachers who are responsible for implementing them.

To bridge these gaps, this study uses a qualitative case study approach to investigate ESL teachers' perceptions of AI-assisted digital storytelling, examine how AI-DST is used or intended to be used in classroom practice, and analyse curriculum documents to determine the level of institutional support for its integration. By combining interview data with document analysis, the study offers a comprehensive overview of both instructional strategies and policy implications. The findings are intended to contribute to research on AIenhanced language acquisition and provide insights for teachers, curriculum developers, and policymakers hoping to foster the effective and ethical incorporation of AI-assisted digital storytelling in ESL classrooms.

Research Objectives:

1. To explore ESL teachers' perceptions on the integration of AI-DST in ESL classrooms.

2. To examine the specific ways in which AI-DST is being used or intended to use by ESL teachers in the classroom.

3. To examine curriculum documents on institutional support for AI-assisted digital storytelling.

Research Questions:

1. What are ESL teachers' perceptions on the integration of AI-DST in ESL classrooms?

2. What are the specific ways in which AI-DST is being used or intended to use by ESL teachers in the classroom?

3. To what extent do curriculum documents provide guidance and support for the use of AI-assisted digital storytelling in educational practice?

LITERATURE REVIEW

Given these developments, this literature review aims to systematically examine empirical research on Digital Storytelling for EFL learners, synthesising evidence on its pedagogical outcomes, methodological patterns, and implementation practices. It seeks to highlight how DST supports linguistic, cognitive, and affective dimensions of learning while identifying gaps and future directions necessary to optimise its transformative potential in 21stcentury language education.

Background Of DST

The pedagogical foundations of Digital Storytelling are multidisciplinary, drawing heavily from several learning theories. Social Constructivism suggests that learning and understanding are inherently social processes, achieved through collaborative activities and cultural tools (Abderrahim & Gutiérrez-Colón Plana, 2021). Digital Storytelling pedagogy is aligned with the core beliefs of social constructivism, emphasizing the collaborative creation of narratives where students actively construct knowledge (Azqiya, 2025). The theory traces its roots to the foundational arguments developed by John Dewey, Jean Piaget, and Lev Vygotsky (Abderrahim & GutiérrezColón Plana, 2021)

Furthermore, Experiential Learning Theory emphasizes the importance of direct experience in learning, which is sometimes referred to as "learning by doing" or "interactive learning". Digital storytelling (DS) acts as a vehicle for (English Language Teaching) ELT by transforming students into active participants and content creators rather than passive users of knowledge (Abderrahim & Gutiérrez-Colón Plana, 2021).

DS is the result of an educational journey that started with Total Physical Response (TPR) and progressed through TPR Storytelling. TPRS combines TPR (teaching through physical reaction), Stephen Krashen's language acquisition theory, and Tracy Terrell's natural approach. TPRS emphasizes physical response while promoting narrative and descriptive speech (Abderrahim & Gutiérrez-Colón Plana, 2021).

According to Liang and Hwang (2023), multiliteracies consider language as one of several semiotic systems that construct meaning through several means of communication, such as verbal, visual, aural, spatial, and gestural. Critical literacy teaches pupils to analyze texts, identify biases and power structures, and challenge or rewrite simple narratives (Peeples,S. et al, 2025). Cognitive theories claim that narrative frameworks of DS apps correspond with how the human brain absorbs, stores, and retrieves information, enhancing comprehension and remembering.

Storytelling began in oral tradition and evolved into cinematic works until producing computer-based storytelling known as DS (Hidayat et al., 2024). The introduction of various and powerful multimedia technologies and gadgets, such as personal computers and the internet, fueled the transition. These technologies enabled the integration of narrative arts with a variety of digital media, including text, images, recorded audio narration, music, and video (Abderrahim & Gutierrez-Colón Plana, 2021). The potential for enhanced learning includes subject matter content acquisition, critical thinking skills, and increased motivation and information literacy (Clabough et al., 2013)

Literacy has evolved to encompass numerous modalities of communication, including visual and gestural features, in addition to printed text (Yuan & Grant, 2023). The growth of digital storytelling tools has progressed from basic slideshow software to complex technologies. Recent research focuses on AI-driven digital storytelling (AI-DST), which employs machine learning and (Natural Language Processing) NLP to create engaging, animated narratives for various educational requirements. (Medina & Goddard, 2024). Generative AI models are fast revolutionizing content creation, especially when integrated into Digital Storytelling (DST) for instructional purposes.

