

How Technology Can Make Writing Fun and Effective for Pupils

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Received 27 October 2024 dy Received in revised form 17 November 2024 lik Accepted 10 December 2024 pl Available online 31 December 2024 ex in w uss addition Keywords: or Artificial Intelligence; Canva AI; writing Call	he rise of digital tools in education has transformed traditional learning, offering ynamic ways to engage students, particularly in areas often perceived as challenging, we writing. This project explores the innovative role that Canva's AI-powered tools ay in making writing both enjoyable and effective for primary school students. It kamines the intersection of creativity and technology, focusing on how Canva's tuitive design and AI functionalities can enhance student engagement, improve riting skills, and foster a positive attitude toward creative expression. Through the see of visual templates, personalized prompts, and interactive design features, Canva I enables pupils to visualize their narratives, encouraging a multimodal approach to riting. This not only aids in organizing thoughts but also supports the development of gital literacy, an essential skill in today's tech-driven world. By integrating Canva AI to the curriculum, educators can offer a playful yet purposeful writing environment hat appeals to various learning styles and meets diverse educational needs. Findings uggest that the gamified experience and visual reinforcement provided by Canva AI positively impact students' willingness to write and revise, leading to improved utcomes. Ultimately, this study emphasizes the potential of AI-driven platforms like anva to transform writing from a rote task into a creative and empowering experience or pupils, making it a valuable asset in modern classrooms.

1. Introduction

The integration of technology in education has revolutionized traditional teaching methods, particularly in enhancing writing skills among primary school students [11,18,30]. The paper examines the use of Canva AI as a tool to elevate writing skills among primary school pupils in Malaysia, focusing on its impact on student engagement, creativity, and overall writing proficiency similarly to Suryani *et al.*, [32] as they propose a groundbreaking study of integration of technology to elevate the pupils learning English language; writing skill in particular. Digital tools have transformed education, offering innovative ways to engage students and improve skills, particularly in writing of Hidayatullah *et al.*, [10], which is often seen as a difficult task for primary school students.

Traditional teaching methods have been revolutionized by digital tools, providing new approaches to learning and skill development. The transformative impact of Canva's AI tools on

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fostering creativity and enhancing writing skills in primary school students, especially given the challenges many faces with writing of Churiyah *et al.*, [4].

The integration of digital tools like Canva, with its AI-powered features, has significantly changed education, offering new ways to engage learners and improve skills It explores how Canva's user-friendly design and AI capabilities can enhance creativity and writing outcomes for young learners, addressing the common perception of writing as a challenging task [15, 28].

Despite numerous studies on Canva's role in education, a specific research gap exists regarding its long-term impact on students' writing proficiency and its applicability across diverse educational contexts. Addressing this gap would highlight the relevance of this study and its contribution to advancing knowledge in educational technology.

2. Literature Review

Technology fosters collaboration, as tools like shared editing features and group projects enable students to co-create and provide peer feedback. This collaborative environment not only enhances social learning but also encourages critical thinking and teamwork [17]. Studies also reveal that gamified features, such as rewards and progress tracking, further incentivize engagement and create a sense of accomplishment. Technology-driven platforms have been shown to develop digital literacy alongside traditional writing skills, preparing students for the demands of a tech-driven world. These advances enhance the pleasure of writing and promote iterative learning, as students are more inclined to rewrite and refine their work in a dynamic digital context.

2.1 The Role of Technology in Writing Education

The incorporation of technology in writing instruction has transformed conventional methods, improving engagement, creativity, and skill acquisition. Digital platforms such as Canva enhance interaction and motivation by offering intuitive tools that convert writing into an interesting, multimodal experience. Technology enables pupils to integrate text with pictures, enhancing idea organisation and rendering abstract notions concrete [3]. Additionally, adaptable elements such as individualised feedback and templates address varied learning requirements, fostering inclusion. These advances enhance the pleasure of writing and promote iterative learning, since students are more inclined to rewrite and refine their work in a dynamic digital context.

