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RESEARCH ARTICLE

English young learners' HOTs barriers in learning online with digital storytelling

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ABSTRACT

Currently, the advancement of technology in education has accelerated, particularly in teaching methodologies. Online or blended teaching has gained popularity in Indonesia. However, barriers persist in teaching English to young learners online, particularly in promoting Higher Order Thinking Skills (HOTs) through digital storytelling. Consequently, this research aims to investigate the barriers faced by English Young Learners (EYL) in acquiring HOTs through online learning with digital storytelling. This qualitative research design employed with case study design in online classroom observation and interviews as research instruments. The analysis revealed that EYL learners encounter difficulties with teaching instruments, technology issues, their English proficiency, and the implementation process. Therefore, it is advisable for future researchers to prioritize and address these barriers.

KEYWORDS

EYL; HOTs barriers; online teaching; digital storytelling

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1. Introduction

The integration of online learning in English language education has experienced substantial expansion, particularly in response to the global shift toward digital education catalyzed by the COVID-19 pandemic (UNESCO, 2021). While online learning offers flexibility and accessibility, it presents significant challenges for young learners, particularly in developing Higher-Order Thinking Skills (HOTs)—which encompass critical thinking, problem-solving, and creativity (Anderson & Krathwohl, 2001). Research indicates that nurturing HOTs in young learners is paramount for preparing them for intricate cognitive tasks in their academic and

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professional futures (Brookhart, 2010). However, English Young Learners (EYLs) frequently encounter difficulties in developing HOTs within online learning environments due to various barriers, such as limited interaction, inadequate scaffolding, and insufficient digital literacy (Alrawili et al., 2020).

Recent studies emphasize the necessity of structured guidance and interactive engagement to effectively foster HOTs in young learners (Qiu, et. al 2022). A survey conducted by the OECD (2021) across multiple countries revealed that over 65% of educators reported challenges in promoting HOTs among young students in virtual classrooms due to diminished student engagement and motivation. Concurrently, a study by Wahyuningrum & Sa'diya (2022) underscored that nearly 70% of English educators identified online learning as less effective for fostering critical thinking skills in young learners compared to face-to-face settings. These findings underscore the imperative to investigate the specific impediments that hinder the development of HOTs among EYLs within online learning environments.

Furthermore, research suggests that technological limitations, inadequate teacher training, and cognitive overload are significant impediments to the development of higher-order thinking skills (HOTs) in virtual classrooms (Al-Yahyaie et al., 2022). Many young learners encounter difficulties in self-regulation and independent learning, hindering their ability to engage in deeper cognitive processes without direct supervision (Rahman et al., 2021). These challenges raise pertinent concerns regarding the efficacy of online learning in fostering higher-order cognitive abilities within English language education.

Moreover, the development of HOTs in online English teaching has been variable, particularly the utilization of Digital Storytelling (DST). The implementation of DST has introduced a new paradigm in online English teaching, emphasizing the promotion of HOTs. The implementation of DST has demonstrated its effectiveness in promoting HOTs in online English teaching (Pabriana et al., 2023).

Given the growing reliance on digital learning and the increasing emphasis on HOTs in contemporary education, it is imperative to investigate the barriers that impede young learners from developing these fundamental skills in online environments. This research aims to delve into these barriers in depth, providing valuable insights for educators, policymakers, and curriculum developers to enhance online English language education for young learners.

2. Literature review

2.1. Lack of interactive engagement in online learning

Developing HOTs in online learning encounters challenges stemming from the limited interactive engagement between students, teachers, and peers. Traditional face-to-face classrooms foster collaborative learning, discussions, and problem-solving, which are fundamental for HOTs. However, online learning reduces direct interaction, hindering young learners' active engagement beyond mere memorization and recall.

OECD (2021) reported a decline in student participation and engagement during online lessons, thereby limiting critical thinking and inquiry-based learning. Wahyuningrum & Sa'diya (2022) observed that young learners in virtual classrooms exhibit greater passivity due to the absence of immediate feedback, peer discussions, and spontaneous questioning, which are crucial for the development of HOTs. Without interactive engagement, EYLs encounter difficulties in analyzing, synthesizing, and evaluating information, thereby restricting their cognitive skill development.

