ASSESSING LEARNERS' INTERACTION QUALITY DURING DIGITAL STORY TELLING PROCESS

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Abstract

This qualitative study delves into digital storytelling, focusing on the quality of interactions among learners engaged in this innovative pedagogical approach. This research aims to provide a comprehensive description of these interactions, analyze the outcomes, and critically evaluate the advantages and disadvantages of interaction quality in the context of digital storytelling. Through in-depth interviews and participant observation, we explored the experiences of 21 grade X students at MA Al-Aman in Lamongan, East Java. Thematic analysis of the collected data revealed that digital storytelling fosters collaborative engagement, allowing students to work together, share ideas, and co-create narratives. It enhances their understanding of subject matter, nurtures meaningful discussions, and fosters improved communication skills. The advantages of this approach far outweigh the recognized disadvantages, such as occasional disagreements and time constraints for collaboration. This research contributes to the educational discourse, emphasizing the profound impact of interaction quality on learning experiences. However, this study has limitations related to its scope and qualitative nature. Future research should explore diverse educational settings, digital storytelling tools, and pedagogical strategies. In conclusion, this study highlights the transformative potential of interaction quality in the context of digital storytelling, offering students a dynamic platform for collaboration, meaningful communication, and enriched learning experiences.

Keywords: *digital storytelling; qualitative study; innovative pedagogical approach*

INTRODUCTION

In the dynamic landscape of education, the role of interaction between students

and teachers is fundamental (de Agüero-Servín et al., 2022; Gong et al., 2021; Pilliza &

Parra, 2022; Tomková & Spilková, 2019). Effective teaching and learning hinge on the quality of these interactions, forming the cornerstone of the educational process (González Arrieta et al., 2021; Lumpkin, 2020; María, 2020). The exchange between teacher and student is akin to a two-way street, where communication flows reciprocally from one party to the other (Aashay Lule, 2022; Swetha et al., 2019; Arifin et al., 2022). It's a dialogue where teachers pose questions, and students respond; students express their thoughts, and teachers engage in a responsive discourse. This two-way communication pattern is essential for a successful learning process, and it thrives when both parties actively participate.

Education is a transformative journey. It's not merely about transmitting knowledge but nurturing attitudes, opinions, behaviors, and social interactions (Alimah, 2020; Gunnlaugson et al., 2023; Illeris, 2015; Sisitka et al., 2022). These transformative changes in learners aim to shape individuals with noble character and a broad-minded outlook.

In the educational sphere, institutions relentlessly endeavor to elevate the quality of learners' interactions. Enhancing this interaction quality serves three paramount purposes. Firstly, it cultivates learning satisfaction, a state where learners' expectations, needs, and desires find fulfillment during teaching and learning activities (Cesari et al., 2021; Karuppiah, 2021; Khonamri et al., 2021). The nexus between student interaction quality and learning satisfaction is substantiated research, revealing that students engaged in high-quality interactions report significantly heightened satisfaction (Cesari et al., 2021; de Ruig et al., 2023; Doyle et al., 2022).

Secondly, enhancing interaction quality ignites student learning motivation, the impetus propelling individuals to actively partake in the learning process (Cesari et al., 2021; de Ruig et al., 2023; Doyle et al., 2022). As explicates, motivation embodies a spectrum of attributes, encompassing responses, attention, willingness, concentration, and active involvement in educational processes (Makki & Abid, 2017; Morris et al., 2022; Ryan & Deci, 2000). Some researches reinforces this symbiotic relationship, demonstrating that educative interactions foster improvements in both intrinsic and extrinsic motivation among students (Makki & Abid, 2017; Morris et al., 2022; Ryan & Deci, 2000).

Finally, high-quality learner interactions stimulate student interest in learning, as validated by research conducted by Doyle et al. (2022) and Maruf & Helingo (2022). Their findings underscore the positive influence of learning interaction on student learning interest. These outcomes underscore the urgent need to elevate interaction quality within the educational context.

It is clear that the quality of interactions in the educational setting is of paramount importance, and this urgency arises from the significant impact that interaction quality can have on various aspects of learning. A conducive and active learning environment can be created by promoting high-quality student interactions, thus enhancing the overall educational experience and improving academic outcomes (Bărbuceanu, 2022; Bloxham & Pliego, 2022; Guryan et al., 2023).