2.1.1 Enhancing engagement and motivation

Research by Suryani *et al.,* [32] also indicates that incorporating technology in the classroom significantly boosts student motivation and engagement. For instance, studies have shown that platforms like Canva enhance creativity and foster a more interactive learning environment. The user-friendly drag-and-drop interface of Canva allows students to create visually appealing texts, such as invitations and advertisements, making the writing process enjoyable. This aligns with findings that suggest technology can transform mundane tasks into engaging activities.

Canva's intuitive design interface enables students to create visually enriched content, such as posters, flyers, and digital invitations, which makes writing tasks more interactive and fun. This approach contrasts with traditional methods of writing, which may seem more formal and restrictive to young learners. Canva allows for creative expression, enhancing motivation by enabling students to see immediate results in their work, which increases their enthusiasm for writing tasks. The

platform also incorporates elements of gamification, where students can experiment with different designs, creating a sense of achievement as they progress through tasks.

Further studies support the notion that when students perceive their writing tasks as enjoyable and meaningful, they are more likely to stay engaged and motivated to improve their skills. Suryani *et al.*, [32] suggest that the interactive features of Canva lead to more hands-on learning, which contrasts with passive listening or rote memorization that students often experience in traditional classrooms. Therefore, the use of technology in writing education can effectively increase student engagement, making learning a dynamic and enjoyable experience.

2.1.2 Improving writing skills

Canva's role in improving writing skills has been well documented. As a multimedia tool, Canva allows students to connect their writing with visual elements such as images, graphics, and varied fonts, which encourages them to develop both linguistic and visual literacy. Dja'far and Hamidah [34] argue that the integration of AI tools like Canva offers immediate feedback, helping students refine their writing through iterative design. This feedback mechanism supports continuous improvement, allowing students to revise and enhance their work in real time.

Research also suggests that visual literacy is an important aspect of writing development, especially in the digital age. By incorporating visuals, students not only improve their writing but also gain skills in communicating messages through multiple modalities. This is particularly crucial in the context of modern education, where the ability to convey information effectively across different media is essential. Moreover, Canva's easy-to-use features allow students to engage with these tools without overwhelming them, thus enhancing their overall learning experience.

As mentioned in Dja'far and Hamidah's [34] study, AI-driven writing platforms can analyze students' drafts, offering suggestions on grammar, structure, and style. This personalized feedback enables students to make real-time corrections, fostering an environment of active learning. Thus, students can develop stronger writing skills by engaging in the iterative process of drafting, receiving feedback, and revising their work—a process that mirrors professional writing practices.

2.2 Theoretical Perspectives on Technology Integration in Education 2.2.1 Constructivism and technology in education

Constructivism is about active learning. The theory, developed by scholars like Piaget, Vygotsky, and Bruner, argues that knowledge is not simply transmitted from teacher to student but is built by the learner through interaction with their environment, peers, and experiences. This aligns perfectly with how modern technology is used in education today. Rather than passively receiving information, students actively engage with digital tools to solve problems, explore new ideas, and reflect on their learning [26,36].

Constructivism emphasizes that students learn best when they are actively involved in the learning process. Technology can make this easier by providing interactive tools and resources that encourage exploration and self-discovery. Vygotsky's idea of learning through social interaction is central to constructivism. Technology helps facilitate this by enabling students to collaborate online, share ideas, and engage in discussions no matter where they are. In a constructivist classroom, teachers provide support that gradually fades as students take more control of their learning [36]. Digital tools, especially those powered by AI, can act as scaffolds by offering personalized feedback and adaptive learning paths, helping students progress at their own pace [38].

Technology allows educators to create rich, interactive environments that align with the principles of constructivism such as exploring into interactive platform such as Canva allows students to not only consume information but also create and design their own learning experiences [31]. With access to videos, infographics, and interactive simulations, students can represent their ideas in multiple ways, deepening their understanding of the material [1]. Tools that provide real-time feedback, such as AI-powered writing assistants or automated quizzes, allow students to learn from their mistakes and improve iteratively—a process central to constructivist learning [25].

