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doi) https://doi.org/10.58256/s9y0xq17

Research Article

Section: Literature, Linguistics & Criticism



Published in Nairobi, Kenya by Royallite Global

Volume 5, Issue 4, 2024

Article Information Submitted:22nd July 2024 Accepted: 29th August 2024 Published: 13th September 2024

> ISSN: 2708-5945 (Print) ISSN: 2708-5953 (Online)

Additional information is available at the end of the article:

To read the paper online, please scan this QR code:



How to Cite:

Patahuddin, P., Ampa, A. T., Akib, E., & Syawal, S. (2024). The impact of web-based "Modul Ajar" of Merdeka curriculum on English learning outcome. *Research Journal in Advanced Humanities*, 5(4). https:// doi.org/10.58256/s9y0xq17 The impact of web-based "Modul Ajar" of Merdeka curriculum on English learning outcome

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Abstract

This study examines the impact of the web-based "modul ajar" of the Merdeka Curriculum on the success of fourth-grade English students at SD Muhammadiyah 3 Parepare. The study aims to assess the quality and efficiency of the web-based "modul ajar" of the Merdeka Curriculum to improve student English learning outcomes and to identify the factors affecting the effectiveness of these modules. The research methodology employed a mixedmethods approach, combining quantitative pre-and post-tests of English subjects for fourth-grade students at SD Muhammadiyah 3 Parepare with qualitative feedback from users regarding the web-based "modul ajar" visual components. These evaluations show a significant improvement in students' understanding of English, with no significant differences in English comprehension levels between the two groups. Furthermore, most users express promising responses to the visual components of the web-based "modul ajar". In conclusion, the web-based "modul ajar" positively impacts English learning, accentuating the importance of improving technology quality, ensuring stable Internet connectivity, enhancing the functionality and accessibility of it, adjusting learning materials to meet individual learners' needs, and exploiting its features to facilitate interactive learning.

Keywords: English Learning Outcomes, Innovative Learning, Interactive Learning, Merdeka Curriculum, Web-Based "modul ajar"

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Public Interest Statement

The Ministry of Education and Culture of the Republic of Indonesia has introduced an innovation called Merdeka Curriculum, which uses "*Modul Ajar*" to replace the Lesson Plan used in the previous curriculum in Indonesia. Our study, "The Impact of Web-based "*Modul Ajar*" of Independent Curriculum on Students English Learning Outcome," aims to examine the effects of this Modul ajar on English language learning among students. By incorporating technology into the Independent Curriculum, our research seeks to provide insight into the effectiveness of digital learning resources in enhancing students' language skills. This significant study addresses the pressing need to modernize education and make learning more accessible and engaging. The findings of this research can inform educators, policymakers, and technology developers about the best practices for implementing web-based "*modul ajar*", ultimately leading to improved learning outcomes and preparing students for a better future.

Introduction

The Merdeka Curriculum, introduced in Indonesia, marks a significant shift in the educational landscape, aiming to address the challenges of traditional education systems and adapt to the needs of the 21st century. This curriculum emphasizes a more flexible and student-centred approach to learning, including integrating technology and promoting critical thinking and problem-solving skills. Research conducted by various scholars has explored different aspects of the Merdeka Curriculum, including its implementation challenges, the role of technology in learning, and its impact on student learning outcomes. For instance, a study focused on teachers' perspectives on assessment within the Merdeka Curriculum, highlighting the importance of effectively measuring students' learning outcomes. Another study discussed the implementation challenges of the Merdeka Curriculum in primary schools, emphasizing the need for a comprehensive understanding of the curriculum to ensure its successful implementation (Shadri et al., 2023).

The Merdeka Curriculum also incorporates technology in learning, a subject of interest in several studies. For example, the POGIL Model Integrated Flipped Classroom Assisted Learning Management System (LMS) for Learning Solution in ERI 4.0 by (Syafei & Mawardi, 2022) Explores the integration of technology in the learning process, which can significantly influence student perception and learning outcomes (Solikhah, 2022). This study highlights the importance of leveraging technology to enhance the learning experience and improve student engagement. Incorporating students' preference for online learning in English language education, particularly within the context of the Merdeka Curriculum, is crucial for understanding the broader educational landscape. The global pandemic has driven the shift towards online learning, necessitating a re-evaluation of traditional learning methods and the development of effective online learning strategies.