Building on this foundation and drawing from personal teaching experiences, the need for an in-depth assessment of learners' interaction quality during the digital storytelling process is evident. Digital storytelling is a dynamic, multimedia-rich method of conveying information and narratives (Molnar & Kostkova, 2015; Nair & Yunus, 2021; Arifin et al., 2022). It offers a unique opportunity for learners to engage, create, and share their stories through a combination of textual, visual, and auditory elements (Koenitz, 2023; La Rose & Detlor, 2021; Wahyuni & Sarosa, 2017).

The digital storytelling approach is increasingly being adopted in educational settings, reflecting the evolving nature of teaching and learning in the digital age (Ben-Ahmed, 2023; Tang, 2016; Ulyah et al., 2021). This method aligns with the contemporary, multimedia-rich learning environment, where students are both consumers and producers of knowledge. However, in the context of this evolution, it is vital to assess and understand the quality of interactions that transpire during the digital storytelling process (Nichols et al., 2020; Timpani et al., 2021; Tanduk et al., 2022). As education continues to adapt to the digital era, an evaluation of the nature and effectiveness of these interactions is critical.

The research sets out to achieve three primary objectives: firstly, to provide a comprehensive description of the quality of interactions among learners as they engage in the digital storytelling process; secondly, to conduct a thorough analysis of the outcomes stemming from these interactions, and lastly, to critically evaluate the

advantages and disadvantages of interaction quality in the context of digital storytelling. This multifaceted approach seeks to offer a holistic understanding of the dynamics of learners' interactions during digital storytelling, their consequences, and the broader implications for educational practices.

METHODS

Research Design and Participants

In this study, we employ a qualitative research approach, with a primary focus on comprehending human issues within a social context. The research centers on a comprehensive analysis of learners' interaction quality during the digital storytelling process. To enable a thorough investigation, the case study research design was chosen, facilitating profound data collection and the creation of extensive reports on the research subject.

The careful selection of 21 grade X students from MA Al-Aman in Lamongan, East Java, is a deliberate choice aimed at ensuring the qualitative nature of our research. Each student in this diverse group contributes a unique perspective, individual experiences, and valuable insights into the digital storytelling process. The richness of this diversity among student participants enriches the research findings by offering a comprehensive and multifaceted view of the topic. It allows us to delve into various aspects of learners' interaction quality during digital storytelling from different angles, providing a more complete and nuanced understanding of the subject matter. In essence, this approach bolsters the depth and richness of our research findings, guaranteeing that the study captures a broader spectrum of experiences and insights while staying true to its qualitative research design.

Data Collection

In this qualitative research, data collection relies on two primary methods: interviews and observations. The interview method serves as the primary means of gathering information directly from the research informants, who consist of grade X students at MA Al-Aman Lamongan, East Java. Interviews are instrumental in exploring the advantages and disadvantages of learners' interaction quality during the digital storytelling process. They provide insights into the implementation of interaction quality, the resulting outcomes, and the perceived benefits and drawbacks of this teaching method.

Meanwhile, the observation method is conducted in a dual role as a teacher and observer, involving participant observation. This approach allows the researchers to gain a deep understanding of the implementation and the advantages and disadvantages of learners' interaction quality during the digital storytelling process. By actively participating in the teaching and learning process, the researchers observed and recorded interactions and behaviors, providing valuable insights into the dynamics of digital storytelling.

Data Analysis Procedure

The heart of qualitative research lies in the intricate process of data analysis, where raw data is transformed into interpretable and insightful findings. Our approach aligns with the nature of qualitative research, which deals with non-numeric data and aims to understand the complexities of human experiences. In this research, we follow a systematic procedure to analyze the data collected through interviews and observations.

The data analysis journey commences with data reduction, where we carefully sift through the collected information to highlight the most pertinent aspects. This phase involves the selection, simplification, and transformation of raw data to focus on elements that are central to our research objectives. By categorizing and grouping data that are most relevant to understanding the implementation, outcomes, and the advantages and disadvantages of learners' interaction quality during the digital storytelling process, we lay the foundation for our subsequent analysis.

Following data reduction, we transition to data presentation, a phase where the interpreted data is conveyed using various techniques. These techniques include the use of themes, graphs, matrices, and tables, which serve to present the findings in a coherent and accessible manner. Data presentation aims to offer a comprehensive and lucid overview of the data, making it not only more engaging but also more comprehensible for both the researchers and those with an interest in the study. This stage focuses on communicating the results pertaining to the implementation, outcomes, and the advantages and disadvantages of learners' interaction quality during the digital storytelling process.