Studies have shown that when technology is used in ways that support constructivist learning, students tend to be more engaged, motivated, and confident in their abilities. For example, research by Widiarti and Jamilah [35] found that online collaborative tools promote deeper engagement, as students build knowledge through group discussions and shared projects. These tools create a more interactive, dynamic learning environment where students can connect with their peers and experts in real time. In a constructivist classroom using technology, students might work on a collaborative project using tools like Canva to design a multimedia presentation on a historical event. They would research, create, and present their findings while reflecting on their learning and receiving peer feedback—all of which can be facilitated through digital platforms.

2.2.2 Project-Based Learning (PBL) and digital tools

Project-Based Learning (PBL) is another teaching approach that pairs perfectly with technology. PBL encourages students to solve real-world problems by working on long-term projects that require critical thinking, creativity, collaboration, and communication. With digital tools, PBL can be made even more effective by providing students with access to resources, collaborative platforms, and ways to present their work in innovative formats.

PBL is built around complex, open-ended problems that require students to apply what they've learned in real-life scenarios. Technology helps students connect to global issues, conduct research, and collaborate with experts outside the classroom [19]. Moreover, PBL thrives on teamwork. Digital tools like Google Drive and Padlet make it easy for students to work together on a project, share resources, and give each other feedback—whether they are in the same room or halfway across the world. In PBL, students are given more control over their learning. Technology supports this autonomy by providing students with the tools to explore topics they are interested in and create projects that reflect their learning.

Digital tools play a crucial role in making PBL more dynamic and engaging. Online tools like Google Scholar, YouTube, and TED Talks provide students with access to vast amounts of information, from academic articles to multimedia content [20]. Whether they are designing a website, creating a documentary, or building an infographic, students can use digital tools like Canva to showcase their work in innovative and engaging ways [31].

Research has consistently shown that PBL not only improves students' problem-solving and critical-thinking skills but also boosts motivation. A study by Khairani et al., [16] found that students in PBL environments developed a deeper understanding of content and demonstrated greater engagement compared to traditional classrooms. When paired with digital tools, these outcomes are amplified as students are able to access more resources, collaborate more efficiently, and create high-quality projects that reflect their learning.

Both Constructivism and Project-Based Learning are educational theories that emphasize active, student-centered learning. Technology plays a pivotal role in making these theories come to life by providing students with the tools they need to engage with content, collaborate with peers, and express their ideas in creative ways. Whether through interactive platforms, collaborative tools, or

multimedia projects, technology enhances the learning experience, making it more engaging and meaningful.

2.3 Benefits of using Canva AI

2.3.1 Accessibility and User-Friendliness

One of the key advantages of Canva is its accessibility. With its free basic version and user-friendly interface, Canva is an ideal tool for primary school pupils who may not have extensive experience with digital platforms. A study emphasize that Canva's simple design and vast library of templates make it accessible to a wide range of users, regardless of their technological proficiency. This accessibility ensures that even students in less-resourced environments can benefit from the tool, as it requires no advanced technical skills to navigate.

Hadi, Izzah, and Paulia [7] further underline Canva's role in democratizing creative expression. As an online tool, Canva can be accessed from any device with internet access, enabling students to work both in and outside the classroom. This flexibility is particularly beneficial in a Malaysian context, where some students may not have access to high-end hardware. The ease of use also fosters a more inclusive learning environment, ensuring that all students, regardless of technological background, can participate fully in creative and writing tasks.

In the context of Malaysia's educational system, which has seen increasing efforts to integrate digital learning tools, Canva's presence on platforms like DELIMa 2.0 further ensures that the tool is available to a broad spectrum of students and educators. The platform's integration with other digital resources enhances its value by offering a wide range of supplementary learning materials, supporting both teachers and students in the creative process.

