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Transforming Drama Education Through Nearpod: Development of Interactive Teaching Materials for University Students

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Abstract

Received Revised. Accepted.	: October 31, 2024 : November 30, 2024 : December 30, 2024	This research aims to develop Nearpod media-assisted teaching materials for Drama courses in the Indonesian Language and Literature Education Study Program, Faculty of Language and Arts, Universitas Negeri Medan. This research uses the Research and Development (R&D) method, carried out until the product revision stage after validation. The research population was all fourth-semester students who took the KDBK Drama Teaching course, with 156 students. The sample was selected purposively, namely one class of 37 students who took part in learning using Nearpod-based teaching materials. The results showed that expert validation gave a perfect percentage for content aspects (85.7%), presentation aspects (85.5%), linguistic aspects (85.8%), and design aspects (85.6%). In addition, the results showed that using Nearpod media-assisted teaching materials significantly improved student learning outcomes in drama learning. This finding indicates that Nearpod is an effective digital media in improving engagement and learning outcomes in literature education.
Keywords:		Nearpod; Teaching Materials; Drama Teaching; Learning Outcomes; R&D Method; Literature
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INTRODUCTION

Learning is a fundamental cornerstone of the educational process, and its effectiveness is significantly influenced by the design of learning experiences. Technology integration into education has emerged as an essential strategy to improve the quality of learning. Technology facilitates diverse, engaging, and accessible learning activities, essential for schools and universities. Educational technology has been proven to improve the quality of education by optimizing teaching methods and increasing student engagement through interactive tools and media (Shaik et al., 2023). This transformation is about replacing traditional methods and completely redefining educational practices that strengthen the learning experience (Shaik et al., 2022).

Integrating technology into the educational process is essential to improving learning outcomes. By developing environments that accommodate diverse learning experiences and address students' ideas, educational technology can significantly improve the quality of education (Shi, 2024; Yao, 2023). The ongoing evolution of existing technologies offers



promising avenues for future educational practices, making educators and institutions need to continuously adapt and innovate to improve education quality (Fu, 2023).

The effective delivery of educational content in higher education depends mainly on teachers' strategies and the quality of teaching materials used. By using diverse teaching methods and integrating technology, teachers can create an engaging learning environment that encourages student participation, critical thinking, and a deeper understanding of the subject matter (Khasanah et al., 2023). Educators must adapt their teaching strategies and materials as educational practices evolve to meet students' changing needs (Lasut & Nurlaily, 2022).

Drama learning is essential in literature education, significantly developing students' literacy competence, creativity, and critical thinking skills. Integrating drama into the educational environment can enhance students' understanding of literary works and be a powerful medium for developing essential skills such as communication, cooperation, and empathy. Drama learning can improve students' problem-solving ability, critical thinking, and self-efficacy while encouraging respect for others and enhancing linguistic skills (Bal Incebacak, 2023).

In higher education, drama teaching faces challenges, especially regarding the availability of teaching materials aligned with modern technology-based learning environments. Incorporating digital technology into drama education has been suggested to enhance students' sustainability awareness and critical thinking skills (Zakopoulos et al., 2023). In reality, lecturers only use teaching materials that do not change yearly in the learning process; this phenomenon was found based on observations made at the Department of Indonesian Language and Literature, Faculty of Language and Arts, State University of Medan. This situation has an impact on boredom or indifference to learning. Moreover, this can impact not achieving learning objectives (Epinur, Yusnidar, and Minarni, 2022).

The integration of technological media in education has become an essential component of the modern educational landscape, especially in the context of the digital age. The utilization of educational technology has experienced significant growth in recent years, especially in higher education institutions. This shift is not only about improving access to information; it also facilitates the creation of more interactive and engaging learning experiences. One notable example of such technology is Nearpod, which allows educators to deliver content interactively through quizzes, discussions, videos, and simulations (Prasetyo, 2024). The interactive nature of Nearpod encourages student participation and allows for real-time assessment of student understanding, which is critical for adapting teaching strategies to meet student needs (Hakami, 2020).

Nearpod is a versatile educational app available for download on the Play Store and App Store, which offers free access to its features. The platform can be used on various devices, including computers, tablets, and smartphones, provided an internet connection allows flexible access to learning materials from virtually anywhere. Nearpod's extensive feature set enhances learning by allowing educators to create interactive and engaging lessons. These features include presentations, interactive boards, discussion walls, quizzes, simulations, and multimedia content such as videos, 3D models, and virtual reality experiences (Ahmed, 2022).

Nearpod functions are categorized into two main groups, namely content and activities. The content section allows educators to present information in a structured manner, while the activities section includes interactive elements that encourage student engagement and participation (Khoirrohmah & Fadhilawati, 2024). Nearpod's interactive features enable real-time feedback and assessment, which empowers teachers to modify their instructional strategies based on student performance (Sukma, Ramadhan, and Ikhlasani, 2024). This adaptability is critical in addressing individual learning gaps and

fostering a collaborative learning environment where students feel ownership of their learning process (Mastura et al., 2023). As educational institutions continue to embrace technology, platforms like Nearpod will play an increasingly important role in shaping effective teaching and learning practices, especially in drama learning (Le & Doan, 2023).

One key benefit of using Nearpod in drama learning is its ability to encourage active engagement among students. The platform allows for real-time interaction through quizzes, polls, and collaborative boards, which can be particularly effective in drama learning, where student participation is crucial. Research shows that students have shown a positive attitude towards using Nearpod, appreciating the interactive elements that encourage their involvement in the learning process (Amelia et al., 2024). This engagement is critical in drama education, where students often need to express themselves and collaborate with peers to develop their skills.

In addition, Nearpod's multimedia capabilities allow educators to present complex concepts in an accessible way. For example, teachers can incorporate video clips, images, and simulations that relate to dramatic techniques or the historical context of drama, thus enriching the learning experience. This can help students visualize and understand the material better, which is particularly beneficial in subjects that rely heavily on interpretation and performance (Paramita 2023). The Nearpod platform's ability to provide immediate feedback through interactive assessment also allows students to reflect on student learning and make necessary adjustments in real time, which is particularly important in performance-based disciplines such as drama (Pazah et al., 2024).

The flexibility of the Nearpod platform also allows teachers to design lessons that can be tailored to individual student needs, either through group activities or independent tasks. This adaptability is crucial in drama learning, where students have varying levels of confidence and experience (Chairunnas et al., 2022). By using Nearpod, educators can create a more inclusive environment that encourages all students to participate and express their creativity.

However, in its implementation, using Nearpod as a learning medium in literature, especially drama, is still minimally explored. Most of the teaching materials available today are conventional, less interactive, and less relevant to the needs of digital generation students. Drama learning requires a creative and innovative approach to actively involve students in the learning process (Hallgren & Österlind, 2019). However, by embracing innovative approaches and integrating technology, especially the Nearpod app, into learning, educators can create a more interactive and relevant learning experience that meets the needs of today's digital generation (Abdullah, Inayati, and Karyawati, 2022).

The research gap identified in this study lies in the limited exploration of integrating digital tools, particularly the Nearpod application, into drama learning in higher education. Although there have been many studies on using Nearpod in various educational settings, its application in drama teaching, especially in the Indonesian Language and Literature Education program, is still not widely done. This gap is significant as drama learning inherently requires innovative and interactive approaches to engage students effectively.

One of the significant gaps identified in the literature is the limited use of interactive, technology-enabled teaching materials in drama learning. Most current teaching practices in the field of drama rely on conventional methods that do not fully engage students or meet the needs of the digital generation. As Zakopoulos et al. (2023) noted, although digital technologies have been integrated into various educational practices, their specific application in drama learning has not been sufficiently explored, especially in improving student engagement and learning outcomes. This research seeks to address this oversight by developing innovative teaching materials that utilize the interactive capabilities of Nearpod.