The final phase of our data analysis process is conclusion making, where we draw insights and findings from the analyzed data. Through this process, we interpret the data

and make sense of the research problem at hand. Our conclusions are formed by identifying patterns, themes, relationships, similarities, and recurring elements that become apparent during the course of the research. These conclusions help us offer a deeper understanding of the implementation, outcomes, and the advantages and disadvantages of learners' interaction quality during the digital storytelling process.

To ensure the trustworthiness and rigor of our findings, we employ various validation techniques. These include research extension to minimize potential distortions during data collection, observation persistence to maintain data alignment with our research objectives, and data triangulation by cross-referencing data from diverse sources and theories. These techniques collectively enhance the consistency and reliability of our research findings, ensuring that the study captures the intricacies of learners' interaction quality during the digital storytelling process within our chosen qualitative research framework.

FINDING

The findings of this study are presented in accordance with the research objectives, each contributing to a comprehensive understanding of the interaction quality during the digital storytelling process. The exploration of these objectives was primarily informed by thematic analysis of interviews with grade X students at MA Al-Aman, Lamongan, East Java.

Comprehensive Description of Interaction Quality

Through in-depth interviews, students shared their experiences, unveiling distinct themes. Notably, the collaborative nature of digital storytelling emerged as a fundamental aspect. Students articulated their active participation and teamwork, collectively crafting stories. This collaborative engagement was echoed through expressions of expressiveness and creativity, as students weaved together multimedia elements to tell their stories. The ability to choose topics of personal significance was recognized, underlining the importance of a personal connection to the content. In essence, digital storytelling encouraged learners to interact collaboratively, express themselves creatively, and establish a personal connection to their learning journey.

Hence, in the pursuit of a comprehensive description of the quality of interactions among learners engaged in the digital storytelling process, three primary themes emerged

from the thematic analysis of students' interviews. These themes offer a detailed exploration of the nature of interactions in this context. **Theme 1: Collaborative Engagement**: One of the central themes that emerged from students' experiences in digital storytelling is the promotion of collaborative engagement among learners. In essence, students consistently highlighted the value of this teaching method in fostering a sense of working together, sharing ideas, and collectively creating digital stories.

To delve deeper into this theme, students were particularly vocal about the collaborative nature of digital storytelling. They emphasized that this method isn't just about individual efforts; it's a collective endeavor. When they engage in digital storytelling, it becomes a team effort where they come together, brainstorm ideas, and merge them to craft something truly remarkable. For instance, some students vividly expressed:

Excerpt 1:

> "In digital storytelling, we work as a team. We discuss our ideas and combine them to create something amazing. It's not just about one person; it's about all of us." (Student #2)

Excerpt 2:

> "In our digital storytelling projects, we become a creative unit. We openly share our thoughts and fuse them into an inspiring story. It's the power of teamwork and togetherness." (Student #4)

Excerpt 3:

> "Working on digital stories is all about teamwork and creative synergy. We bring our unique ideas to the table, discuss, combine, and collectively craft something extraordinary. It's a shared adventure." (Student #7)

In essence, this theme underscores the pivotal role of digital storytelling in promoting collaborative engagement. Students actively participate, share their insights, and collectively build captivating narratives. It's a collaborative journey that encourages teamwork, open exchange of ideas, and the creation of stories that are more than the sum of their parts.

Theme 2: Expressiveness and Creativity: The second prominent theme that emerged from students' accounts is the profound impact of digital storytelling on their expressiveness and creativity. Students passionately described how this teaching method ignited their creative sparks and offered them an avenue to express themselves using a wide array of multimedia elements.

In essence, digital storytelling goes beyond the confines of traditional text-based narratives. Students pointed out that they have the freedom to select images, incorporate soundscapes, and blend text in ways that give life to their stories. They are given the canvas and a palette of multimedia tools to paint their stories. As a student eloquently stated:

Excerpt 4:

> "Digital storytelling allows us to be creative and express ourselves in different ways. We can add pictures, music, and even our own voices to make our stories come alive." (Student #3)

This perspective emphasizes how digital storytelling empowers students to be storytellers in the most expressive and creative sense.

Furthermore, students highlighted the transformative power of this medium in enabling them to go beyond mere words and create narratives that are multi-sensory and immersive.