2.3.2 Fostering creativity

Canva's unique ability to foster creativity in writing education cannot be overstated. By allowing students to customize templates, incorporate multimedia, and experiment with design elements, Canva provides a space for students to express themselves visually and linguistically. As mentioned in the study of Hadi, Izzah, and Paulia [7], argues that digital tools like Canva allow students to engage in creative writing in ways that were previously unavailable. The use of design in writing tasks enables students to visualize their thoughts and present their ideas in a more compelling and engaging manner.

Moreover, the integration of text and visuals encourages students to think critically about how they structure their messages. A study highlights the importance of creativity in writing, noting that it not only enhances students' ability to articulate their thoughts but also promotes deeper engagement with the content. By combining creativity with critical thinking, Canva transforms writing tasks into project-based activities, allowing students to explore different ways of communicating their ideas.

The platform's flexibility enables students to experiment with diverse formats, including infographics, social media posts, and advertisements, providing ample opportunities for creative expression. In doing so, Canva offers a bridge between traditional writing tasks and the more dynamic, digital forms of communication students will encounter in their future careers.

2.4 Successful Case Studies 2.4.1 Improving writing skills

A study by Fauziyah, Widodo, and Yappi [14] at MTs Sabilunnajah Prambon found that the use of "Canva for Education" significantly improved students' procedural writing skills. Through pre- and post-tests, students demonstrated better organization and clarity in their writing. Additionally, students reported that using Canva motivated them to engage more deeply with the writing process, particularly because the platform allowed them to visualize their writing.

2.4.2 Creative writing enhancement

Research by Widiarti *et al.,* [35] showed that Canva's diverse templates allowed primary school students to produce more engaging and polished creative writing. Students reported higher levels of motivation and creativity when given the opportunity to incorporate Canva's visual elements into their written assignments.

2.4.3 Online learning during the pandemic

A case study conducted at SDN Krembangan Selatan III Surabaya by Indriyani, Fendi, and Haron [12] found significant improvements in learning outcomes among students who utilized Canva for Online Self-Regulated Learning. Students who created their own learning materials using Canva scored higher on tests compared to their peers who completed assignments using traditional methods.

2.4.4 Visual learning

Another study by Nabila Farhana Jamaludin and Siti Farahin Sedek [23] demonstrated that Canva helped students develop better engagement and comprehension in visual note-taking activities. The use of Canva for digital note-taking allowed students to combine text with images, improving both their cognitive understanding and retention of the material.

The literature supports the notion that integrating technology like Canva into writing education can significantly enhance student engagement, creativity, and writing skills among primary school pupils in Malaysia. As educators explore innovative teaching methods, tools like Canva not only make writing enjoyable but also prepare students for a digitally-driven world. Future research should focus on overcoming challenges associated with technology use in classrooms to maximize its benefits for all learners.

2.5 Addressing Challenges

Despite its advantages, the use of Canva presents challenges. Some studies highlight issues such as the need for internet access and familiarity with digital tools, which may hinder some students' full engagement with the platform as mentioned in Syahdan *et al.*, [33] not all students are able to attend online lessons simultaneously, further complicating the teaching process. Additionally, while Canva offers many free features, some premium elements require payment, potentially limiting accessibility for all students. This issue highlights the need for equitable access to digital tools, ensuring that all students, regardless of financial background, can fully participate in the learning process. Teachers expressed frustration with the restricted access to advanced templates, which are only available in the premium version. This issue was also mentioned in Syahdan et al., [33], who found that limited resources in free versions of digital tools can restrict creativity and engagement in teaching. Teachers in the study mentioned that while the premium version offers more robust features, the cost is often prohibitive, a challenge echoed by a study in Ref. [33], who pointed out that financial constraints often prevent users from accessing more advanced features.

Besides teachers' frustrations with limited access to premium features of Canva, their ability to effectively integrate Canva into their teaching practices should also be given attention. Comprehensive training programs focusing on digital pedagogy and Canva-specific functionalities are essential for equipping teachers with the skills and confidence to use such tools effectively. Addressing this gap would ensure that teachers are not only familiar with the platform's features but are also adept at designing engaging and inclusive learning experiences. Including a discussion on professional development initiatives would add depth to the article and provide a roadmap for successful technology integration.