Moreover, existing research on Nearpod still focuses on its application in Science subjects, with limited attention to its potential in literature and drama education (Carrillo-Yalán et al., 2023; Umirkhanovich et al., 2022; Vinolo-Gil et al., 2022). This research will contribute to the growing body of knowledge by demonstrating how Nearpod can be effectively used to enhance the teaching and learning of drama, thus providing a new perspective on technology integration in a more specific educational context. Thus, the novelty of this research lies in its focus on developing teaching materials that are not only interactive but also contextually relevant to the needs of students in the Indonesian Language and Literature Education program. Using the Research and Development (R&D) methodology, this study will systematically create and evaluate Nearpod-based teaching materials that align with contemporary educational practices and student expectations. This approach ensures that the developed materials are theoretically sound and practically applicable in actual classroom management, especially in drama learning at the Indonesian Language and Literature Education Study Program, Faculty of Language Arts, State University of Medan.

METHODS

This research was designed using the Research and Development (R&D) method. According to According to Sugiyono (2015), research and development (R&D) methods are research methods used to produce specific products and test the effectiveness of these products. As the name suggests, this method is a research and development method. The research referred to here is to test Nearpod-based teaching materials carried out in the learning process of Teaching Children's Literature KDBK in the Indonesian Language and Literature Education Study Program, Faculty of Language and Arts, State University of Medan., research and development (R&D) methods are research methods used to produce specific products and test the effectiveness of these products. As the name suggests, this method is a research and development method. The research referred to here is to test Nearpod-based teaching materials carried out in the learning process of Teaching Children's Literature KDBK in the Indonesian Language and Literature Education Study Program, Faculty of Language and Arts, State University of Medan. The development in question is how to develop Nearpod-based teaching materials in the Indonesian Language and Literature Education study program at the Faculty of Language and Arts, State University of Medan, after the trial.

In this research, there are three types of data collection methods used and they are 1) Observations, Observations in this study were conducted to record and record learning resources and study program resources; 2) Questionnaire, questionnaires were distributed to lecturers and students regarding the needs of lecturers and students in the learning process in the Indonesian Language and Literature Education Study Program FBS, UNIMED; 3) Special tests, tests were held to students to determine the effectiveness of the use of teaching materials assisted by Nearpod media. The population of this study was all Semester IV students of the Indonesian Language and Literature Education Study Program, totaling 156 who took the KDBK Drama Teaching course. The sample was selected purposively, namely one class that followed the learning process using Nearpod-based teaching materials totaling 37 students. The statistical analysis used to evaluate the effectiveness of teaching materials is a paired sample t-test. This analysis aims to compare the test results before and after using Nearpod-based teaching materials so that it can be seen whether there is a significant difference in increasing student understanding.

Data analysis is carried out using data from the needs analysis questionnaire obtained from lecturers and students, as well as data on the suitability of learning materials and product design obtained from material experts and design experts who have gone through expert validation tests. Data from expert validation results are used to determine whether the product that has been produced is feasible or not. Furthermore, data regarding the product's interest, ease of use, and benefits were obtained from direct field tests with students. The success of this research is measured based on three main criteria, namely 1) the feasibility of teaching materials, which is assessed through the validation of material experts and design experts; 2) learning effectiveness, which is measured by the improvement of student learning outcomes after using Nearpod-based teaching materials; and 3) user satisfaction, which is obtained from student responses to the attractiveness, ease of use, and benefits of teaching materials.

RESULTS & DISCUSSION

Results of the Needs Analysis for the Use of Teaching Materials Assisted by Nearpod Media in the Indonesian Language and Literature Education Study Program

Based on the analysis of questionnaires given to lecturers and students, all respondents (100%) stated that Nearpod-based teaching materials are needed to support the learning process. Detailed data related to these results are presented in the following table. **Table 1.** Results of the Needs Analysis for the Use of Nearpod-Based Teaching Materials

No	Question	Answer	Frequency			Domoontogo
		Answer	Lecturer	Student	Amount	Percentage
1	Do you have an	Yes	5	37	42	100%
	electronic device, such as an Android smartphone?	No	0	0	0	0%
2	Does the smartphone you	Yes	5	34	39	92.85%
	own support learning?	No	0	3	3	7.14%
3	Are you familiar with	Yes	2	4	6	14.28%
	Nearpod media-assisted teaching materials?	No	3	33	36	85.71%
4	When you teach/learn using teaching materials	Yes	0	0	0	0%
	assisted by Nearpod media?	No	5	37	42	100%
5	Do you need teaching materials assisted by	Yes	5	34	39	92.85%
	Nearpod media in the teaching/learning process?	No	0	3	3	7.14%

Several significant findings were obtained based on the data presented in Table 1 regarding the needs analysis of the use of Nearpod-based teaching materials. All lecturers and students (100%) have owned electronic devices in the form of Android smartphones. Of these, all lecturers and most students (92.85%) have Android smartphones that support learning, while a small number of students (7.14%) use devices that do not help learning. Furthermore, only a tiny proportion of lecturers and students (14.28%) knew about Nearpod-based teaching materials, while most others (85.71%) were unfamiliar with the media. Nevertheless, no lecturers or students (100%) used Nearpod-based teaching materials in the current teaching-learning process. However, all lecturers and most students (92.85%) stated they needed Nearpod media-assisted teaching materials to support learning. However, a small number of students (7.14%) said they did not need the media.

The findings from the needs analysis regarding the use of Nearpod-based teaching materials revealed some critical insights into the current state of technology integration in education, particularly in the context of drama learning. The data shows that although all lecturers and students have electronic devices, they are still unfamiliar with Nearpod, and none use it in teaching-learning. However, there was a strong demand for Nearpod-based materials, indicating a gap between the availability of technology and its practical application in the classroom.

The finding that 85.71% of lecturers and students were unfamiliar with Nearpod is in line with Prasetyo's (2024), highlighting the need for further investigation into the integration of Nearpod in educational settings. This suggests similar challenges across different educational contexts where technology is available but not widely adopted due to a lack of awareness or training. The current study's emphasis on the need for Nearpods to enhance the learning experience aligns with the findings from Hakami (2020), which showed that Nearpods significantly increased students' motivation and engagement in learning activities. This relationship underscores the potential of Nearpod to transform educational experiences, especially in literature and drama education, where engagement is crucial.

This study's focus on innovative teaching approaches in drama education is supported by research from Cavanagh et al. (2018), which found that active learning strategies positively impact student engagement and learning outcomes. This highlights a broader trend in educational research advocating active learning strategies essential for encouraging students' critical thinking and creativity. These findings also reflect the observations by Turkyilmaz et al. (2019), who discussed the importance of improving educators' readiness to integrate digital technology into teaching practices. The results of the current study indicate a similar need for professional development and support for lecturers to utilize Nearpod in teaching effectively.

Thus, the Nearpod app has great potential to be integrated into the teaching-learning process, echoing the sentiments expressed by Xian (2021), who emphasized the need for continuous refinement of educational tools such as Nearpod to maximize their effectiveness. This highlights the shared understanding in the literature that while technology offers significant benefits, its successful implementation requires ongoing evaluation and adaptation.

Development of Teaching Materials for Drama Courses Assisted by Nearpod Media

Nowadays, students are inseparable from technological advances, where smartphones and internet access have become necessary. Based on the facilities available at the Faculty of Language and Arts, State University of Medan, it appears that this institution has sufficient facilities to support implementing the Nearpod application, such as free WiFi access. However, the current drama teaching materials used by students are still printed teaching materials. This deficiency can affect student learning outcomes in drama learning, so the development of teaching materials is an urgent need. The facilities available at the Faculty of Language and Arts, State University of Medan, can be utilized to implement exciting and interactive teaching materials, such as Nearpod media-based teaching materials developed in the Indonesian Language and Literature Education Study Program. The results of developing Nearpod media-assisted teaching materials are shown in the following figure.

The following comparison covers various aspects to provide a clear picture of the differences between the previously used teaching materials and the developed teaching materials. This comparison aims to show how innovation in developing teaching materials can improve the quality of learning, especially in using technology and interactive media

such as Nearpod.



Figure 1. Teaching Material Page Assisted by Nearpod Media in Drama Course

By understanding these differences, it is expected to see the benefits presented by the teaching materials that have been developed in supporting the teaching and learning process.