A study published in the Journal of Distance Education Technology highlights the growing preference among students for online learning, especially in the context of English language education. The study found that students value the flexibility and convenience offered by online learning platforms, which allow them to learn at their own pace and in their own time. This preference is particularly pronounced among selfmotivated students with reliable internet connections. The study also noted that online learning platforms can provide a more interactive and engaging learning experience, enhancing students' learning outcomes (Ilin, 2022; McGuinness & Fulton, 2019). This preference for online learning reflects the current educational landscape and responds to the challenges posed by the COVID-19 pandemic (Syawal et al., 2023). As schools and educational institutions adapt to the new normal, integrating online learning. Methods within the Merdeka Curriculum are becoming increasingly essential. The curriculum's emphasis on technology and student-centred learning aligns well with students' preferences for online learning, allowing for a more customised and flexible learning experience.

Educational technology has been interested in the Merdeka curriculum's web-based "modul ajar" impact on students' English learning outcomes. The advent of online learning platforms has transformed

the academic landscape, offering new opportunities for students to engage with learning materials and interact with peers and instructors in a virtual environment. (Resdiana, 2021). A study conducted on *Siyasah Sharqiyah* students found that using e-module-based English learning materials did not significantly differ in English proficiency between the two classes (Resdiana, 2021). Another study on web-based learning modules in senior high school general chemistry found a significant improvement in students> pretest-to-posttest performance (Astiti et al., 2023; Kuncahyono, 2018; Resdiana, 2021).

The effectiveness of using "*modul ajar*" in the Merdeka curriculum was also explored, focusing on building a rational argument for curriculum intervention, developing alternative curricula, and creating alternative curriculum selection strategies (Mustadi et al., 2023; Primayana, 2022). However, the research on the impact of the Merdeka curriculum's web-based "modul ajar" on student English learning outcomes is limited, and more studies are needed to draw definitive conclusions. The Merdeka curriculum's web-based "*modul ajar*" is designed to allow students to learn at their own pace, allowing for customised learning experiences. These "modul ajar" often include various content types, such as text, video, and interactive activities, to cater to different learning styles. The flexibility of these modules can enhance student engagement and motivation, which are crucial factors in learning outcomes. The use of web-based learning materials is effective in promoting independent learning and improving student engagement and motivation (Alkiş & Temizel, 2018; Hamdan & Amorri, 2022; Junça Silva & Almeida, 2023; Suriaman et al., 2018; Wang et al., 2023; Zekaj, 2023).

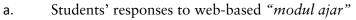
The effectiveness of online learning environments can significantly impact student engagement and learning outcomes. Research has shown that web-based learning technology can positively influence college student engagement, suggesting that designing and implementing the Merdeka curriculum's web-based *"modul ajar"* can enhance learning outcomes (Alismaiel et al., 2022; Hollister et al., 2022). In a fully online learning environment, student engagement is positively correlated with academic retention; the higher the engagement, the higher the academic retention (Armstrong et al., 2018; Luyun Gao, 2023). Interactive and customised characteristics of online education can improve the depth and breadth of students' participation in the online learning environment, thereby enhancing academic retention. Student engagement has three dimensions: behavioural, cognitive, and affective, each with indicators that can be used to measure engagement. (Hollister et al., 2022; Park & Kim, 2020; Wise et al., 2004).

The Merdeka curriculum's web-based "modul ajar" impact on student English learning outcomes can be influenced by several factors, including cognitive load. Cognitive load theory suggests that unnecessary cognitive load can be eliminated or reduced by optimizing the design of instruction. However, in the context of The Merdeka curriculum's web-based "modul ajar", there are challenges related to cognitive overload. Students may need to process content in a second language while simultaneously engaging with the material, which can be particularly challenging for students with limited proficiency in English. They may need help understanding the academic vocabulary and concepts presented in the modules, leading to cognitive overload and potential frustration (Bälter et al., 2023; Fadhillah et al., 2022; Price, 2017; Skulmowski & Xu, 2022). The absence of a teacher in a self-study environment provided by online courses can limit students' access to language support, which is essential for successful learning in English. This highlights the need for webbased "modul ajar" to incorporate features that provide explicit and incidental language support to students, enhancing their understanding of the subject matter and their development of disciplinary literacy (Bälter et al., 2023). In conclusion, while The Merdeka curriculum's web-based "modul ajar" offer promising opportunities for enhancing student English learning outcomes, addressing the challenges associated with cognitive overload and the need for language support is crucial. Further research is needed to explore strategies for designing practical web-based "modul ajar" to overcome these challenges and maximize students' learning benefits.