Another challenge from the students' perspective would be that students from disadvantaged backgrounds may face significant barriers, including limited internet connectivity, lack of access to devices and inadequate prior exposure to technology. These challenges not only hinder the equitable use of Canva but may also widen the digital divide, affecting students' learning outcomes and engagement levels. Addressing these gaps would provide a more comprehensive understanding of the tool's limitations and areas for improvement

3. Methodology

3.1 Analysis

In this phase, the key challenges faced by pupils in writing such as difficulties in expressing thoughts and constructing grammatically correct sentences are identified.

3.2 Design

In the design phase, instructional strategies are formulated to address the identified needs. The activities are integrated with AI tools to support the development of pupils' writing skills in an engaging and interactive manner. Integrating AI is crucial as it makes educational content more accessible, engaging and relevant [13].

3.3 Development

The development phase is reflected in the creation and preparation of instructional materials such as comic strips and book review posters using Canva's templates. These materials are designed to foster pupils' creativity while providing structured guidance to improve their writing. The activities are well-constructed to ensure that pupils engage meaningfully with the tools.

3.3.1 Curriculum design

The curriculum design phase will focus on creating engaging and interactive lesson plans that integrate Canva AI tools to enhance writing instruction for the pupils.

3.3.1.1 Lesson objectives

Each lesson will have clear objectives aligned with curriculum standards, focusing on developing specific writing skills such as brainstorming, drafting, revising, and publishing.

3.3.1.2 Integration of Canva AI

Lessons will incorporate features like Magic Write for generating ideas and text, and Magic Media for creating visual content. For example, a lesson on storytelling might involve students using Magic Write to draft narratives and then using Canva's design tools to create accompanying illustrations or infographics.

3.3.1.3 Resource development

Customizable templates tailored to various writing tasks (e.g., story maps, character profiles) will be developed in Canva. This will provide students with structured formats to guide their writing while allowing for creativity.

3.4 Implementation

Implementation is addressed through the classroom activities where pupils are guided in using the AI tools and completing tasks such as generating images from text, creating comics and developing book reviews.

3.4.1 Classroom activities

Students will engage in hands-on activities where they can explore writing through collaborative projects. For instance, they might work in groups to create a digital storybook using Canva, combining text generated by Magic Write with images created through Canva's design tools.

3.4.2 Ongoing support

Teachers will provide continuous support and guidance as students navigate the tools, ensuring they understand how to use Canva effectively to enhance their writing.

3.5 Evaluation

Evaluation is integrated into the activities through reflective tasks at the end of each lesson. Reflective tasks promote critical thinking which allow pupils to analyze their understanding and identify areas for improvement [2]. Pupils are also evaluated through the teacher's observation and interview session after each activity is conducted. This ensures that the effectiveness of the AI tools and the overall learning outcomes are assessed.

3.5.1 Pre- and post-assessments

Writing assessments will be administered before the project begins and after its completion to measure improvements in student writing skills. These assessments can include narrative pieces or descriptive paragraphs.

3.5.2 Data analysis

The results from assessments will be analyzed quantitatively (e.g., score improvements) and qualitatively (e.g., student reflections on their experiences). This dual approach provides a comprehensive view of the project's impact.

3.5.3 Student surveys

Surveys will be conducted to gather student feedback on their engagement levels and enjoyment of writing tasks using Canva AI. This data will help assess the effectiveness of technology integration.

4. Result

The case of using Canva's AI tools in improving the writing abilities of the primary school learners, can be considered as successful in terms of learners' interest, imaginative thinking, and writing skills improvement. Both quantitative and non-quantitative data was gathered to evaluate these tools within the context of classroom learning. This section brings out the analysis of the findings with regards to the students' performance, engagement and feedback.