Table 2. Comparison between Conventional Teaching Materials and De	eveloped Teaching
Materials	

Materials	
Old Teaching Materials	Developed Teaching Materials
There is no mind-mapping	There is mind-mapping
There is no element of critical thinking	There is an essential element of thinking,
learning	learning
There are no examples of	There are examples of images/animations
images/animations in the material	in the explanation of the material
description	-
Only printed in books	Teaching materials were developed with
	the help of Nearpod media

The table above illustrates the difference between the Old Teaching Materials and the Developed Teaching Materials. No mind mapping can help students organize information visually in the old teaching materials. In contrast, mind mapping is included in the developed teaching materials to facilitate understanding. In addition, the old teaching materials did not integrate critical thinking learning elements, while the developed teaching materials include these elements to encourage students to think analytically and reflectively. Regarding material visualization, the old teaching materials did not include examples of images or animations in explaining the material, while the developed teaching materials provided images/animations to clarify the explanation and make the material more interesting. Finally, the old teaching materials are only available as printed books. In contrast, the developed teaching materials are presented using Nearpod media, allowing for more dynamic interaction and interactive learning.

Findings from a study on Nearpod media-assisted teaching materials development revealed significant improvements compared to traditional teaching materials. The study highlighted several key enhancements, including incorporating mind mapping, critical thinking elements, better visualization of materials, and transitioning from printed books to interactive digital formats. These improvements are crucial to fostering a more engaging and effective learning environment, particularly in drama education. Mind mapping in the developed teaching materials aligns with the findings of Liu et al. (2023) and Yang et al. (2020), which showed that mind mapping improves information retention and encourages critical thinking. Both studies emphasize that mind mapping helps organize information visually, making it more accessible and easier to understand. This supports the idea that integrating mind mapping into teaching materials can significantly improve student understanding and engagement.

The focus of the teaching materials developed in integrating critical thinking elements is in line with the research of D'Antoni et al. (2010) and Hardianti et al. (2020), who found that teaching materials designed to encourage critical thinking effectively improve students' analytical skills. The emphasis on critical thinking in the current study reflects a broader trend in educational research advocating instructional strategies that encourage students to engage in higher-order thinking.

The research findings regarding the use of images and animations in the developed teaching materials align with the research of Atmono et al. (2021), which highlighted the positive impact of visual aids on student understanding. Incorporating multimedia elements in teaching materials is proven to make learning more engaging. It can improve information retention, aligning with the current study's aim to increase student engagement through dynamic content.

The shift from traditional printed materials to Nearpod's interactive platform reflects a growing trend in education towards digital learning environments. Research by Mumtaz & Zahra (2016) supports this transition, showing that interactive learning modalities, such as role-playing and digital aids, encourage critical thinking and increase student participation. The use of Nearpod in this study aligns with these findings, suggesting that digital platforms can facilitate a more interactive and engaging learning experience.

Research conducted by Li et al. (2023) supports the overall effectiveness of the developed teaching materials in improving student engagement and learning outcomes. This study showed that innovative teaching strategies, such as mind mapping and digital tools, can significantly enhance students' academic performance and critical thinking skills. The current study contributes to this literature by showing how Nearpod can effectively integrate into drama education.

The findings from this research on Nearpod-based teaching materials show significant advances over traditional teaching methods, particularly in drama learning. The integration of mind mapping, critical thinking elements, and an interactive digital format align with existing literature that supports the effectiveness of this strategy in improving student engagement and learning outcomes. By addressing the specific needs of drama education, this research contributes valuable insights to the ongoing discourse on technology integration in education.

Feasibility of Mobile Learning Assisted by Nearpod Media in its Use in Drama Learning

The results of validation and assessment by material experts and media experts on each aspect of the comprehensive evaluation are determined by the average score of each criterion. The results of this study were analyzed to determine the feasibility of Nearpod media-assisted learning media. The average percentage of assessment results by material experts, media experts, lecturer assessments, individual trials, small group trials, and limited field group trials are assessed based on aspects and assessment indicators. The results of the assessment aspects obtained will be described as follows.

1. Data from Material Expert Validation Results

Product validation is intended to determine the opinion of material experts regarding content feasibility, presentation feasibility, and language. This validation was carried out by Mr. Azhar Umar, M.Pd lecturer at the State University of Medan. The

assessment was conducted to obtain information about the quality of teaching materials developed to improve the quality of learning in the Indonesian Language and Literature Education Study Program in the drama area. Based on the assessment of the feasibility aspects of material content, using teaching materials assisted by Nearpod media for drama learning is declared "Very Good" with a total average percentage of 85.7%. Data on the validation results from material experts regarding the suitability of material content can be seen in the following table.

Table 3. Material Expert Assessment of Teaching Materials Assisted by Nearpod Media

 for Content Suitability

Sub Component	Indicator	Average (%)	Criteria
A. Suitability of material to learning outcomes	1. Completeness of material	86	Very good
-	2. Breadth of material	85	Very good
	3. Depth of material	84.5	Very good
B. Accuracy of Material	4. Accuracy of concepts and definitions	84	Very good
	5. Data accuracy	86	Very good
	6. Accuracy of examples	88	Very good
	7. Image accuracy	85	Very good
	8. Accuracy of terms	85.5	Very good
	9. Accuracy of symbols and icons	85	Very good
C. Latest Material	10. Suitability of the material to language development	86	Very good
	11. Internet-based displays using CapCut-based learning media for local communities	88	Very good
	12. Examples and cases in everyday life	86	Very good
	13. Pictures and illustrations in everyday life	85	Very good
	14. Use examples of cases found in everyday life	84	Very good
D. Encourage Curiosity	15. Encourage curiosity	85	Very good
	16. Create the ability to ask	86	Very good
	questions Average	85,5	Very Good

Table 3 shows the results of the material expert's assessment of Nearpod Media Assisted Teaching Materials in terms of content suitability, which includes four main sub-components: Material Suitability to Learning Outcomes, Material Accuracy, Material Novelty, and Encouragement of Curiosity. In the sub-component of Material Compatibility with Learning Outcomes, which consists of material completeness, material breadth, and material depth, all indicators obtained a perfect average score, with a percentage between 84.5% and 86%. This shows that the material presented suits

the learning objectives set. This finding is consistent with the research of Dewi et al. (2023), which showed that the implementation of Nearpod significantly improved students' reading skills, indicating that well-designed teaching materials can effectively support learning objectives. Both studies highlight the importance of aligning educational content with desired learning outcomes to improve student performance.

The Material Accuracy sub-component includes the accuracy of concepts and definitions and the accuracy of data, examples, images, terms, and symbols/icons. All indicators in this sub-component also received excellent ratings, with percentages ranging from 84% to 88%. This indicates that Nearpod-assisted teaching materials have a high level of accuracy in conveying precise and relevant information. The high ratings for the accuracy of the materials in the current study (ranging from 84% to 88%) reflect the findings of Mastura et al. (2023), who emphasized the importance of accurate and relevant content in educational materials. Their research showed that Nearpod positively affected reading comprehension, indicating that accurate teaching materials are essential for effective learning. This relationship underscores the importance of ensuring educational resources provide the right information to facilitate student comprehension.

In the Novelty of Materials sub-component, indicators covering the suitability of the material with language development, the use of CapCut-based media for internetbased learning, and the relevance of examples and illustrations of daily life all also received excellent ratings, with values between 84% and 88%. This indicates that this teaching material presents up-to-date and applicable content. The emphasis on novelty in the developed teaching materials aligns with the findings of Astarina & Herlinda (2022), who highlighted the need for innovative teaching materials that engage students. The current study's focus on incorporating contemporary examples and media reflects a broader trend in educational research advocating using current and relevant content to maintain student interest and engagement.