Specific Applications in the Creative Domain

In the creative domain, AI is primarily applied as a supportive tool that augments digital media production and pedagogical practices in English as a Foreign Language (EFL) education. Within Digital Storytelling (DST), AI

assists learners and educators by streamlining the creation of multimodal narratives and enhancing instructional efficiency.

Creative Content Production

According to Bourneman and Gibson (2011, cited in Clabough et al., 2013), digital storytelling can enhance critical thinking and multimodal literacy skills. This technique requires students to combine various materials such as digital text, audio narration, images, and video into a cohesive narrative. Using structured questioning, educators can encourage students to broaden their imaginative interpretations while helping them through the key stages of storyboarding, format selection, and self-evaluation.

AI tools such as Jasper AI, Visme, and Murf AI offer specific functionalities that support the creation of digital narratives, including AI-powered writing assistance, visual narratives, and audio enhancement (Medina & Goddard, 2024). This technological integration simplifies the content creation process and is used to create innovative and tailored educational experiences. The use of AI-driven platforms can positively influence narrative intelligence and foster creativity.

Enhancing Engagement and Adaptability

AI tools are recognized for their potential to enhance the effectiveness of language learning and offer time-saving capabilities in the creation and organization of storytelling materials. This technology enables the construction of personalized learning experiences and can adapt learning materials to the needs of a wide range of learners, including those with special needs. One experimental approach found that a robot-based DST editor could simulate the audience’s expected reactions, designing the robot's body language, facial expressions, and emotional reactions through AI features to create a higher-level embodied cognitive experience (Liang & Hwang, 2023). The overall benefit of applying AI in this creative context is the opportunity to foster a more effective and innovative language learning environment.

According to recent research, AI systems may struggle to match human creative thinking and emotional depth. They frequently have difficulty appreciating the nuance, context, and emotional tone required for high-quality narrative building (Medina & Goddard, 2024). AI output may appear impersonal. AI-driven technologies must be linguistically and culturally innovative in order to provide individualized educational experiences (Medina & Goddard, 2024). There is concern that over reliance on technology may impair the user's intrinsic creativity and problem-solving abilities. Furthermore, AI-generated content that lacks context, tone, or distinction can result in stories that appear impersonal. (Medina & Goddard, 2024).

Theories and models supporting the study

The pedagogical integration of Digital Storytelling (DS) is grounded in a multi-layered theoretical framework that draws upon educational psychology, experiential learning, and second language acquisition theories (Abderrahim & Gutiérrez-Colón Plana, 2021). Among these, Social Constructivism serves as the primary theoretical foundation underpinning the use of DS as an instructional approach. This perspective posits that learning is a socially mediated process in which knowledge is constructed through interaction, collaboration, and engagement within meaningful cultural contexts rather than through individual cognition alone.

The social constructivist view is strongly influenced by Vygotsky’s sociocultural theory, which emphasizes the role of social interaction and environmental factors in cognitive development. According to Vygotsky, learning occurs through dialogic processes and scaffolded interactions within a learner’s Zone of Proximal Development, highlighting the importance of collaborative learning environments. In this regard, DS aligns well with social constructivist principles by encouraging learners to co-construct meaning through shared narratives, peer interaction, and reflective engagement.

The environment created by DST can function as a Community of Practice (CoP), facilitating shared knowledge construction. Dewey argued that education and learning are socially interactive processes, advocating for teachers to present content in a way that allows the student to relate new information to prior experiences.

Piaget's model of cognitive development views children as having an active and constructive nature, assimilating, and accommodating noticed information, defining development as a form of biological adaptation (Abderrahim & Gutiérrez-Colón Plana, 2021). Together, these perspectives support the use of DS as a learnercentred and socially interactive pedagogical approach.