2.2. Insufficient teacher scaffolding and support

In physical classrooms, educators employ scaffolding techniques to guide young learners toward higher-order thinking. This involves providing verbal cues, explanations, and adaptive questioning to assist students in developing critical thinking and problem-solving abilities. However, in online settings, the absence of immediate teacher intervention and structured support impedes the independent development of higher-order thinking skills among young learners.

A study conducted by Qiu et al. (2022) revealed that over 70% of educators encountered challenges in effectively scaffolding young learners within online environments due to limitations imposed by digital platforms. Many online lessons predominantly rely on pre-recorded materials, multiple-choice quizzes, and one-way instruction, which discourage deep thinking and problem-solving. Furthermore, young learners lack self-regulation skills, making it more difficult for them to navigate complex cognitive tasks without real-time teacher guidance. The absence of adequate scaffolding results in superficial learning, where students primarily rely on rote memorization rather than cultivating analytical and creative thinking abilities.

2.3. Technological and self-regulation barriers

Technological and cognitive factors impede the development of HOTs in online learning environments. Young learners encounter technical challenges, such as unstable internet connections and limited access to digital devices, which hinder their ability to engage in higher-order thinking tasks. Approximately 40% of students from lower-income households experience difficulties in accessing stable internet and interactive learning tools, thereby reducing their capacity to participate in critical thinking activities.

Furthermore, young learners face cognitive overload when navigating multiple digital tools without adequate support. Unlike older students, EYLs require structured learning environments, but online platforms lack built-in mechanisms for self-regulated learning. A study conducted by Hodges et al. (2020) revealed that students under the age of 12 exhibited lower levels of concentration and struggled with independent problem-solving in digital settings. Without digital literacy and self-regulation strategies, young learners are unable to engage deeply in HOTs-based activities, exacerbating the cognitive development gap.

3. Methods

3.1. Research design

This study employs a qualitative research approach to investigate the barriers EYL encounter in developing Higher-Order Thinking Skills (HOTs) during online learning. The research objectives are to gather in-depth insights from students, teachers, and parents regarding the challenges faced and potential solutions (Nunan, 1992).

Research Design A case study approach employed to examine the specific learning experiences of EYL students within an online learning environment (Nunan, 1992). This methodology enables an in-depth exploration of the issue by collecting comprehensive and descriptive data from multiple perspectives.

Participants The study will involve English Young Learners (aged 7–12), and an English teacher. A purposive participants utilized to select participants who have had at least one academic year of experience with online learning.

3.2. Data collection method

Data collection was conducted through observation and interviews. Classroom observations conducted during online English lessons were used to assess students'

engagement, participation, and interaction levels. The observation checklist identified indicators such as critical thinking activities, collaborative learning opportunities, teacher-student interactions, and problem-solving exercises. Semi-structured interviews were conducted with teachers and students to explore their perspectives on the barriers to HOTs in online learning. The interview questions addressed:

- Teachers' challenges in fostering HOTs in digital classrooms; and
- Students' difficulties in engaging in higher-order thinking tasks.

The collected data analyzed using thematic analysis to identify patterns, themes, and key challenges related to HOTs barriers in online learning. The data from observations and interviews coded and categorized to ensure a comprehensive understanding of the issue.

Ethical Considerations All participants informed about the study's objectives, and informed consent will be obtained from teachers, parents, and students prior to data collection. The confidentiality and anonymity of participants will be strictly maintained.

4. Results

4.1. Teaching instruments

Teaching instruments were a challenge in the teaching. The teacher struggled to design a lesson plan evaluation rubric and choose a story. She found it difficult to determine the lesson's indicators and allocate time effectively, especially when predicting the teaching and linking it to the material.

"…especially in designing lesson plans, it's quite difficult. I felt confused about choosing the right indicator for HOTs and determining the appropriate time allocation. Online teaching is unpredictable, so I had to adapt to the existing material."

Moreover, designing the evaluation rubric was also challenging, especially considering the students' HOTs. It was also difficult because the teaching was conducted online through an application. The teacher stated, "Designing the evaluation rubric was hard because it was my first time teaching online, especially promoting HOTs. It made me feel stressed."

Concurrently, the students remain perplexed regarding the teaching methodology through the utilization of teaching instruments. They are unable to synchronize their understanding with the teaching process, particularly for certain

instruments used for testing or assessments. This observation from the researcher revealed that they frequently posed numerous questions and expressed various concerns. This suggests that they still require a simplified worksheet for learning purposes.