4.1 Enhanced Writing Skills

Being one of the suggestions for the use of Canva AI in the writing curriculum, one of the principal goals was to enhance students' writing skills. The outcome was a surveyed enhancement in students' most crucial organizational skills regarding composition and their ability to craft coherent stories. All the enhancements packages, including grammar corrections and sentence construction, enabled students pumped in AI to spot and avoid typical mistakes in writing as they completed their work in real-time, which resulted in the improvement in the better part of other work (Larasati, 2022). Moreover, there was a variety of templates in Canva and various shapes and design elements enabled the students to think and outline their ideas better while writing essays, stories, or reports.

4.2 Increased level of Motivation and Learning Environment

This issue shows that the most important progress was made in student engagement. Survey with students and classroom observation indicated a heightened interest in writing tasks among the students. From the response given prior the launch of the Canva AI, a number of students complained that traditional writing methods used to be boring to them. One of the key found aspects students highlighted as stimulating their interest and creativity when it came to writing tasks was the opportunity to visually present ideas using graphics, colour and text formatting. However, the students themselves noted that it is less engaging to revise and edit papers, and this task was made more interesting better by the instant feedback and visual aids given by the platform. This approach implemented into a game framework with direct evidence of their advancement and possible incentives increased motivation of students to finish writing tasks.

4.3 Development of Digital Literacy Skills

Another outstanding factor was improved students' digital competency. Students were able to be introduced to the basic range of tools and resources within Canva's AI that are already crucial to

the modern world. Apart from fulfilling the writing skills aspect, the students improved their knowledge on how to use the tools for designing, how to search for the visuals, and how to include multimedia features into their writing work. That non-serial type of writing not only enhanced the students' textual production but also provided the accounts of valuable digital competencies needed in future academic and work experiences [6].

4.4 Increased Creativity and Critical Thinking

Al in Canva's learning platform also contributed to innovation among the students. The customization of writing tasks and the choice of designs that students can use freed the student's creative imagination to a great extent. The integration of texts with images, illustrations, and custom designs helped students spatially plan out their narratives by visualise them and improve on their narrative and critical thinking skills. Some key things that teachers noticed as results of using Canva AI, was the fact that students using it where more likely to take creative chances when writing, sometimes even choosing different genres such as informative pictures, posters, advertisements, etc. This freedom used in creative writing helped improve the attitude of the students toward writing positive most especially because they are now writing not as a task that has been instructed on them but as a creative and intellectual part of them.

5. Discussion

The incorporation of digital technology in contemporary educational environments has grown more common to improve teaching and learning experiences. The integration of digital material resources, educational applications, and online collaboration platforms is important in converting conventional educational techniques into more dynamic, engaging, and effective learning environments. Incorporating social media into school may foster innovative, engaging, and efficient learning environments. This integration improves communication among contemporary digital natives, facilitating quicker and easier engagement in debates and information sharing [24]. Moreover, it cultivates a favourable view of educators, depicting them as inventive and attuned to contemporary trends.

The incorporation of technology in education has transformed the delivery of instructional content, facilitating multimodal learning techniques. Sankey, Birch, and Gardiner [29] assert that multimodal learning entails delivering content via many sensory modalities, including visual, aural, and kinaesthetic channels, to accommodate the varied learning preferences of students. Educators may utilise digital tools and platforms to provide dynamic and interactive learning environments [29]. Online collaboration platforms, digital content resources, and educational applications provide many methods for instructors to engage students, enhancing accessibility and personalisation in learning.

Digital content resources encompass several methods, including interactive modules, multimedia material, and instructional websites. These tools allow instructors to transition from traditional teaching techniques to employing dynamic and visually stimulating materials [27]. Various teaching strategies may prove more successful for distinct pupils as they use the individual perceptual and cognitive capabilities of each learner [29]. A survey conducted by Yacob et al., [37] revealed that the majority of students utilised PCs and laptops for online learning, followed by mobile phones, while a lesser segment shared learning resources. The research also emphasised many obstacles that impeded efficient online education during the epidemic. The hurdles encompassed students' attitudes, technological difficulties, the necessity of sharing learning materials with family members, learners' competencies, and obstacles related to learning evaluations [37].