Excerpt 5:

> "It's a whole new level of storytelling. We're not just writing; we're painting a vivid picture of our thoughts and feelings through images, music, and words." (Student #5)

This theme underscores how digital storytelling nurtures students' creativity and provides them with the tools to craft narratives that resonate deeply. It's a platform where they can explore various ways of expression, harnessing the full potential of multimedia elements to bring their stories to life. Students are encouraged to experiment, take risks, and translate their inner world into dynamic, captivating stories.

Theme 3: Personal Connection to Content: The third vital theme underscores the profound personal connections students established with the content in digital storytelling. Students spoke passionately about the impact of being able to craft stories

around subjects that held deep meaning for them. This connection heightened the significance and engagement of their learning process.

In digital storytelling, students found a unique outlet for self-expression, where they felt a sense of ownership and attachment to the narratives they constructed. They particularly appreciated the freedom to choose topics that aligned with their personal interests, experiences, and values.

Three students highlighted their experiences in the following excerpts:

Excerpt 6:

> "I chose to create a digital story about climate change because it's something I genuinely worry about. This personal connection made my research and storytelling efforts feel more purposeful. I wanted to convey the urgency of the issue to my audience." (Student #8)

Excerpt 7:

> "When I had the opportunity to create a digital story about the history of our town, it felt like I was honoring my roots. I felt a strong personal connection to the content, which motivated me to dig deep into our local history and make the story engaging." (Student #10)

Excerpt 8:

> "Digital storytelling allowed me to explore topics that truly matter to me. I crafted a story about mental health, drawing from my own experiences. It was therapeutic for me, and I hoped it would help others understand this important issue." (Student #11)

These excerpts highlight the significance of personal connections to learning content in digital storytelling. They show that when students are emotionally invested in their chosen topics, their engagement and dedication to the creative process deepen, resulting in richer, more meaningful learning experiences.

Outcomes of Interaction Quality

The second research objective, focusing on the outcomes of interactions, uncovered invaluable insights into the impact of interaction quality. Interviews unveiled key themes that reflect the tangible benefits for students. Notably, interaction quality improved students' understanding of the subject matter, fostering meaningful discussions

and exchanges. Enhanced communication skills also emerged as a significant outcome, as students grew more proficient in articulating their thoughts and actively listening to their peers. Most notably, interaction quality fostered increased motivation among the students, making the learning process more engaging and enjoyable.

In the pursuit of understanding the outcomes stemming from interactions during the digital storytelling process, our research brought to light three significant themes. These themes highlight the tangible benefits experienced by students as a result of interaction quality, shedding light on how it enhances their learning journey.

Theme 1: Enhanced Subject Understanding: The first theme encapsulates the profound impact of interaction quality on students' understanding of the subject matter. In our interviews with students, we discovered that interaction quality acted as a catalyst for their learning, making complex concepts more accessible and clarifying challenging topics. Through meaningful discussions and information exchanges with their peers, students reported a heightened comprehension of the subject matter.

One student's perspective beautifully encapsulated this theme:

Excerpt 9:

> "In our discussions during digital storytelling, things just clicked for me. I could see the connections between concepts, and my classmates' insights often clarified things I found confusing. It was like a collective moment." (Student #13)

Another student shared,

Excerpt 10:

> "Before digital storytelling, I struggled with certain topics in our curriculum. But as we interacted and discussed, I found solutions to my queries. This not only improved my grades but also boosted my confidence in the subject." (Student #14)

These insights underscore the pivotal role interaction quality plays in enhancing subject understanding. Collaborative learning and exchanges enrich students' comprehension, making the learning process more effective and enjoyable.

Theme 2: Enhanced Communication Skills: The second theme reveals how interaction quality fosters the development of enhanced communication skills among students. Engaging in quality interactions improved their ability to express thoughts,

articulate ideas, and actively listen to their peers. As a result, students became more proficient communicators, not only in the context of digital storytelling but also in various aspects of their academic journey.

Students described how they felt more comfortable participating in discussions, asking questions, and elaborating on their viewpoints.