Language Acquisition Models

The application of DS in language learning reflects an evolution of teaching methodologies. Total Physical Response (TPR), developed by Asher, suggests that language acquisition is enhanced when physical movement follows verbal orders. This evolved into TPR Storytelling (TPRS), which integrates Asher's physical approach with Krashen's Input Hypothesis. According to Krashen, acquisition occurs when learners receive "comprehensible input" in a low-anxiety environment a state DS facilitates by lowering "affective filters" like poor motivation or lack of self-confidence. By allowing learners to express ideas creatively through multimodal storytelling, DS fosters a supportive environment conducive to language acquisition.

Pedagogical Models and Frameworks

To move from theory to practice, specialized frameworks guide the implementation and evaluation of digital storytelling. TPACK model (technological, pedagogical, and content knowledge), this framework is essential for effective instruction because it demands educators to traverse the intersection of content, pedagogy, and technology (Lisenbee & Ford, 2017). It allows instructors to structure DS in order to achieve both content knowledge and 21st-century skills. In addition, the Digital Storytelling Pedagogical Evaluation Star, grounded in social constructivist principles, offers sixteen pedagogical dimensions for evaluating the design and effectiveness of instructional DS environments and resources (Abderrahim & Gutiérrez-Colón Plana, 2021). This framework provides a structured means of assessing the pedagogical quality of DS activities. The Input–Process–Output (IPO) model, commonly applied in design and educational research, further supports this study by conceptualising learning as a transformation process. Within this model, instructional inputs (e.g., pedagogical strategies and digital tools) are mediated through learning processes such as collaboration and reflection, resulting in measurable outputs including enhanced creativity, critical thinking, and language proficiency. Overall, adopting a consistent theoretical lens particularly social constructivism across these models enhances analytical rigour and ensures coherence between the study's theoretical foundations, pedagogical design, and analytical framework.

The Malaysian Context: AI Policy and Institutional Support

Malaysia's incorporation of AI in schools is regulated by the National Digital Education Policy (2023) and the English Language Education Roadmap 2015-2025. While the Ministry of Education (MoE) promotes ICT innovations through platforms such as DELIMa, there is often a disconnect between policy and reality. Researchers see Artificial Intelligence (AI) as a transformative force and paradigm change in the literary and educational fields, however its implementation raises substantial ethical and policy concerns. While academics recognize that AI can act as a powerful "co-creator" in the creative realm, there is a persistent emphasis on the need for revised policies to handle authorship, data privacy, and the preservation of the "human touch" in storytelling (Verma, 2025; Medina & Goddard 2024).Artificial intelligence (AI) is poised to radically impact the future of digital education, beyond mere automation to become a disruptive force in how information is created, given, and experienced (Zainudin et al., 2025).

Hyper-Personalization and Adaptive Learning

One of the most significant changes brought about by AI is the capacity to provide personalized educational experiences suited to each student's unique skills, limits, and interests (Zainudin et al., 2025). AI-powered platforms enable students to learn at their own pace, with targeted assessments and information that adapts to their progress in real time (Zainudin et al., 2025). Future trends include the use of smart tutoring systems, digital exams, and responsive surroundings to improve education efficiency and effectiveness. (Zainudin et al., 2025).

Interactive and Collaborative Creativity

AI is redefining the creative process, shifting from being a mere tool to a co-creator in educational and literary spaces. Emerging AI tools allow for dynamic and interactive narratives where students can influence plot outcomes or character development in real-time in digital storytelling. This participatory model transforms students from passive readers into active co-creators. Other than that, AI allows for the integration of text, graphics, audio, and video into immersive experiences, such as AI-generated writing or transmedia storytelling, which makes learning more interesting. (Verma, 2025).