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Choosing a suitable story for the students was important. The story should engage them and make them watch the DST later. The teacher read the story one by one to find the relevant ones and analyze them to be questioned in teaching. She said, "If we like a story, it doesn't mean the child will like it. We need to find new ones that excite them. Reading the story first with them helps grow their excitement.". Despite the unfamiliarity of the story, particularly for students distant from their cultural background, they expressed a heightened interest in understanding its details. This curiosity prompted the teacher to provide explanations on multiple occasions. In this instance, the setting for integrating HOTs in learning was appropriate, but due to time constraints, the instructor must adjust their learning estimation based on the lesson plan. This requires the ability to construct questions to investigate students' HOTs compared to DST within the existing framework, which increases the effort required to prepare teaching instruments.

4.2. Technological issues

Technological issues were the most challenging aspects of DST implementation. The teacher, lacking expertise in creating videos or editing them with music and sound effects, faced limitations in constructing the DST. Additionally, signal problems occasionally arose, posing further difficulties.

The teacher claimed designing DST was challenging due to her mastery of technology, especially editing DST with appropriate applications. In the first cycle, she struggled to find an editing application and faced difficulties combining video elements like pictures, music, sound effects, and voice-overs. She emphasized the time-consuming and skill-intensive nature of editing, likening it to translating.

Additionally, the teacher questioned her ability to utilize all resources. She encountered issues editing the video on her mobile phone during the first cycle due

to the lack of an editing application on her computer. Finding an affordable editing program was also challenging, limiting the students' access to media for online learning. Some students provided computers, which was advantageous. The teacher expressed difficulty editing videos solely on cellphones, emphasizing the need for clear pictures, especially when relying on cellphones.

Despite the challenges faced by students, they encountered difficulties in accessing reliable internet signals and compatible media devices, such as laptops or smartphones. The signal itself often hindered their comprehension of the teacher's explanations due to muted audio or frozen video. Furthermore, they expressed limitations in accessing certain application features due to the requirement of paid access.

The implementation of DST in online teaching encountered several challenges. Teachers encountered difficulties editing DST using online applications, which sometimes required extended periods. Furthermore, intermittent sound and connection loss disrupted teaching, affecting both teachers and students. As one teacher noted, "Instantly when the network connection is bad, the student's voice falters even out of the Zoom meeting."

Furthermore, students encountered technical difficulties navigating DST tools, hindering their ability to create and edit digital stories effectively. The lack of high-quality devices further exacerbated these challenges, as some students were forced to rely on outdated or low-performing technology.

Technological challenges arose as obstacles in online teaching for both teachers and students. To overcome these barriers, online learning necessitates the development of skills, technical assistance, and access to reliable digital tools for the successful completion of courses and effective DST implementation.

4.3. Students' English ability

Young learners' language skills were deficient, especially in English vocabulary mastery. Some schools didn't include English in the curriculum, making it challenging for teachers to explain unfamiliar vocabulary. Selecting an understandable story for students was also difficult, especially when using unfamiliar words.

From the students' perspective, learning English through DST was both engaging and challenging. Many students expressed frustration when encountering unfamiliar vocabulary, as it made it harder to follow the story. Some felt embarrassed or

hesitant to ask questions, fearing they might slow down the lesson or appear less capable than their peers. Others, however, preferred to interrupt the video to clarify difficult words, which sometimes disrupted the flow of the lesson but was necessary for their understanding.

Students often interrupted the video by asking the meaning of unfamiliar vocabulary, forcing the teacher to predict and explain them before displaying DST. Some less confident students were afraid to speak, especially when answering teacher questions. As one student shared, "I want to answer, but I'm afraid of making mistakes in English." To encourage participation, the teacher used examples and words that could provoke students to speak. Student answers were needed to assess the effectiveness of HOTs. "It's challenging when students lack confidence in their English skills. They're reluctant to talk or answer questions from the teacher. So, I usually give examples or words that help them speak…"

In this instance, the researcher found that some students struggled with their English vocabulary, leading to questions from teachers and longer learning times. Additionally, the teacher's voice might be missed, affecting communication with students. From the students' point of view, these challenges sometimes made learning frustrating, as they felt left behind or unable to fully participate. Consequently, students' English proficiency influenced the promotion of HOTs, sometimes hindering learning. To overcome this, teachers should choose stories students can understand and avoid many unfamiliar words while also providing a supportive environment where students feel comfortable asking questions without fear.