Finally, the Encouraging Curiosity sub-component assesses the ability of teaching materials to encourage curiosity and the ability to ask questions. Both indicators in this sub-component received very good scores, with percentages between 85% and 86%. Overall, with an average assessment of 85.5%, Nearpod media-assisted teaching materials are rated very well by material experts regarding content suitability, indicating that the teaching materials are very effective in supporting the learning process. This finding also aligns with Astarina & Herlinda (2022), which found that interactive platforms such as Nearpod encourage student engagement and curiosity. This relationship suggests that teaching materials designed to stimulate questions can significantly enhance the learning experience, supporting the idea that curiosity is essential to effective education.

The transition from traditional printed materials to Nearpod's interactive platform reflects the growing trend in education toward digital learning environments. Research by Abdullah et al. (2022) supports this transition, showing that interactive learning platforms increase student motivation and engagement. The current study's findings reinforce that integrating technology into teaching practices can create a more dynamic and effective learning experience.

The findings from this assessment showed significant strengths in content appropriateness, accuracy, novelty, and ability to encourage curiosity. These results align with existing literature emphasizing the importance of accurate and engaging teaching materials in improving student learning outcomes. However, the current study's focus on content appropriateness and comprehensive assessment framework provides valuable insights contributing to the ongoing discourse on technology integration in education. By highlighting the effectiveness of Nearpod in supporting learning, this study underscores the potential of innovative teaching materials to enhance the educational experience.

Furthermore, the validation data from material experts regarding the feasibility of the presentation is explained in the following table.

 Table 4. Expert Assessment of Nearpod Media-assisted Drama Teaching Materials for Presentation

Sub Component	Indicator	Average (%)	Criteria
A. Presentation	1. Consistent serving system	85	Very good
Technique	2. Concept confusion	84	Very good
B. Presentation	3. Examples of questions in each	86	Very good
Support	learning activity		
	4. introduction	85	Very good
C. Presentation of Learning	5. Student Engagement	87	Very good
D. Coherence and sequence of	6. Linkages between learning activities/sub-learning activities	85	Very good
thought flow	7. Wholeness of meaning	86	Very good
Average		85,8	Very good

Table 4 shows the assessment results from material experts regarding the feasibility of presenting Nearpod Media Assisted Teaching Materials in the presentation aspect. This assessment is divided into four main sub-components: Presentation Techniques, Presentation Support, Presentation of Learning, and Coherence and sequence of thought flow.

In the Presentation Technique sub-component, which includes the consistency of the presentation system and the concept of confusion, both indicators received a very good assessment with an average value of 84% to 85%. This shows that teaching materials are presented consistently and clearly without confusing concepts in information delivery. This finding aligns with the research of Mastura et al. (2023), who found that Nearpod-based learning materials effectively improved students' understanding of the content. Both studies emphasize the importance of clarity in presentation techniques to prevent confusion and facilitate learning.

In the Presentation Support sub-component, which includes sample questions in each learning activity and introduction to the material, both indicators also received excellent ratings with percentages of 85% to 86%. This indicates that the teaching materials strongly support facilitating active interaction and understanding of the material through relevant examples. This finding is consistent with Hakami's (2020) research, which noted that Nearpod encourages active learning by presenting diverse learning tasks. The results of the current study reinforce the idea that effective teaching materials should include relevant examples and questions to engage students actively.

The Learning Presentation sub-component assesses the level of student involvement in the learning process. With a score of 87%, this indicator received a very good assessment, which shows that teaching materials can significantly increase student involvement. This finding is corroborated by the findings of Wulandari et al. (2023), which showed that Nearpod effectively increased student engagement and critical thinking skills. This relationship highlights the potential of Nearpod to foster a more interactive learning environment, which is crucial for maintaining student interest and participation.

In the Coherence and sequence of thought sub-component, which includes the connection between learning activities and the integrity of meaning, both indicators received an average score of 85% to 86%. This indicates that the flow of the presentation of material in teaching materials is organized coherently and easily. This finding is

supported by Ismah & Zuliarni (2022), who emphasize the importance of structured content in enhancing students' learning experience. Both studies show that well-organized materials contribute to better understanding and retention of information.

Overall, Nearpod media-assisted teaching materials obtained an average rating of 85.8% and were included in the "Very Good" category. This rating reflects that this teaching material has excellent presentation quality and effectively supports learning. This aligns with Abdullah et al. (2022), who reported that Nearpod significantly improved learning outcomes in various educational contexts. The current study adds to this literature by specifically highlighting the effectiveness of Nearpod in the presentation of teaching materials.

Furthermore, to assess the language aspect in the Teaching Materials for drama learning with Nearpod Media, material experts evaluated the feasibility of using language in the presentation of the material. This language aspect is very important to ensure that students can clearly understand the material presented and by good and correct Indonesian language rules. The following table shows the assessment results of language use in the teaching materials that have been developed, which include various indicators to evaluate the feasibility of the language used.

Sub Component	Indicator	Average (%)	Criteria
A. Straightforward	1. Accuracy of sentence structure	86	Very good
C C	2. Effectiveness of sentences	87	Very good
	3. Standardity of Terms	85	Very good
B. Communicative	4. Understanding the message or information	86.5	Very good
C. Dialogic and	5. ability to motivate students	86	Very good
interactive	6. the ability to encourage critical thinking	85	Very good
D. Suitability to the student's level of	7. suitability to students' intellectual development	87	Very good
development	8. suitability to the student's level of emotional development	85	Very good
E. Conformity to the rules	9. Grammatical correctness	86	Very good
F. Use of terms	10. Consistency in the use of terms	85	Very good
Averag	e	85,8	Very Good

Table 5. Material Expert Assessment	t of Drama	Teaching	Materials Assisted with Nearpod
Media for Language Aspec	ets		

Table 5 above presents the results of the material expert's assessment of the Nearpod Media-assisted Drama Learning Teaching Materials in the language aspect, which includes six main sub-components, namely Straightforward, Communicative, Dialogic, and interactive, Suitability to the student's level of development, Conformity to Rules, and Use of Terms. This assessment aims to ensure that the language used in teaching materials is by the rules and is easily understood by students.

In the Straightforward sub-component, which includes the accuracy of sentence structure, sentence effectiveness, and term standards, all indicators received excellent ratings, with an average value ranging from 85% to 87%. This shows that teaching materials use clear and compelling sentence structures and consistently use appropriate terms. This finding aligns with the findings of Wati et al. (2020), who emphasized the importance of clear and straightforward language in teaching materials to improve student understanding. Both studies highlight that effective teaching materials should use concise language and sentence structure to facilitate learning.

The Communicative sub-component assesses how teaching materials can convey messages or information well. With an average score of 86.5%, this indicator received a very good assessment, which indicates that teaching materials can convey information in a way that is easily understood by students. This finding is consistent with Sukerti & Marsiti's (2021) research, which found that teaching materials designed with a focus on communication significantly improved student engagement and understanding. This research reinforces that teaching materials should prioritize clear communication to enhance the learning experience.

In the Dialogical and Interactive sub-component, which includes the ability of teaching materials to motivate students and encourage critical thinking, both indicators obtained a perfect average score of 85% to 86%. This shows that teaching materials function as a source of information and stimulate interaction and critical thinking among students. This finding mirrors that of Zainuddin & Misbah (2020), who noted that interactive teaching materials encourage student engagement and critical thinking. This relationship suggests that teaching materials encouraging dialog and interaction can significantly improve learning. This aligns with the current study's emphasis on dialogic and interactive qualities.

The Suitability of the student's level of development sub-component assesses the suitability of the material to the intellectual and emotional growth of students. Both indicators in this sub-component also received excellent ratings, with an average score of 85% to 87%, indicating that the teaching materials are based on students' level of ability and needs. The high assessment of the sub-component of suitability to the level of student development (85% to 87%) indicates that the material is by students' intellectual and emotional growth. This finding is supported by research from Mispandi and Fahrurrozi (Santi, Nusrotus, and Hayu, 2019), emphasizing the need for teaching materials appropriate to students' developmental stages to maximize their effectiveness. Both studies underscore the importance of tailoring educational content to meet students' needs.

In the Conformity to the rules sub-component, which assesses grammatical correctness, teaching materials obtained an average score of 86%, indicating that the material's presentation is by applicable language rules. This finding aligns with Mispandi & Fahrurrozi (2023), highlighting the importance of grammatical accuracy in teaching materials for effective communication. The results of the current study reinforce the idea that adherence to language rules is essential to ensure clarity and understanding in education.