Materials and methods

In this study, we examine the impact of the Merdeka curriculum's web-based "modul ajar" on the English learning outcomes of students at SD Muhammadiyah 3 Parepare. This study involved 26 students as experimental subjects. To collect data, we use questionnaires with three main items: materials and activities provided through the website, the format and appearance of the website, and the instructional language used on the website. This questionnaire assesses the quality and effectiveness of web-based "modul ajar" in supporting students' English language learning. Before and after using web-based "modul ajar", students are given a pre-test and post-test to assess the development of their English language skills. The pre-test is given before the teachers begin using web-based "modul ajar", while the post-test is given after the teacher has completed teaching using the web-based "modul ajar". This pre-test and post-test and tests were then examined using SPSS version 2.6. This analysis aims to evaluate the impact of web-based "modul ajar" on students' English learning outcomes and tests were then examined using SPSS version 2.6. This analysis aims to evaluate the effectiveness of using those "modul ajar". The results of this analysis are expected to provide new insights into how web-based "modul ajar" can be used to improve students' English learning outcomes at SD Muhammadiyah 3 Parepare.

Results



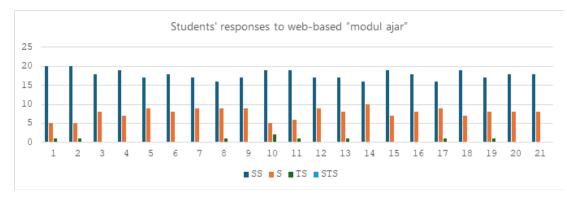


Figure 1. The students' responses to web-based "modul ajar"

Based on the responses of 26 grade 4 students of SD Muhammadiyah 3 Parepare to the materials and activities on web-based "modul ajar", most students stated that the materials and activities in web-based "modul ajar" were what they wanted to learn and by their needs. They also find that the materials and activities on the portal help them understand the lessons, including English lessons. Meanwhile, most learners find that the materials and activities on the web-based "modul ajar" are easy to use, giving them ease in learning and stimulating their curiosity. Learners' responses also show that the materials and activities on web-based "modul ajar" encourage them to learn independently and think more deeply. They state that it provides them with knowledge of new vocabulary and terms, as well as provides knowledge of current themes, topics, and issues. In addition, they feel that the materials and activities on it are neatly arranged, applicative, and valuable for their daily lives. However, some students also responded that there are areas where web-based "modul ajar" still needs to be improved, such as providing more visual support and paying attention to individual learning styles more specifically.

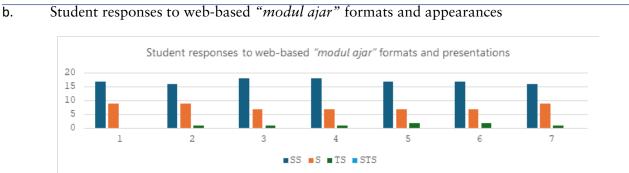


Figure 2. The students' responses to website formats and appearances

Based on the responses of 26 grade 4 students of SD Muhammadiyah 3 Parepare to the web-based "modul ajar" formats and appearances, the majority of students consider that the appearance of the web-based "modul ajar" is beautiful both in the device version (smartphone) and desktop version (PC / computer/ laptop). They also feel that the colours used in it are comfortable to look at, the font chosen is friendly, and the font size is comfortable for the eyes. In addition, students stated that the content, tables, presentation slide illustrations, photos, and videos always performed according to the HP screen size, and they found the slides, photos, and video illustrations very attractive. Student responses also showed that the visual presentation in the web-based "modul ajar" was quite good, with most students interested in the slide illustrations, photos, and videos. However, some students state that there are areas where the website still needs to be improved, such as ensuring that all content always appears according to the size of the HP screen. Overall, the positive response from students shows that the format and appearances of the webbased "modul ajar" are sufficient to meet their expectations regarding visual beauty and comfort.

c. Students' responses to instructional language within the web-based "modul ajar"

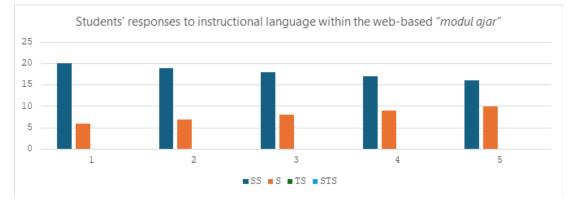


Figure 3. Students' responses to instructional language within the web-based "modul ajar"