Enhanced Accessibility and Global Inclusivity

Artificial intelligence technology serves as a bridge to overcome traditional educational hurdles. AI-powered translation, speech recognition, and text-to-speech capabilities enable educational content to reach worldwide audiences, regardless of language or literacy level. This technology has the potential to amplify marginalized voices and preserve indigenous narratives, fostering cross-cultural communication (Verma, 2025)

Development of "AI Literacy"

As AI becomes popular, "AI Literacy" is emerging as a new set of essential competencies (Ng et al., 2022). Students must move beyond being end-users to understanding the basic concepts, working principles, and logic behind AI technologies. A critical component of future education is teaching students to use AI effectively and ethically, which includes understanding issues like algorithmic bias and data privacy. (Ng et al., 2022)

METHODOLOGY

This study employs a qualitative case study design (Yin, 2018) to explore AI-assisted digital storytelling (AIDST) in Malaysian ESL classrooms. Data triangulation is achieved through semi-structured interviews with teachers and document analysis of curriculum and policy guidelines, allowing for a comprehensive understanding of teacher perceptions and institutional support (Creswell & Poth, 2018).

Research Design and Justification

A qualitative case study design is adopted to gain an in-depth understanding of AI-DST within its real-life educational context. Yin (2018) asserts that case studies are suitable when contextual conditions are integral to the phenomenon under investigation. As AI integration is shaped by school infrastructure and Ministry of Education (MOE) policies, this design is appropriate. Qualitative inquiry further enables exploration of how and why teachers use AI, capturing lived experiences that may not be evident through quantitative methods (Creswell, 2014). Given the rapidly evolving nature of AI in education, this approach allows for timely documentation of pedagogical practices.

Data Collection Methods

A triangulated data collection approach is employed to enhance credibility, combining semi-structured interviews and document analysis.

Semi-Structured Interviews

Semi-structured interviews are conducted with three lower secondary ESL teachers from three different secondary schools in Klang, Selangor. Open-ended questions allow flexibility for probing and clarification, supporting in-depth exploration of teachers' digital readiness, perceptions, and attitudes toward AI-DST. Interview data address Research Questions 1 and 2.

Document Analysis

Document analysis involves a systematic review of policy and curricular documents, including the Dokumen Standard Kurikulum dan Pentaksiran (DSKP) for Forms 1–3, the Digital Education Policy, and relevant case studies. Bowen (2009) highlights document analysis as a valuable non-reactive method for qualitative case studies. This approach provides institutional and policy-level insights and supports Research Question 3 on curriculum and institutional support for AI-DST.

Data Analysis

The study employs thematic analysis to analyse interview and document data. According to Braun and Clarke (2006), thematic analysis enables the identification and interpretation of recurring patterns in qualitative data. This method allows systematic examination of teachers' perceptions, digital readiness, and experiences, alongside institutional expectations reflected in policy documents. Themes related to AI use, digital storytelling practices, and institutional support are identified, coded, and organized, facilitating triangulation across data sources and addressing all research objectives.

Participants and Sampling

Purposive sampling is used to select information-rich participants relevant to the study's focus. The sample comprises three lower secondary ESL teachers from different schools in Klang, Selangor, which is appropriate for an in-depth qualitative case study prioritising contextual understanding over generalisation (Creswell & Poth, 2018).

Selection criteria include:

- A minimum of two years' experience teaching lower secondary ESL (Forms 1–3)
- Experience using digital or AI tools, or intention to integrate them into instruction

Research Instruments

Two instruments are used: a semi-structured interview guide and a document analysis checklist. The interview guide addresses Research Questions 1 and 2 and follows four stages: consent and briefing, rapport-building, core questions on affordances and challenges of AI-DST, and reflective closure. The document analysis checklist, guided by Bowen's (2009) framework, focuses on AI integration, digital competencies, multiliteracies, and multimodal assessment.

Data Collection Procedures

Data collection is conducted in three phases. The first phase involves obtaining ethical clearance and permission from participating schools and teachers. Informed consent is secured, and anonymity is ensured through the use of pseudonyms. The second phase consists of semi-structured interviews conducted face-to-face or via telephone, based on participants' preferences. Telephone interviews are supported by Sturges and Hanrahan (2004) as a feasible and comfortable option for participants. All interviews are audio-recorded with consent and transcribed verbatim. The final phase involves systematic collection and analysis of curriculum and policy documents, including the DSKP for Forms 1–3 and the National Digital Education Policy. This phase provides institutional context and strengthens data triangulation.