Finally, in the Use of Terms sub-component, which includes the consistency of using terms in the material, the score is 85%, indicating that the teaching materials use consistent and appropriate terms throughout the material presented. This finding is related to the research of Wati et al. (2020), which emphasizes the importance of consistency of terms in learning materials to improve student understanding. Both studies highlight that transparent and standardized language helps students understand complex concepts better, supporting the idea that consistency in language is essential for effective learning.

Overall, the Nearpod media-assisted teaching materials obtained an average rating of 85.8% and were included in the "Very Good" category. This indicates that the language aspects in these teaching materials have been implemented very well to support student understanding and engagement in learning. This finding aligns with Mispandi & Fahrurrozi (2023), highlighting the importance of grammatical accuracy in teaching materials for effective communication. The results of the current study reinforce the idea that adherence to language rules is essential to ensure clarity and understanding in education.

Findings from the assessment of Nearpod media-assisted teaching materials showed significant strengths in language quality, including simplicity, communicative effectiveness, encouragement of interaction, conformity to student development, and adherence to language rules. These results align with existing literature emphasizing the importance of clear and engaging teaching materials in improving student learning outcomes. However, the current study's focus on language aspects and comprehensive assessment framework provides valuable insights contributing to the ongoing discourse on technology integration in education. By highlighting the effectiveness of Nearpod in supporting drama learning, this study underscores the potential of innovative teaching materials to enhance the educational experience of drama learning in higher education. 2. Data on Validation Results from Learning Design Experts

Teaching material design experts Adek Cerah Kurnia Azis, S.Pd., M.Pd., a lecturer at the State University of Medan, carried out product validation of CapCutbased teaching materials. This assessment aims to improve the display quality and effectiveness of the CapCut-based teaching materials that have been developed. The validation results showed that the teaching materials developed obtained an assessment in the "Very Good" category, with an average total percentage of 85.6%.

The teaching material design was validated twice, but the first validation still needed improvement. Suggestions for improvement given by learning design expert validators are that the text layout in teaching materials should be more attractive and neat, and animation should be added to support the delivery of material to make it easier to understand. After making improvements, the design experts assessed that the teaching materials assisted by Nearpod media in their use in children's literature courses for students of the Indonesian Language and Literature Education Study Program developed were feasible with an average score percentage of 85%. The data on the validation results by learning design experts can be seen in Table 6 below.

 Table 6. Expert Assessment Score for Teaching Material Design Assisted by Nearpod Media

Indicator	Average (%)	Criteria
1. Effective and efficient learning media	86	Very good
2. Reliable (some or all of the learning media can be reused)	86	Very good
3. Maintainable (can be maintained/managed easily)	86.5	Very good
4. Usability (easy to use and simple in operation)	85	Very good
5. Accurate selection of the type of	86	Very good
application/software/tool/for development		
6. Compatibility	85	Very good
7. Easy program packaging	85	Very good
8. Completeness of learning media	86	Very good
9. Reusable	85.5	Very good
Rata-Rata	85.6	Very Good

Table 6 shows the results of the design expert's assessment of the Nearpod Media Assisted Teaching Material Design, which includes various indicators related to the effectiveness and quality of learning media. The assessment ensures that the teaching materials developed are not only effective in delivering material but also meet technical criteria in their use.

The first to ninth indicators received a Very Good rating, with an average score between 85% and 86.5%. In detail, the indicators Effective and efficient as learning media, Reliable (can be reused in part or all of the learning media), and Manageable (has good maintenance capabilities) obtained a high average value of 86% to 86.5%, indicating that this learning media is practical, can be repeatedly used, and is easy to maintain. In addition,

the indicators of Ease of use and Ease of program packaging received an average score of 85%, indicating that Nearpod media-assisted teaching materials can be used easily and are simple to operate. Other indicators, such as accurate application type selection and compatibility suitability, also received an excellent assessment with a score of 86%, indicating that the Nearpod application used is needed for this teaching material development. Overall, Nearpod media-assisted teaching materials obtained an average assessment score of 85.6%, which is included in the Very Good category. This reflects that these teaching materials meet good design standards regarding effectiveness, ease of use, and sustainability.

The assessment of Nearpod Media Assisted Teaching Material Design in drama learning showed significant alignment with existing literature on the effectiveness of digital learning tools. Findings showed that the design expert evaluation yielded an average score of 85.6%, categorizing the materials as "Excellent" regarding effectiveness, ease of use, and sustainability. This assessment is consistent with previous research highlighting the positive impact of Nearpod on learning outcomes. Research by Mastura et al. (2023) showed an 86% improvement in student learning outcomes after using Nearpod in a blended learning context, reinforcing the idea that digital media can improve educational effectiveness. Similarly, research by Ristanto et al. (2023) reported a pass rate of 95% for students using Nearpod, compared to 70% for those not using Nearpod, further validating the platform's efficacy in improving comprehension skills.

In addition, the reliability and manageability indicators received high scores, indicating that Nearpod materials are effective, reusable, and easy to maintain. This aligns with Xian's (2021b) research, which notes that although teachers face increased preparation time when integrating interactive activities, the benefits of using platforms such as Nearpod outweigh the previous challenges, as these platforms encourage a more engaging learning environment. In addition, the indicators of ease of use and program packaging both scored 85%, indicating that the materials were easy to use, which aligns with the findings from Susanti et al. (2023), who emphasized the effectiveness of learning videos in facilitating student understanding through a clear presentation format.

The suitability of the Nearpod application for developing teaching materials is another important aspect highlighted in the assessment. This finding is in line with the research of Munjiat et al. (2023), which stated that digital learning media, if aligned with educators' competencies, can significantly improve the quality of student learning. In addition, positive acceptance of Nearpod's interactive features, as reported by X. Liu (2023), underscores the importance of interactivity in online education, indicating that devices such as Nearpof can effectively engage students and improve educational outcomes.

Therefore, Nearpod Media Assisted Teaching Material Design assessment in drama learning reflects high effectiveness and usability and aligns with the growing literature supporting integrating digital learning tools in educational settings. The positive outcomes associated with Nearpod are corroborated by various studies, which show the successful implementation of technology-supported learning environments, especially the Nearpod application.

Effectiveness of Nearpod Media-Assisted Teaching Material Development in Literature Learning

The use of technology in learning is increasingly becoming a concern in the world of education, especially in an effort to improve the quality and learning outcomes of students. This study aims to evaluate the effectiveness of Nearpod media-based teaching materials development in literature learning, especially on drama material. The results of this study provide an overview of the improvement of student learning outcomes after using Nearpod as a learning medium. By utilizing interactive features such as live quizzes, discussions, and multimedia content, Nearpod offers a more enjoyable and effective approach than conventional methods. Data analysis that includes descriptive and inferential statistical tests provides empirical evidence of the successful implementation of Nearpodbased teaching materials in achieving drama learning objectives.

Responden	Pretest	Posttest
1	65	81
2	70	85
3	68	84
4	75	86
5	74	89
6	60	78
7	80	88
8	71	83
9	76	90
10	69	82
11	73	85
12	72	84
13	64	80
14	78	90
15	67	81
16	75	88
17	71	85
18	68	84
19	69	83
20	70	86
21	65	79
22	77	89
23	72	85
24	73	84
25	68	82
26	74	88
27	66	81
28	79	90
29	62	78
30	70	83
31	69	85
32	71	84
33	68	82
34	76	89
35	75	88
36	72	85
37	64	80
Average	72.27	83.72

 Table 7. Comparison of Pre-Test and Post-Test Scores of Student Learning Outcomes

 Using Nearpod Media

After using Nearpod media-assisted teaching materials, the average score obtained was 83.72, with a standard deviation of 8.73 and a standard error of 1.43 from 37 students sampled. These results indicate that the majority of students were able to achieve an outstanding score category. The data normality test using the Liliefors test shows that the data is normally distributed with $L_{count} = 0.409$ and $L_{table} = 0.456$ ($L_{count} < L_{Table}$). This normality indicates that the learning outcomes after using Nearpod are stable and do not

deviate from the normal distribution.