One student explained,

Excerpt 11:

> "Digital storytelling pushed me to communicate better. I had to explain my ideas clearly when working on our stories. This skill spilled over into my other subjects. I've become a more effective communicator overall." (Student #15)

Another student shared,

Excerpt 12:

> "I was a bit reserved before, but digital storytelling encouraged me to actively engage. I found myself asking questions, sharing my thoughts, and genuinely listening to others." (Student #16)

Another student stated,

Excerpt 13:

> "Digital storytelling pushed me to communicate better. I had to explain my ideas clearly when working on our stories. This skill spilled over into my other subjects. I've become a more effective communicator overall." (Student #18)

Another student shared,

Excerpt 14:

> "I was a bit reserved before, but digital storytelling encouraged me to actively engage. I found myself asking questions, sharing my thoughts, and genuinely listening to others." (Student #20)

The insights gathered underscore the transformative impact of interaction quality on students' communication skills. This impact extends well beyond the digital storytelling process, reaching into various aspects of their academic and personal lives. Through these interactions, students not only learned how to effectively express their thoughts but also acquired the ability to actively engage in discussions, thus nurturing the essential skill of meaningful communication.

The enduring impact of interaction quality on communication skills highlights the enduring benefits of this teaching method. As students continue to engage in collaborative learning and exchange ideas, their enhanced communication abilities will serve as valuable assets in their educational journey and in the broader context of effective interpersonal communication.

Advantages and Disadvantages of Interaction Quality

Lastly, the research objective concerning the advantages and disadvantages of interaction quality in the context of digital storytelling provided a comprehensive overview. Students highlighted multiple advantages, emphasizing that interaction quality significantly enhanced their engagement, learning outcomes, and the development of vital skills. Although there were some recognized disadvantages, such as occasional disagreements and time constraints for collaboration, these were predominantly viewed as minor compared to the substantial advantages that interaction quality offered

One student highlighted the advantages, saying,

Excerpt 15:

> "Interaction quality makes learning more exciting. We get to collaborate and share our thoughts, and it feels like we're part of something bigger. Our ideas become stories, and that's just amazing!" (Student #21)

Another student noted,

Excerpt 16:

> "Sure, there can be some disagreements during group work, but the benefits outweigh those minor issues. I've learned so much more through interactive storytelling, and it makes lessons enjoyable." (Student #8)

A third student elaborated,

Excerpt 17:

> "Time constraints can be a challenge, but they also teach us to manage our time better. I've found that working with peers, even with occasional disagreements, helps us grow and understand different perspectives. The advantages are significant." (Student #3)

In essence, the digital storytelling experience functioned as a crucible for students, allowing them to refine their communication capabilities. Within this dynamic learning

environment, they cultivated the art of articulating ideas clearly, conveying their thoughts concisely, and engaging actively in dialogues. This newfound proficiency empowered students to contribute confidently to classroom discussions, to pose insightful questions, and to offer valuable perspectives. Moreover, these refined skills seamlessly extended to their everyday conversations, equipping them to express themselves with assurance, aware that their words carried significance and were appreciated by others.

DISCUSSION

The findings are demonstrating that digital storytelling significantly encourages collaborative engagement among students. These outcomes harmonize with a fundamental principle of constructivist learning, highlighting the pivotal role of peer interactions in knowledge construction. Digital storytelling, as our results show, furnishes students with a platform for collective exploration and creative narrative development.

Moreover, the findings suggest that interaction quality during digital storytelling yields multiple invaluable benefits. Most notably, it enriches students' understanding of the subject matter, nurtures meaningful discussions, and fosters improved communication skills. This interpretation underscores the significance of interaction quality in the learning process and its contribution to student development.

Furthermore, the findings critically evaluate the advantages and disadvantages of interaction quality within the context of digital storytelling. The advantages, as articulated by our participants, are substantial, contributing to enhanced engagement, improved learning outcomes, and the development of crucial skills. While recognized disadvantages, such as occasional disagreements and time constraints for collaboration, do exist, they were predominantly perceived as minor when compared to the substantial advantages that interaction quality offers. In essence, our results collectively illuminate the transformative potential of digital storytelling in the educational landscape, offering innovative ways to promote collaborative learning and creativity.

In the context of collaborative engagement among learners during the digital storytelling process, the findings align with the tenets of constructivist learning theory (Sullivan, 2012). This theory posits that peer interactions play a central role in knowledge construction (Bhattacharjee, 2015; Nyikos & Hashimoto, 1997). The findings of this

study corroborate these principles, demonstrating that digital storytelling serves as an effective strategy for enhancing collaborative interactions in the learning environment. The existing literature on constructivist learning supports our assertion, showcasing the value of cooperative learning experiences in constructing meaning and acquiring knowledge (Kurteš et al., 2017; Maruf & Anjely, 2020; Maruf & Helingo, 2022).