Ethical Considerations and Limitations

The study adheres to the Malaysian Code of Responsible Conduct in Research (MCRCR). Participants receive detailed information sheets, provide written consent, and may withdraw at any time without consequence (Creswell & Poth, 2018). Confidentiality is maintained through pseudonyms and the removal of identifying details.

Limitations include a small sample size and reliance on self-reported data, which may limit generalisability. The absence of classroom observations restricts direct examination of enacted practices. However, these limitations align with the exploratory nature of qualitative case study research, which prioritises depth and contextual insight.

RESULT

Semi-structured Interview

Thematic analysis was employed on the interview data to identify recurring patterns in ESL teachers' perceptions and experiences of integrating AI-assisted digital storytelling (AI-DST) in lower secondary ESL classrooms. Among the more common techniques used by qualitative researchers, thematic analysis involves the identification of recurring patterns that are presented by researchers as overarching statements or themes (Lochmiller, 2021). The transcribed data were coded and sorted into themes based on shared meanings which served as the foundation for the findings presented in this section. The findings are organized around the themes that arose from the analysis and they are supported with sample extracts from the participants' responses. The interview data revealed four major themes regarding ESL teachers' perceptions of AI-assisted digital storytelling in lower secondary classrooms.

AI-DST as an Engagement and Motivation Tool

Teachers believed AI-assisted digital storytelling as an excellent way to increase student engagement and

motivation. Respondents stated that multimedia elements such as graphics, audio, and short videos helped to maintain students' attention and minimize anxiety, especially among learners with lower proficiency level. AIDST was considered as a way to make English teaching more engaging and less intimidating.

"It's a great engagement tool… students will not be bored during the teaching and learning session." (Respondent 1)

Respondent 2 highlighted that AI-DST reduces learners' anxiety and increases engagement, particularly among low-proficiency students who struggle with traditional literacy tasks.

"AI-DST can help make lessons more engaging and students will feel that the lesson is less intimidating especially for the weak students… This makes the learning process more achievable and students are more willing to participate when tasks are more doable." (Respondent 2)

She further explained that multimodal elements such as visuals and audio help sustain interest and lower affective barriers:

"DST with the support of AI technology helps them to use images, audios, short sentences and videos… This helps them reduce their anxiety to learn the language." (Respondent 2)

Respondent 3 similarly perceived AI-DST as a more engaging alternative to conventional reading-based instruction:

"AI-DST would be more engaging for students instead of just reading story books, since most of them actually have poor skills in reading." (Respondent 3)

These positive perceptions of engagement naturally extend into teachers' recognition of AI-DST's instructional value, as discussed in the next theme.

Pedagogical Benefits of AI-DST in ESL Learning

The findings demonstrate that AI-DST promotes pedagogical support by facilitating scaffolding, immediate feedback, and idea development. Teachers noted that AI tools helped them manage large classes more

successfully while also assisting learners with various language skills such as reading, listening and speaking. "The AI will give them immediate feedback… that's where AI comes to assist them." (Respondent 1)

Respondent 2 emphasized AI-DST's role in scaffolding learning, vocabulary development, and idea generation for weaker learners:

"AI tools can help my students generate better ideas… They can learn more vocabulary and get sample sentences generated by AI, which is very useful for learners with low proficiency." (Respondent 2)

She noted that AI-supported storytelling enables learners to approach tasks in manageable ways:

"Students are more willing to participate when tasks are more achievable." (Respondent 2)

Respondent 3 viewed AI-DST as a tool that can support creativity and comprehension, especially in reading lessons:

"AI-DST would be able to enhance their creativity when they are able to see how the story goes." (Respondent 3)

However, she also highlighted pedagogical complexity related to differentiated learning:

"It might be a bit difficult to ensure that all learners with different learning backgrounds are able to adapt to AIDST." (Respondent 3)

While teachers acknowledge strong pedagogical affordances, these benefits are often difficult to realise due to practical constraints, as discussed in the following theme.