4.4. The implementation process

Promoting HOTs for English Language Learners (EFL) presents significant challenges, particularly in their implementation. The teacher encountered difficulties in designing and executing the opening, main activity, and closing processes.

From the students' perspective, engaging in HOTs activities was both stimulating and demanding. While some students found interactive elements, such as brain gym activities and storytelling, to be engaging and beneficial in enhancing focus, others encountered challenges in comprehending the story's context, particularly when unfamiliar words or abstract concepts were involved.

The teacher encountered difficulties in initiating the lesson. She needed to motivate and engage students in the story's context and provide explanations to

ensure comprehension. Brain gym activities were employed to capture their attention, but some students found them enjoyable and helpful, while others required more direct explanations before engaging with the story.

In the main activity, the teacher introduced an unfamiliar story, encouraging critical and creative thinking. She paused the video, solicited student predictions, and provided a visual stimulus to stimulate their imagination. Some students actively participated, relishing the opportunity to share their ideas and make predictions. However, others struggled to formulate responses due to limited vocabulary or a lack of confidence in expressing their thoughts in English. As one student expressed, "I have ideas, but I am unsure how to articulate them in English." Additionally, some students felt pressured when asked to predict story events, apprehensive about the possibility of incorrect responses.

The students even surmised the solution to the character's predicament. Nevertheless, in the concluding activity, the instructor encountered difficulties in guiding students to retell, conclude, and derive value from the narrative. While some students were able to summarize the salient points, others encountered challenges in recalling specific details or articulating the moral lesson of the story. Providing feedback and ensuring comprehension proved particularly arduous, especially for struggling students who sometimes felt overwhelmed by the expectation to express their thoughts lucidly. One student articulated, "I comprehend the narrative, but it is challenging to articulate it in my own words."

Teachers encountered substantial challenges in implementing DST to foster HOTs among EFL young learners, particularly given that it was their inaugural experience utilizing DST within the classroom. The implementation process encompassed three primary activities: the opening activity, the main activity, and the closing activity, each designed to promote HOTs. From the students' perspective, each stage presented its own set of challenges, ranging from comprehending the narrative at the outset to articulating their thoughts effectively at the conclusion. The instructor was tasked with enhancing students' critical thinking abilities throughout the process. The main activity posed difficulties, as the instructor was required to facilitate students' HOTs in accordance with the established structure. The instructor employed questions and supplementary stimuli to encourage critical and imaginative thinking among students. However, some students necessitated additional guidance and reassurance to actively participate and develop their critical thinking skills effectively.

5. Discussion

5.1. Teaching instruments

The findings reveal that designing teaching instruments presented substantial challenges for educators, particularly in online learning environments. Teachers encountered difficulties in developing lesson plans, designing evaluation rubrics, and selecting appropriate stories for students. This aligns with previous research by Anderson & Krathwohl (2001), which emphasizes the complexity of aligning instructional planning with HOTs. The unpredictability of online teaching further compounded these difficulties, as teachers had to adapt their lesson plans dynamically to accommodate various learning conditions.

Furthermore, students struggled to comprehend the teaching methodology employed through these instruments. Many exhibited confusions when engaging with worksheets and assessments designed to evaluate their HOTs. According to Bloom et al. (1956), HOTs require analytical, evaluative, and creative thinking, which can be challenging for young learners, particularly in an online setting where immediate clarification is not always feasible. The necessity of designing simplified learning materials to support students in developing HOTs is evident, reinforcing prior studies suggesting that scaffolded instructional tools enhance student engagement and comprehension (Vygotsky, 1978).

Selecting stories for DST implementation also presented difficulties for teachers. While teachers sought engaging narratives, students' interests and comprehension levels varied. This supports research by Robin (2018), who argues that the effectiveness of DST relies on content appropriateness and student engagement. Additionally, students' cultural background and language proficiency influenced their ability to relate to and comprehend the stories, further complicating the integration of HOTs in the learning process.