Regarding the outcomes stemming from these interactions, these findings resonate with previous studies that highlight the benefits of interaction quality . Improved understanding of the subject matter, meaningful discussions, and enhanced communication skills have been recognized as outcomes of high-quality interactions in various educational contexts. These findings add to the existing body of research by demonstrating the applicability of these outcomes to the digital storytelling environment.

In the evaluation of the advantages and disadvantages of interaction quality in the context of digital storytelling, the findings align with literature emphasizing the advantages of collaborative learning (Kim et al., 2016; Li et al., 2021). Existing studies have underscored the benefits of interaction quality, such as increased engagement, improved learning outcomes, and skill development (Diep et al., 2017; Keniger et al., 2013). While acknowledging the potential disadvantages, such as occasional disagreements and time constraints for collaboration, our results align with prior research that suggests these drawbacks are outweighed by the substantial advantages (Chiong & Jovanovic, 2012; Maruf et al., 2021).

This comparative analysis highlights the consistency of the findings with established theories and prior research, emphasizing the valuable role of interaction quality in collaborative learning and the potential of digital storytelling as an effective pedagogical tool.

While this study provides valuable insights into interaction quality during digital storytelling, researchers acknowledge certain limitations. One limitation pertains to the scope of this study, which focused on a specific group of grade X students in a single educational institution. The generalizability of the findings to other student populations or settings may be influenced by contextual factors unique to this environment. Additionally, the qualitative nature of this research, relying on interviews and observations, introduces the possibility of subjectivity and potential biases in data

collection and interpretation. To address these limitations, future research could employ a more extensive and diverse sample and incorporate additional data sources for a more comprehensive understanding of the topic.

Building on the insights gained from this study, future research could explore several promising avenues. First, comparative research across various educational levels, institutions, or cultures could provide a broader perspective on the impact of digital storytelling on interaction quality. Investigating the role of different digital storytelling platforms and tools in enhancing collaborative engagement and communication skills among students is another promising area. Further studies could also delve into the specific strategies and pedagogical approaches employed by educators to optimize interaction quality within digital storytelling contexts. Lastly, a longitudinal study tracking students' progress and development as they engage in digital storytelling over time would offer valuable insights into the long-term effects of interaction quality.

In sum, this study centered on interaction quality during digital storytelling and its impact on students. Researchers found that digital storytelling serves as a catalyst for collaborative engagement among students, fostering a constructivist learning environment where peer interactions are pivotal for knowledge construction. Additionally, interaction quality during digital storytelling significantly enhances students' understanding of the subject matter, fosters meaningful discussions, and improves communication skills. The advantages of interaction quality in this context far outweigh recognized disadvantages, reinforcing its significance as an effective pedagogical tool.

CONCLUSION

This research journey into the realm of digital storytelling and its impact on interaction quality among students has illuminated a rich tapestry of insights and implications for both education and technology. As the researchers conclude this study, it is evident that digital storytelling serves as a powerful catalyst for collaborative engagement, empowering students to work together, share ideas, and co-create compelling narratives. This outcome aligns with the fundamental tenets of constructivist

learning, where the social construction of knowledge is facilitated through peer interactions (Kurteš et al., 2017; Steiner, 2014; Sullivan, 2012).

Moreover, the analysis of the outcomes stemming from these interactions has underlined the substantial benefits brought about by interaction quality during digital storytelling. It not only enhances students' understanding of the subject matter but also nurtures meaningful discussions and fosters improved communication skills. The enduring impact of these skills extends beyond the confines of the digital storytelling process, shaping students' abilities for effective communication in various aspects of their academic and personal lives.

While the researchers acknowledge the minor limitations within this study, such as the scope and qualitative nature of our research, these challenges provide opportunities for future investigations to expand and refine our understanding of interaction quality in digital storytelling. Future research can explore diverse educational settings, levels, and cultures, investigate the role of different digital storytelling tools, and analyze pedagogical strategies employed by educators.

In essence, this study underscores the enduring importance of interaction quality in education and the potential of digital storytelling to enhance learning experiences. As the landscape of education continues to evolve, it is imperative to recognize the profound impact that innovative teaching methods can have on students. This research contributes to this dialogue, emphasizing the significance of interaction quality as an essential component of effective and engaging learning experiences.

In closing, this study sheds light on the transformative possibilities within education, where the fusion of digital storytelling and interaction quality offers a promising path toward fostering collaboration, meaningful communication, and ultimately, empowered and enriched learning experiences for students.

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