Challenges in Implementing AI-DST in ESL classrooms

Despite positive critiques, teachers highlighted several challenges to the proper application of AI-DST. These challenges included limited access to devices, inconsistent internet connectivity, insufficient training and a lack of confidence in adopting AI-based technologies. Such challenges were especially noticeable in rural school settings.

"We don't really have a good internet connection… even accessing Google takes a long time." (Respondent 1)

Respondent 2 identified multiple challenges, including limited confidence, time constraints, unequal access to devices, and student distraction:

"One challenge is my own limited experience and the low level of confidence that I have in using AI-DST." (Respondent 2)

She further explained structural constraints:

"We don't have equal access to devices… some students may get good devices and some may not." (Respondent 2)

She also raised concerns about classroom management:

"Students are highly distracted by technology… it's a struggle to monitor students' work while handling distractions." (Respondent 2)

Respondent 3 emphasized the lack of technical and pedagogical training as a major barrier, even in a wellequipped school:

"Even though we are able to use AI, how are we going to apply it for learners to be able to learn something from it? The number one issue would be the technical skill." (Respondent 3)

She also highlighted concerns related to differentiated learning and teacher readiness:

"Even us teachers have to adapt to the technology itself before we use it in the classroom." (Respondent 3)

These challenges shape how teachers conceptualise the role of AI in instruction, as explored in the next theme.

AI as a Supportive Tool Rather Than a Replacement for Teachers

Every respondent stressed that rather than replacing the position of teachers, AI should serve as an additional teaching tool. Teachers emphasized the value of preserving human contact and raised concerns about students' over reliance on AI, which may impede their capability to produce language on their own.

"AI is just an assistant… teachers are still needed for human connection." (Respondent 1)

Respondent 2 clearly viewed AI as a supplementary tool that requires teacher mediation:

"AI should be used as a supporting tool because it cannot be a whole replacement for teachers." (Respondent 2)
She stressed the importance of human interaction:

"Students actually need human interaction to help them with whatever they could not understand." (Respondent 2)

Respondent 3 expressed concern about over-reliance on AI and its impact on language foundations:

"We need to ensure that the foundation of the language skills that the students have is enough for them to be independent learners." (Respondent 3)

She also cautioned against unchecked AI use:

"We need to explore more to know how to use it before the students misuse it for their assignments." (Respondent 3)

The interview findings highlight a blend of optimism and caution among teachers, indicating that their perceptions are influenced by the institutional structures and guidelines available. The following section therefore examines policy and curriculum documents to determine the extent of institutional support for AIassisted digital storytelling.

Document Analysis

Institutional Support for AI-Assisted Digital Storytelling

This document analysis examined the extent to which curriculum and policy documents provide guidance and institutional support for the use of AI-assisted digital storytelling in educational practice. Analysis of the Digital Education Policy (DEP, 2023), the Form 3 DSKP, and related literature reveals that while explicit references to AI-assisted digital storytelling are limited, curriculum documents demonstrate moderate institutional support through implicit policy alignment, particularly in areas of infrastructure provision, curriculum integration, pedagogical expectations, ethical regulation, and assessment structures.

Policy Support for Emerging Digital and AI Technologies

At the policy level, the DEP (2023) provides a strong institutional foundation for technology-enhanced pedagogies by promoting the use of emerging digital technologies, including Artificial Intelligence (AI), to enhance teaching and learning. Although AI-assisted digital storytelling is not explicitly stated, the policy's

emphasis on producing digitally fluent, creative, and innovative learners aligns conceptually with the pedagogical affordances of AI-supported storytelling practices (Zainudin et al., 2025). Additionally, infrastructural initiatives such as WAN and LAN upgrades and the Point of Presence (PoP) broadband project indicate systemic readiness to support digitally intensive activities, including AI-assisted content creation (Digital Education Policy, 2023).