Before applying Nearpod media-assisted teaching materials, the average student score was 72.27, with a standard deviation of 11.05 and a standard error of 1.81. The Liliefors method's normality test also showed that the data was normally distributed ($L_{count} = 0.409$; $L_{Table} = 0.456$). Although the data were normally distributed, the mean scores were in the sufficient category, thus showing room for improvement in learning outcomes. Inferential statistical analysis was conducted to test whether there was a significant improvement between the scores before and after using Nearpod. Using the paired t-test, the value of $t_{count} = 5.47$ and $t_{table} = 2.02$ was obtained (p<0.05). These results indicate a significant increase in student learning outcomes after using Nearpod media-assisted teaching materials. The average increase of 11.45 points indicates that Nearpod significantly impacts learning outcomes.

The results of this study show that the use of Nearpod media-assisted teaching materials significantly improves students' learning outcomes in drama learning. Nearpod offers interactive features such as live quizzes, discussions, and multimedia content that can increase student engagement. The normally distributed data of pre-test and post-test results indicate that the research results can be generalized to a broader population. The results also indicated that the variation in scores among students was relatively consistent, both before and after using Nearpod. The increase from a mean score of 72.27 to 83.72 shows a substantial improvement. This confirms that Nearpod improves understanding of the material and helps students achieve more optimal learning outcomes. Inferential statistical tests proved a significant improvement in learning outcomes. This indicates that Nearpod is a learning tool and an effective instrument for improving the quality of literature learning, especially drama learning.

Research conducted by Wahyudi et al. (2023) showed that multimedia in learning significantly improved student motivation and learning outcomes, corroborating the current study's findings regarding the effectiveness of using Nearpod application on drama learning. Similarly, Ercan's (2014) study on multimedia learning materials supports the idea that integrating multimedia elements can improve academic achievement and positive attitudes toward learning. The interactive nature of Nearpod, which includes features such as quizzes and discussions, is also consistent with the findings of Alalwan et al. (2019), who noted that social media and interactive platforms promote a conducive learning atmosphere, increasing student engagement and academic achievement.

The inferential statistical test confirming the significant improvement in learning outcomes shows that Nearpod is a learning tool and an effective instrument to improve the quality of literature learning, particularly in drama. This is supported by the research of Chen et al. (2019), which highlighted the role of interactive multimedia in improving students' understanding and engagement in various subjects. This study's findings align with the findings of Guo et al. (2018), who emphasized that modern technology can dramatically change the educational experience, leading to better learning outcomes.

Moreover, the consistency in score variation among students before and after using Nearpod suggests that the platform effectively accommodates diverse learning needs, a concept echoed in the study by Petrova et al. (2018), which discusses the advantages of cognitive technology in providing personalized learning experiences. This adaptability is crucial in modern education, where personalized learning paths can significantly improve students' understanding and retention of material. The significant improvement in student learning outcomes in drama learning, therefore, not only validates the use of Nearpod but also contributes to the broader discourse on technology integration in education.

These findings suggest that Nearpod can effectively improve student learning outcomes in drama subjects and potentially across a wide range of subjects. Nearpod's interactive features, such as live quizzes and multimedia content, can be adapted into different educational contexts, making it a versatile tool for diverse learning environments (Khoirrohmah & Fadhilawati, 2024; Mastura et al., 2023). This adaptability suggests that various educational institutions can benefit from integrating Nearpod into the curriculum to encourage better engagement and understanding in various subjects, from science to humanities.

The results of this study underscore the importance of active learning strategies in improving student performance. Nearpod's interactive capabilities encourage student participation and engagement, which is essential for effective learning (Ahmed, 2022). As educators become more aware of the importance of active learning, tools like Nearpod can facilitate the transition from traditional lecture-based teaching to a more interactive and student-centered approach. This shift is in line with modern educational theories that advocate the importance of learner engagement as a critical component of successful education (Civelek and Karatepe 2021).

Successful implementation of Nearpod and similar technologies requires adequate training and support for educators. This research highlights the need for professional development programs that equip teachers with the skills to effectively integrate interactive tools into their teaching (Ahmed 2022). This kind of training can increase teachers' confidence and competence in using technology, which in turn benefits students' learning experience.

CONCLUSION

This research successfully developed Nearpod media-assisted teaching materials that improved student learning outcomes in Drama courses at the Indonesian Language and Literature Education Study Program, Faculty of Language and Arts, State University of Medan. Validation from material and design experts showed that the Nearpod teaching materials product met the excellent criteria in content, presentation, language, and design, with a percentage of over 85% each. The increase in student learning outcomes after using Nearpod teaching materials shows its effectiveness as an interactive learning media that can increase student involvement in the learning process. With its interactive features, Nearpod can be an innovative solution to overcome the challenges of conventional learning, especially in literature learning. The results of this study not only provide a practical contribution in the form of teaching material products that can be implemented in drama learning and contribute to the development of technology-based learning theory in literature education. This study recommends further research with a broader scope to test the generalizability of the results and explore the utilization of Nearpod features in other courses.

The developed Nearpod-assisted teaching materials can be implemented more widely in literature learning, especially for materials that require an interactive approach. Nearpod features, such as live quizzes and multimedia, can be adapted to other learning needs in literature and other courses. Further research is recommended to test the effectiveness of Nearpod teaching materials on a larger population and other learning contexts, such as primary or secondary education. In addition, studies can be conducted to explore the effect of using Nearpod on students' analytical skills and creativity. To increase the effectiveness of using Nearpod, it is recommended that educational institutions organize training for lecturers and teachers regarding using this technology in the learning process. The positive results of using Nearpod invite further research into its long-term effects on student learning and engagement. Future research could explore the impact of Nearpod on different education levels, subjects, and student demographics, thereby

contributing to a more comprehensive understanding of how digital tools can improve educational practices.

REFERENCES

- Abdullah, Muhammad Ilyas, Dian Inayati, and Ninik Nurlaila Karyawati. 2022. "Nearpod Use as a Learning Platform to Improve Student Learning Motivation in an Elementary School." *Journal of Education and Learning (EduLearn)* 16(1):121–29. doi: 10.11591/edulearn.v16i1.20421.
- Agung Prasetyo. 2024. "Nearpod Integration: What and How Is the Potential for Teaching and Learning?" *Journal of Electrical Systems* 20(5s):730–38. doi: 10.52783/jes.2297.
- Ahmed, Abdelrahman Mohamed. 2022. "An Investigation into Using Nearpod as an Interactive Tool to Aid Students' Achievement and Motivation for Learning Educational Technology." *Research on Humanities and Social Sciences.* doi: 10.7176/RHSS/12-4-01.
- Alalwan, Nasser, Waleed Mugahed Al-Rahmi, Osama Alfarraj, Ahmed Alzahrani, Noraffandy Yahaya, and Ali Mugahed Al-Rahmi. 2019. "Integrated Three Theories to Develop a Model of Factors Affecting Students' Academic Performance in Higher Education." *IEEE Access* 7:98725–42. doi: 10.1109/ACCESS.2019.2928142.
- Amelia, Rizky, Zamzani Zamzani, Ali Mustadi, Ahmad Suriansyah, and Aslamiah Aslamiah. 2024. "Student's Acceptance of the Nearpod Application: An Investigation in Elementary School." *International Journal of Evaluation and Research in Education (IJERE)* 13(2):682. doi: 10.11591/ijere.v13i2.26619.
- Astarina, Atri Nadia, and Riana Herlinda. 2022. "PROMOTING ACTIVE AND INTERACTIVE LEARNING IN A HIGHER EDUCATION ONLINE CLASS." *English Journal Literacy Utama* 6(2):534–43. doi: 10.33197/ejlutama.vol6.iss2.2022.179.
- Atmono, Dwi, Muhammad Rahmatullah, and Fitria Febry Sarinang. 2021. "The Impact of Electronic Mind Map as Part of Learning."
- Bal İncebacak, Belgin. 2023. "The Effect of Creative Drama Courses Taken by Teacher Candidates on Critical Thinking Standards." *Pedagogical Perspective* 2(2):91–104. doi: 10.29329/pedper.2023.18.
- Carrillo-Yalán, Milagros Edith, Carlos Enrique Vargas-Trujillo, Yuliana Villarreal-Montenegro, Eber Moises Carrillo-Yalán, Josefina Amanda Suyo-Vega, and Hernán Neciosup Puican. 2023. "Use of Nearpod and Blum Modeling to Strengthen the Academic Performance of University Students in Mathematics." *Academic Journal of Interdisciplinary Studies* 12(5):224. doi: 10.36941/ajis-2023-0140.
- Cavanagh, Andrew J., Xinnian Chen, Meghan Bathgate, Jennifer Frederick, David I. Hanauer, and Mark J. Graham. 2018. "Trust, Growth Mindset, and Student Commitment to Active Learning in a College Science Course" edited by M. L. Ledbetter. *CBE—Life Sciences Education* 17(1):ar10. doi: 10.1187/cbe.17-06-0107.
- Chairunnas, Andi, Dendy Saeful Zen, Henny Annisa Rahmawati, and Mira Mirnawati. 2022. "Development of A Web-Based Nearpod Application in Increasing Elementary School Students' Interest in Learning." *QALAMUNA: Jurnal Pendidikan, Sosial, Dan Agama* 14(1):435–52. doi: 10.37680/qalamuna.v14i1.4380.
- Chen, Hui, Jose Miguel Baptista Nunes, Gillian Ragsdell, and Xiaomi An. 2019. "Somatic and Cultural Knowledge: Drivers of a Habitus-Driven Model of Tacit Knowledge Acquisition." *Journal of Documentation* 75(5):927–53. doi: 10.1108/JD-03-2018-0044.