5.2. Technological issues

The implementation of DST in online learning encountered substantial technological challenges, aligning with prior research that underscores the digital divide's impact on education (Selwyn, 2020). Teachers encountered difficulties in editing and constructing DST content due to their limited technological expertise, resulting in suboptimal video quality and inefficient content delivery. This corroborates findings by Yang & Wu (2012), who assert that successful DST implementation necessitates technical proficiency and resource availability.

Furthermore, students experienced connectivity issues, limited access to high-quality devices, and challenges navigating digital storytelling applications. Research by Hew & Brush (2007) identifies insufficient technological access as a critical impediment to online learning, which was evident in students' inability to participate effectively. Poor internet connections disrupted communication, hindering students' ability to follow lessons and engage in DST activities. The necessity for digital literacy training for both teachers and students is evident, as previous studies suggest that technical support enhances the effectiveness of online learning (Buttimer et al., 2022).

5.3. Students English ability

The findings suggest that students' limited English proficiency posed a significant challenge in implementing HOTs through DST. Many students lacked the vocabulary necessary to fully engage with digital stories, resulting in frustration and reluctance to participate. This finding aligns with Krashen (1982) Input Hypothesis, which posits that learners require comprehensible input slightly beyond their current proficiency level to facilitate language acquisition. However, when the gap between their proficiency and the lesson content is too substantial, comprehension deteriorates, impeding the learning process.

Students frequently hesitated to ask questions due to the fear of making errors, reinforcing previous research that underscores the influence of affective factors on language learning (Dörnyei, 2005). To address these challenges, the teacher provided vocabulary explanations prior to playing the DST, a strategy supported by Nation (2001), who emphasizes the significance of pre-teaching vocabulary to enhance reading and listening comprehension. Furthermore, some students preferred pausing the video to clarify unfamiliar words, although while beneficial for comprehension, it disrupted the lesson's flow and extended the learning time.

5.4. The implementation process

Promoting HOTs through DST presented numerous implementation challenges. Teachers encountered difficulties in structuring lessons, particularly in engaging students in critical and creative thinking activities. As outlined by Costa & Kallick (2008), fostering HOTs necessitates the meticulous design of questioning techniques and scaffolding strategies, which proved challenging to implement effectively in an online learning environment.

While certain activities, such as brain gym exercises and interactive storytelling, proved engaging for students, they struggled with prediction and analysis tasks due to limited language proficiency. This aligns with the findings of Zohar & Dori (2003), who emphasized the necessity of integrating HOTs into language learning through continuous teacher support and structured prompts to guide students' thinking. The research findings underscore the imperative for teachers to employ explicit questioning strategies and facilitate structured discussions to support students' development of HOTs.

In conclusion, while DST holds the potential to enhance HOTs among young English learners, its effectiveness is constrained by technological limitations, teaching instrument challenges, and students' language barriers. Addressing these barriers necessitates targeted professional development for teachers, improved digital resources, and scaffolded instructional materials to facilitate students' meaningful engagement with DST and the development of higher-order thinking skills.

6. Conclusion

This research elucidates the multifaceted challenges encountered by young English learners in developing HOTs through DST within online learning environments. The findings reveal that both educators and learners faced significant obstacles, including the difficulty in designing effective teaching materials, technological limitations, and students' limited proficiency in English. Educators grappled with structuring lesson plans, selecting appropriate narratives, and crafting evaluation criteria that aligned with HOTs, resulting in less effective lesson delivery. Furthermore, technological issues, such as inadequate internet connections, limited access to digital tools, and insufficient technical expertise, further complicated the implementation of DST.

From the students' perspective, barriers included comprehension difficulties with intricate narratives, low confidence in speaking English, and unfamiliarity with DST tools. These factors impeded their engagement and critical thinking abilities. Despite these challenges, the study emphasizes the potential of DST as a potent tool for fostering HOTs when appropriately supported. To enhance its effectiveness, educators require structured training, students need access to improved resources, and the overall learning framework should integrate DST more seamlessly into curriculum planning. Addressing these barriers will facilitate DST's role as an

effective approach to developing critical thinking and problem-solving skills among young English learners in online education.

Conflict of interest

The authors declare that they have no conflict of interest.