Curriculum-Level Integration of Digital Storytelling Practices

At the curriculum level, the DSKP reflects institutional support through the integration of ICT as a CrossCurricular Element. This requirement enables the use of digital tools across subjects, thereby legitimizing technology-mediated learning activities. In particular, the English Language curriculum includes learning tasks that require students to respond to texts through the creation of digital artefacts such as blogs, webpages, and multimedia presentations. These activities align with the core principles of digital storytelling, including narrative construction, multimodal expression, and audience engagement.

Although the DSKP does not explicitly mention AI tools, its emphasis on “rapidly emerging technologies” and creative digital production provides curricular flexibility for teachers to incorporate AI-assisted tools in storytelling tasks. This suggests that institutional support exists at an implicit level, allowing AI-assisted digital storytelling to be pedagogically justified within existing curriculum expectations.

Pedagogical and Professional Support Structures

Institutional support is also demonstrated by the DEP's emphasis on human capital development. Teachers are expected to participate in ongoing professional development to improve their digital competence and pedagogical integration of technology (Zainudin et al., 2025). This focus aligns with the educational demands of AI-assisted digital storytelling, which encourages teachers to enable creative, technology-mediated learning rather than relying primarily on traditional teaching methods. Furthermore, school leaders are positioned as "leaders of change" in charge of cultivating digital ecosystems through planning, monitoring, and evaluation (Digital Education Policy, 2023), allowing for the institutional adoption of innovative practices such as AI-aided storytelling.

Ethical and Responsible Use of AI in Educational Practice

The analysis also indicates that institutional support for AI-assisted digital storytelling is framed within strong ethical guidelines. The DEP highlights data security, privacy protection, and responsible technology use, acknowledging the ethical risks associated with digital and AI-enabled platforms (Zainudin et al., 2025). The principle of *Karamah Insaniah* (human dignity) further reinforces ethical conduct and social responsibility in digital learning environments (Digital Education Policy, 2023). Correspondingly, the DSKP includes learning objectives that require students to evaluate information critically and differentiate between ethical and unethical digital practices, which is particularly relevant to AI-assisted storytelling contexts involving issues of authorship, bias, and misinformation.

Assessment Alignment and Institutional Monitoring

Institutional support is also reflected in assessment structures. The DSKP’s Performance Standards framework (Levels 1–6) provides a formal mechanism for evaluating digitally mediated learning tasks. The DEP identifies the DSKP as a benchmark for determining mastery levels and guiding follow-up instructional decisions, including remedial or enrichment activities delivered through digital platforms. This assessment alignment legitimizes the implementation of digital storytelling projects, including those supported by AI tools, within formal classroom evaluation practices.

Extent of Institutional Support

In response to the research question, the data show that curricular documents offer indirect but significant institutional support for AI-assisted digital storytelling. While there is no clear curricular advice for AI-assisted

storytelling, there is substantial agreement between policy vision, curriculum expectations, pedagogical support structures, ethical frameworks, and evaluation systems. Collectively, these features form a favourable institutional context for the incorporation of AI-assisted digital storytelling, however clearer and more specific curricular instructions would improve implementation.

Overall, this study focusses on the rising but underexplored potential of AI-assisted digital storytelling in Malaysian lower secondary ESL classrooms. While teachers largely recognise the potential to increase engagement, confidence, and language development, their experiences highlight practical and institutional constraints that must be overcome in order to properly exploit AI-DST. This study, by revealing both the promise and limitations of implementation, provides insights that might contribute to future professional development, resource planning and curriculum revision to enable meaningful and sustainable AI integration in ESL education.

DISCUSSION

This study examined the extent to which curriculum documents provide guidance and institutional support for AI-assisted digital storytelling (AI-DST) and how such support is reflected in teachers' classroom practices. The document analysis revealed that national policies and the DSKP offer substantial implicit institutional support for AI-DST, while the interview findings illustrate how teachers interpret and operationalize this support in practice. Collectively, the findings highlight both alignment and tension between policy intent and classroom implementation.