- Civelek, Mustafa, and Çiğdem Karatepe. 2021. "The Impact of Student-Paced Pragmatics Instruction through Nearpod on EFL Learners' Request Performance." *Advances in Language and Literary Studies* 12(6):67. doi: 10.7575/aiac.alls.v.12n.6.p.67.
- D'Antoni, Anthony V, Genevieve Pinto Zipp, Valerie G. Olson, and Terrence F. Cahill. 2010. "Does the Mind Map Learning Strategy Facilitate Information Retrieval and Critical Thinking in Medical Students?" *BMC Medical Education* 10(1):61. doi: 10.1186/1472-6920-10-61.
- Epinur, Epinur, Yusnidar Yusnidar, and Minarni Minarni. 2022. "Development of Basic Chemistry Teaching Material Chemical Education Based on Entrepreneurship." *Jurnal Penelitian Pendidikan IPA* 8(6). doi: 10.29303/jppipa.v8i6.2456.
- Ercan, Orhan. 2014. "THE EFFECTS OF MULTIMEDIA LEARNING MATERIAL ON STUDENTS' ACADEMIC ACHIEVEMENT AND ATTITUDES TOWARDS SCIENCE COURSES." *Journal of Baltic Science Education* 13(5):608–21. doi: 10.33225/jbse/14.13.608.
- Fu, Xing. 2023. "Study on the Improvement of Educational Management and Teaching in the Context of Education Informatization." *Scientific and Social Research* 5(11):33– 37. doi: 10.26689/ssr.v5i11.5556.
- Guo, Fengtao, Joseph Lane, Yushan Duan, Joseph P. Stoltman, Olga Khlebosolova, Hao Lei, and Weiguo Zhou. 2018. "Sustainable Development in Geography Education for Middle School in China." *Sustainability* 10(11):3896. doi: 10.3390/su10113896.
- Hakami, Mohssen. 2020. "Using Nearpod as a Tool to Promote Active Learning in Higher Education in a BYOD Learning Environment." *Journal of Education and Learning* 9(1):119. doi: 10.5539/jel.v9n1p119.
- Hallgren, Eva, and Eva Österlind. 2019. "Process Drama in Civic Education: Balancing Student Input and Learning Outcomes in a Playful Format." *Education Sciences* 9(3):231. doi: 10.3390/educsci9030231.
- Hardianti, Tuti, Lisa Ariyanti Pohan, Julia Maulina, and Uswatun Hasanah. 2020. "The Effectiveness Of Teaching Materials Based Scientific On Critical Thinking Skills." Pp. 412–18 in.
- Ismah, Rahmi, and Zuliarni. 2022. "PENGEMBANGAN DESAIN PESAN BERBASIS PLATFORM NEARPOD PADA MATA PELAJARAN IPA UNTUK SISWA KELAS VII SMP." *AKSELERASI: Jurnal Ilmiah Nasional* 4(2):33–39. doi: 10.54783/jin.v4i2.560.
- Khasanah, Nur, Abdurrachman Faridi, and Sri Wahyuni. 2023. "The Implementation of Genre-Based Approach Through Project-Based Learning in Teaching Writing." *English Education Journal* 13(3):465–75. doi: 10.15294/eej.v13i3.77331.
- Khoirrohmah, Laelatul, and Dian Fadhilawati. 2024. "Unveiling The Impact of 'Nearpod' Application in Elevating Tenth-Grade Reading Narrative Text Comprehension Mastery." *Jurnal Riset Dan Inovasi Pembelajaran* 4(1):547–61. doi: 10.51574/jrip.v4i1.1348.
- Lasut, Rani Falantika, and Nurlaily Nurlaily. 2022. "DESIGNING INTEGRATED ENGLISH TEACHING MATERIAL CLASS THROUGH ONLINE LEARNING." *JALL (Journal of Applied Linguistics and Literacy)* 6(2):9. doi: 10.25157/jall.v6i2.7949.
- Le, Huynh Ha Van, and Thi Kieu Oanh Doan. 2023. "EFL Students' Perceptions of Using Nearpod in Online English Learning." *ICTE Conference Proceedings* 3:98–117. doi: 10.54855/ictep.2338.
- Li, Shan, Xiaohong Zhu, Lihua Zhang, Cui Huang, and Dan Li. 2023. "The Effect of Pain-Education Nursing Based on a Mind Map on Postoperative Pain Score and Quality of Life in Patients with Colorectal Cancer." *Medicine* 102(19):e33562. doi: 10.1097/MD.00000000033562.