Technology can tailor and enhance accessibility to students' learning methods. Muniandy and Munir Shuib [21] define learning style as the inherent traits that learners generally employ unintentionally. Conversely, learning strategies are external competencies that learners recognise and may utilise to improve their learning experience [21]. Employing interactive multimedia presentations and audio-visual resources in education accommodates diverse learning styles and rates among students [27]. Social media platforms and interactive websites function as essential digital content resources, enabling learners to access a diverse array of instructional materials that may be customised to meet individual requirements. Social connection, a crucial motivating element, also prompts students to utilise social media in an educational setting [24] Consequently, by using these technologies, instructors may cultivate a more flexible and stimulating learning environment that inspires students and deepens their comprehension of the subject matter.

Subsequently, educational applications are engineered to enhance skill acquisition via interactive tasks. These applications are available on several digital platforms, including smartphones and PCs. The use of gamification aspects in these applications enhances student engagement and enjoyment in the learning process. Applications such as Duolingo, Memrise, and Busuu offer interactive activities and quizzes that assist learners in practicing vocabulary, grammar, and pronunciation. Moreover, the use of artificial intelligence (AI) technology in certain applications significantly improves students' learning experiences by providing tailored feedback and modifying the content and pace of classes according to the user's competency and learning style. This tailored method enhances linguistic proficiency while simultaneously maintaining student motivation and engagement in their studies [22]. Digital collaboration systems, like Google Classroom, Microsoft Teams, and Zoom, have become indispensable resources in contemporary education, particularly during the Covid-19 epidemic. These systems enable communication and cooperation between educators and students, simplifying resource sharing, virtual class conduction, and group activities engagement. The capacity to communicate in real-time, exchange documents, and engage in debates improves the entire learning experience. Educators can deliver prompt feedback, while students may collaborate on projects, promoting a feeling of community and shared learning. Furthermore, these platforms facilitate asynchronous learning, enabling students to access resources and fulfil assignments at their own speed, which is very advantageous for varied learning requirements.

Digital transformation is a holistic digital process that necessitates the strategic use of technology, demanding an organisation to formulate a meticulously crafted strategy, engage in extensive preparation, and foster cooperation [37]. For educational reasons, it is crucial for both students and instructors to possess a well-equipped and accessible online environment to enable meaningful interactions [37]. This setting cultivates students' enthusiasm in acquiring deeper information and improves their overall happiness with the learning experience.

Nonetheless, the incorporation of digital technology also poses difficulties. Educators require sufficient training to utilise these resources successfully, along with a necessity for continuous support and professional growth. Certain educators and learners perceived no substantial distinction from conventional techniques and reported emotions of detachment in their pedagogical experiences [9]. Educators articulated apprehensions over heightened workload and the necessity for supplementary help and supervision [5]. Furthermore, concerns of digital equity and access to technology must be resolved to guarantee that all pupils can take advantage of these improvements. A collaborative initiative among policymakers, educators, technology developers, and stakeholders is crucial to influence the future of education and achieve its maximum potential through creative and responsible technological application [8].

In conclusion, the incorporation of digital material resources, instructional applications, and online collaboration platforms has the capacity to transform education. By using these technologies,

educators may provide more engaging, customised, and successful learning experiences that address the varied requirements of today's students.

6. Conclusion

The integration of Canva AI into the pupils' writing curriculum has proven to be an effective strategy for enhancing student engagement and improving writing skills. By utilizing tools such as Magic Write and Magic Media, students were able to express their creativity and ideas in innovative ways, transforming traditional writing tasks into interactive learning experiences. Feedback from both students and teachers indicated a marked increase in enthusiasm for writing. Many pupils reported feeling more confident in their writing abilities when using Canva's visual tools, which facilitated a more personalized and collaborative learning environment. This aligns with existing research that highlights the positive impact of technology on student motivation and learning outcomes.

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