Findings indicate that teachers perceive AI-assisted digital storytelling as a powerful pedagogical tool for enhancing student engagement, motivation, and creativity. Increased learner participation and enthusiasm were consistently reported when AI tools were embedded within narrative-based tasks. These perceptions align with national policy priorities articulated in the Digital Education Policy (DEP, 2023) and the *Dokumen Standard Kurikulum dan Pentaksiran* (DSKP), both of which emphasise digital fluency, creative production, and learnercentred innovation. Although AI-DST is not explicitly prescribed in these documents, the curricular focus on multimodal communication and digital artefact creation implicitly legitimises its use. However, the absence of explicit references to AI-based storytelling suggests that perceived pedagogical value alone may be insufficient to ensure consistent or widespread adoption across schools.

Beyond engagement, teachers identified AI-DST as affording pedagogical support for idea generation, language scaffolding, multimodal composition, and differentiated instruction. These affordances closely reflect the DEP's vision of learners as creative and autonomous problem solvers, as well as the DSKP's emphasis on communication through diverse media. Document analysis further demonstrates that existing curricular structures are broadly compatible with digital storytelling practices. Nevertheless, the lack of concrete pedagogical models, exemplars, or implementation guidelines within curriculum documents constrains teachers' ability to systematically integrate AI tools. Consequently, the pedagogical benefits of AI-DST are realised unevenly, depending largely on individual teachers' digital competence, confidence, and professional agency.

Despite generally positive perceptions, teachers reported significant challenges related to time constraints, limited professional training, ethical uncertainty, and unequal access to digital resources. These concerns mirror gaps identified in policy documents, particularly the reliance on implicit rather than explicit instructional guidance. While the DEP foregrounds infrastructure development and general professional upskilling, interview data suggest that such support does not consistently translate into practical classroom readiness for AI-assisted pedagogies. These finding echoes broader concerns that digital transformation initiatives may exacerbate second- and third-level digital divides when access is not accompanied by targeted pedagogical and instructional support (Ayob et al., 2022). In this sense, equity emerges as a central issue, with students' learning opportunities shaped by school resources and teachers' individual capacities rather than by systematic institutional provision.

Ethical considerations also feature prominently in teachers' perceptions of AI-DST. Participants consistently framed AI as a supportive pedagogical tool rather than a replacement for teacher expertise, emphasising the continued importance of professional judgment, instructional leadership, and human mediation. This stance aligns with ethical principles outlined in the DEP, particularly those related to *Karamah Insaniah* (human

dignity), responsible technology use, and data protection. The congruence between policy-level ethical values and teachers' cautious yet constructive attitudes towards AI provides a strong moral foundation for AI-DST integration. However, in the absence of formal curriculum-level guidelines addressing ethical AI use in storytelling activities, ethical decision-making remains largely individualised, placing additional responsibility on teachers.

Overall, the findings indicate that curriculum and policy frameworks offer moderate but indirect institutional support for AI-assisted digital storytelling. While national policies promote enabling conditions through infrastructure development, curricular flexibility, ethical safeguards, and assessment alignment, they rely heavily on teacher discretion for pedagogical enactment. Teachers demonstrate a clear willingness to integrate AI-DST when it is perceived to enhance student learning and engagement, yet persistent challenges related to training, clarity, and equity limit its systematic implementation. Strengthening curricular guidance through explicit AIrelated examples, pedagogical frameworks, and targeted professional development would help bridge the gap between policy vision and classroom practice, enabling more consistent, ethical, and equitable integration of AIassisted digital storytelling.

CONCLUSION

This study examined ESL teacher perceptions of AI-assisted digital storytelling (AI-DST) in Malaysian lower secondary classrooms and studied curriculum resources to assess institutional support. The findings show that teachers generally perceive AI-DST as a valuable tool for increasing engagement, reducing anxiety, and supporting multimodal language development, particularly for low-proficiency learners, while emphasising the importance of teachers in providing human interaction, ethical judgement, and pedagogical guidance. Although explicit references to AI-DST are scarce, current policies indirectly encourage its usage through curriculum flexibility, ethical norms, infrastructural initiatives, and evaluation procedures.

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