- Liu, Ping, Wanzhen Mei, Mengying Zhou, Ting Zhao, Yuwen Wang, Runmei Zou, and Cheng Wang. 2023. "Application of Mind Map Can Promote the Health Education Effect of Children with Vasovagal Syncope." *Frontiers in Cardiovascular Medicine* 10. doi: 10.3389/fcvm.2023.1051677.
- Liu, Xuanwen. 2023. "Improve Interactivity in Online Learning: Take Nearpod as an Example." *Journal of Education, Humanities and Social Sciences* 8:1954–60. doi: 10.54097/ehss.v8i.4622.
- Mastura, Amy, Silvi Listia Dewi, Misnar Misnar, Intan Zuhra, and Misnawati Misnawati. 2023. "Boosting the L2 Learners' Reading Comprehension Capability by Employing Nearpod Media." *IJORER : International Journal of Recent Educational Research* 4(6):877–88. doi: 10.46245/ijorer.v4i6.431.
- Mispandi, Mispandi, and Muh. Fahrurrozi. 2023. "Development of Economics Teaching Materials Based on Entrepreneurial Values as A Learning Media." *Economic Education Analysis Journal* 12(1):1–9. doi: 10.15294/eeaj.v12i1.66513.
- Mumtaz, Sadaf, and Tatheer Zahra. 2016. "Role-play as a Learning Modality in Pakistan." *The Clinical Teacher* 13(2):124–29. doi: 10.1111/tct.12406.
- Munjiat, Siti Maryam, Abdul Rifa'i, Cecep Sumarna, and Didin Nurul Rosidin. 2023. "Improving Academic Achievement for Islamic Religious Education Students through Lecturer Competence and Digital Learning Media." Jurnal Intelektual: Jurnal Pendidikan Dan Studi Keislaman 13(2):177–92. doi: 10.33367/ji.v13i2.4010.
- Paramita, Paulina Erawati. 2023. "Exploring Student Perceptions and Experiences of Nearpod: A Qualitative Study." *Journal on Education* 5(4):17560–70. doi: 10.31004/joe.v5i4.4249.
- Pazah, Guti Ameda, Eko Risdianto, and Andik Purwanto. 2024. "Analysis of Needs for the Development of Nearpod-Based Interactive Learning Media to Improve Student Learning Outcomes in Class XI at SMAN Bengkulu City on Parabolic Motion Material." *FINGER : Jurnal Ilmiah Teknologi Pendidikan* 3(1):117–22. doi: 10.58723/finger.v3i1.198.
- Petrova, Mariana, Iryna Buzko, and Yuriy Dyachenko. 2018. "Cognitive, Intelligence Technologies and Economic Foundations of Teaching of International Economic Relations and Tourism."
- Puma, Elena Guillermina Martinez. 2022. "How Universities Have Responded to E-Learning as a Result of Covid-19 Challenges." *Periodicals of Engineering and Natural Sciences (PEN)* 10(3):40. doi: 10.21533/pen.v10i3.3008.
- Ristanto, Rizhal Hendi, Safina Zahira, and Rusdi Rusdi. 2023. "Ciculapod for Teaching Circulation Systems: Development and Validity of Biological Learning Media." *QALAMUNA: Jurnal Pendidikan, Sosial, Dan Agama* 15(2):971–86. doi: 10.37680/qalamuna.v15i2.3349.
- Santi, Andriyani, Saidah Nusrotus, and Dian Yulistianti Hayu. 2019. "Construct Validity on Teaching Materials of Language Assessment Based on Problem-Based Learning." in *Proceedings of the 1st International Conference on Education and Social Science Research (ICESRE 2018).* Paris, France: Atlantis Press.
- Shaik, Asif Hussain, Madhava Prabhu, Shaik Mazhar Hussain, and Kiran Kumar Poloju. 2023. "An Interactive Design Tool for Assessing Student Understanding in Digital Environments" edited by A. N. Hakro and N. Al Bassam. SHS Web of Conferences 156:09004. doi: 10.1051/shsconf/202315609004.
- Shaik, Thanveer, Xiaohui Tao, Yan Li, Christopher Dann, Jacquie McDonald, Petrea Redmond, and Linda Galligan. 2022. "A Review of the Trends and Challenges in Adopting Natural Language Processing Methods for Education Feedback Analysis." *IEEE Access* 10:56720–39. doi: 10.1109/ACCESS.2022.3177752.
- Shi, Yuehong. 2024. "The Application of Computer VR Technology in Physical

Education." *Applied Mathematics and Nonlinear Sciences* 9(1). doi: 10.2478/amns.2023.2.00252.

Sugiyono. 2015. Metode Penelitian Dan Pengembangan. Bandung: Alfabeta.

- Sukerti, N. W., and Cok Istri R. Marsiti. 2021. "A Development of Chinese and Japanese Culinary Teaching Materials in Asia Culinary Courses."
- Sukma, Elfia, Syahrul Ramadhan, and Inti Ikhlasani. 2024. "Elementary Teachers' Perspective on Nearpod in Flipped Classrooms." South African Journal of Childhood Education 14(1). doi: 10.4102/sajce.v14i1.1472.
- Susanti, Atika, Nani Yuliantini, Andika Prabowo, Melisa Melisa, Tiara Andini, and Ady Darmansyah. 2023. "The Development of Totor Gala Traditional Game Learning Video Using Nearpod Application for 4th Grade Elementary School Students." *Kinestetik : Jurnal Ilmiah Pendidikan Jasmani* 7(1):248–57. doi: 10.33369/jk.v7i1.25284.
- Turkyilmaz, Ilser, Niki H. Hariri, and Leila Jahangiri. 2019. "Student\'s Perception of the Impact of E-Learning on Dental Education." *The Journal of Contemporary Dental Practice* 20(5):616–21. doi: 10.5005/jp-journals-10024-2568.
- Umirkhanovich, Orazmetov Marat, Makhmutova Kulsara Isakhanovna, Zhumash Arman Iskakovich, Aitzhanov Maksat Aitzhanovich, Kuletova Ulbosyn Akhmetovna, and Mussabekova Gulnar Tajibayevna. 2022. "The Role of Theatre in the Spiritual and Moral Education of Children and Adolescents in the Era of Digitalisation." *Cypriot Journal of Educational Sciences* 17(6):2181–92. doi: 10.18844/cjes.v17i6.7556.
- Vinolo-Gil, Maria Jesus, Ismael García-Campanario, Carolina Lagares-Franco, Gloria Gonzalez-Medina, Manuel Rodríguez-Huguet, and Francisco Javier Martín-Vega. 2022. "Satisfaction Level and Performance of Physiotherapy Students in the Knowledge of Musculoskeletal Disorders through Nearpod: Preliminary Reports." *International Journal of Environmental Research and Public Health* 20(1):99. doi: 10.3390/ijerph20010099.
- Wahyudi, Wahyudi, M. Daud Yahya, Jenuri Jenuri, Catur Budi Susilo, Dina Mayadiana Suwarma, and Okta Veza. 2023. "Hubungan Penggunaan Multimedia Dalam Pembelajaran Terhadap Peningkatan Hasil Belajar Peserta Didik." *Journal on Education* 6(1):25–34. doi: 10.31004/joe.v6i1.2910.
- Wanda Dian Paramesti Fortuna Dewi, Made Hery Santosa, and Kadek Sintya Dewi. 2023. "The Effect of Nearpod Toward Tenth-Grade Students' Reading Skill in A Public Senior High School in North Bali, Indonesia." *PANYONARA: Journal of English Education* 5(2):189–204. doi: 10.19105/panyonara.v5i2.9979.
- Wati, Mustika, Misbah Misbah, Surya Haryandi, and Dewi Dewantara. 2020. "The Effectiveness of Local Wisdom-Based Static Fluid Modules in the Wetlands Environment." *Momentum: Physics Education Journal* 102–8. doi: 10.21067/mpej.v4i2.4769.
- Wulandari, Ismi Ayu, Meti Maspupah, and Maratus Sholikha. 2023. "Analysis of Critical Thinking Skills of Students Assisted With Nearpod Media on Ecosystem Materials." *Pedagonal : Jurnal Ilmiah Pendidikan* 7(1):58–63. doi: 10.55215/pedagonal.v7i1.6008.
- Xian, Junhua. 2021a. "A Critical Evaluation of Nearpod's Usefulness in Teaching K-12 Biology Science Online Classroom." in *Proceedings of the 2021 4th International Conference on Humanities Education and Social Sciences (ICHESS 2021)*. Atlantis Press.
- Xian, Junhua. 2021b. "A Critical Evaluation of Nearpod's Usefulness in Teaching K-12 Biology Science Online Classroom."
- Yang, Hua, Xue-Bin Gao, Ming-He Li, Qiang Ye, Yue Sun, and Yang Huang. 2020. "The Use of Mind Mapping in Health Education in Extended Care for Children with

Caries." Journal of International Medical Research 48(5). doi: 10.1177/0300060519898053.

- Yao, Jirui. 2023. "Development and Application of Modern Educational Technology in Physical Education: Trends, Challenges and Recommendations." *International Journal of Education and Humanities* 10(3):129–33. doi: 10.54097/ijeh.v10i3.12240.
- Zainuddin, and Misbah. 2020. "The Practicality of Physics Teaching Materials Based on the Wetland Environment." in *Proceedings of the 1st South Borneo International Conference on Sport Science and Education (SBICSSE 2019)*. Paris, France: Atlantis Press.
- Zakopoulos, Vassilis, Agoritsa Makri, Stamatios Ntanos, and Stilianos Tampakis. 2023. "Drama/Theatre Performance in Education through the Use of Digital Technologies for Enhancing Students' Sustainability Awareness: A Literature Review." Sustainability 15(18):13387. doi: 10.3390/su151813387.