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References

Al-Yahyaie, R., Muhamad, M. M., & Alkharusi, H. A. (2022). Barriers to teaching higher order thinking skills to EFL school learners: A systematic review. International Journal of Academic Research in Progressive Education and Development, 11(2), 784-801. https://10.0.23.119/IJARPED/v11-i2/1331

Alrawili, K. S., Osman, K., & Almuntasheri, S. (2020). Effect of Scaffolding Strategies on Higher-Order Thinking Skills in Science Classroom. *Journal of Baltic Science Education*, *19*(5), 718-729.

Anderson, L. W., & Krathwohl, D. R. (2001). A taxonomy for learning, teaching, and assessing: A revision of Bloom's taxonomy of educational objectives: complete edition. Addison Wesley Longman, Inc..

Bloom, B. S. (1956). *Taxonomy of educational objectives: The classification of educational goals*. Handbook I: Cognitive domain. David McKay.

Brookhart, S. M. (2010). *How to assess higher-order thinking skills in your classroom*. Ascd.

Buttimer, C. J., Colwell, R., Coleman, D., Faruqi, F., Larke, L., & Reich, J. (2022). What's lost, what's left, what's next: Lessons learned from the lived experiences of teachers during the pandemic. *Berkeley Review of Education*, *11*(2). https://doi.org/10.5070/B811251975

Costa, A. L., & Kallick, B. (Eds.). (2008). *Learning and leading with habits of mind: 16 essential characteristics for success*. ASCD.

Dörnyei, Z. (2014). *The psychology of the language learner: Individual differences in second language acquisition*. Routledge.

Hew, K. F., & Brush, T. (2007). Integrating technology into K-12 teaching and learning: Current knowledge gaps and recommendations for future research. *Educational technology research and development*, *55*, 223-252. https://doi.org/10.1007/s11423-006-9022-5

Hodges, C. B., Moore, S., Lockee, B. B., Trust, T., & Bond, M. A. (2020). The difference between emergency remote teaching and online learning. http://hdl.handle.net/10919/104648

Krashen, S. (1982). Principles and practice in second language acquisition.

OECD. (2021). *Teachers' Perceptions of Online Learning Effectiveness: A Global Survey Report*. OECD Publishing.

Pabriana, H., Setyarini, S., & Rodliyah, R. S. (2023, December). The implementation of digital storytelling to promote higher-order thinking skills (HOTs) of EFL young learners. In *AIP Conference Proceedings* (Vol. 2621, No. 1). AIP Publishing. https://doi.org/10.1063/5.0142315

Qiu, C., Shukor, S. S., Singh, C. K. S., Wang, G., Zhong, X., & Tian, Y. (2022). A systematic review on the effectiveness of blended learning on learners' EFL vocabulary performance. *Pegem Journal of Education and Instruction*, *12*(4), 204-219. https://doi.org/10.47750/pegegog.12.04.21

Rahman, A., et al. (2021). The Challenges of Self-Regulated Learning in Young Learners During Online Education. *Journal of Educational Technology & Society, 24*(3), 45-58

Robin, B. R. (2008). Digital storytelling: A powerful technology tool for the 21st century classroom. *Theory into practice*, *47*(3), 220-228. https://doi.org/10.1080/00405840802153916

Selwyn, N., Macgilchrist, F., & Williamson, B. (2020). *Digital Education After the Covid-19*. Verlag nicht ermittelbar.

UNESCO. (2021). *Education in a Post-Pandemic World: Nine Ideas for Public Action*. UNESCO Publishing

Vygotsky, L. S. (1978). *Mind in society: The development of higher psychological processes*. Harvard University Press

Wahyuningrum, T., & Sa'diya, L. K. (2022). *Impact of Learning From Home: Cognitive Development of Early Childhood Education Student in Pandemic Covid–19* (Doctoral dissertation, Jurnal Obsesi: Jurnal Pendidikan Anak Usia Dini). https://10.31004/obsesi.v6i5.2825

Yang, Y. T. C., & Wu, W. C. I. (2012). Digital storytelling for enhancing student academic achievement, critical thinking, and learning motivation: A year-long experimental study. *Computers & education*, *59*(2), 339-352. https://doi.org/10.1016/j.compedu.2011.12.012

Zohar, A., & Dori, Y. J. (2003). Higher order thinking skills and low-achieving students: Are they mutually exclusive?. *The journal of the learning sciences*, *12*(2), 145-181. https://doi.org/10.1207/S15327809JLS1202_1