Based on the responses of 26 grade 4 students of SD Muhammadiyah 3 Parepare to the instructional language on the web-based "modul ajar", most students stated that the language of instruction used in it was straightforward to understand. They also feel that the language of instruction used is short and appropriate for their needs and age. In addition, learners revealed that the language used in the portal is straightforward and easy to understand. Learner responses show that the instructional language in the web-based "modul ajar" is rated excellent, with most learners feeling that the language used is appropriate to their understanding. However, some students state that there is room for improvement in the language of instruction, which can be better tailored to individual preferences and experiences. Overall, the positive response from learners shows that the instructional language has managed to present information clearly and easily understood by them.

Table 1

The result of the pre-test and post-test on students' English achievement at SD Muhammadiyah 3 Parepare Statistics

Statistics	Statistics				
		NILAI PRE-TEST	NILAI POS-TEST		
N	Valid	26	26		
	Missing	0	0		
Mean		69.4872	82.5641		
Std. Error	of Mean	2.31452	1.69774		
Median		66.6667	86.6667		
Mode		66.67	86.67		
Std. Devia	tion	11.80178	8.65680		
Variance		139.282	74.940		
Minimum		40.00	60.00		
Maximum	1	100.00	93.33		

In the pre-test results for English subjects in grade 4 at SD Muhammadiyah 3 Parepare, 26 participants demonstrated a range of scores with a mean score of 69.4872, a standard deviation of 11.80178, and a variance of 139.282. The median score was 66.6667, indicating a central value in the data distribution, while the mode, also 66.67, highlighted the most frequent score. The scores ranged from a minimum of 40.00 to a maximum of 100.00, with 25% of participants scoring 66.6667 or less, 50% scoring exactly 66.6667, and 75% scoring 73.3333 or less. This data suggests a relatively uniform distribution of scores around the average, with only a small number of students scoring above or below this average. Following the implementation of the web-based "modul ajar", post-test results for the same group of students showed a significant improvement in their English comprehension. The average post-test score was 82.5641, a notable increase from the pre-test average. The median score rose to 86.6667, with the mode at 86.67, indicating a central value in the post-test scores ranged from a minimum of 60.00 to a maximum of 93.33, with most students. The post-test scores ranged from a minimum of 60.00 to a maximum of 93.33, with most students scoring above the average. This indicates the effectiveness of the learning methods applied through the portal in enhancing the students' English comprehension.

Table 2

Variations in students' English achievement at SD Muhammadiyah 3 Parepare in the pre-test.

		Frequency	Per cent	Valid Percent	Cumulative Percent
Valid	40.00	1	3.8	3.8	3.8
	46.67	1	3.8	3.8	7.7
	60.00	3	11.5	11.5	19.2
	66.67	9	34.6	34.6	53.8
	73.33	8	30.8	30.8	84.6
	80.00	1	3.8	3.8	88.5
	86.67	2	7.7	7.7	96.2
	100.00	1	3.8	3.8	100.0
	Total	26	100.0	100.0	

Based on pre-test score data for English subjects from grade 4 students of SD Muhammadiyah 3 Parepare, there are variations in their achievement. A total of 26 students took the pre-test, with scores between 40 and 100. Most learners score around the grade point average, with most scoring between 60 and 80. Specifically, as many as nine students (34.6%) obtained a score of 66.67, which is the median score. In addition, eight students (30.8%) received a score of 73.33, indicating a reasonably even distribution of their achievements. Overall, the data shows that most learners have a good grasp of English subjects, with the majority obtaining above-average scores. However, some students scored below average, indicating variations in their level of understanding. Thus, the results of this pre-test provide an initial picture of how well learners understand before they undertake further learning in English subjects.

Table 3

Variations in the student's level of understanding at SD Muhammadiyah 3 Parepare in the pre-test.

					Cu-
				Valid	mulative
		Frequency	Per cent	Percent	Percent
Valid	Perlu	4	15.4	15.4	15.4
	Bimbingan				
	Cukup	10	38.5	38.5	53.8
	Baik	9	34.6	34.6	88.5
	Sangat	3	11.5	11.5	100.0
	Baik				
	Total	26	100.0	100.0	

Based on the data criterion, the pre-test results of English subjects for grade 4 students of SD Muhammadiyah 3 Parepare showed variations in their understanding. As many as 38.5% of students were declared sufficient in mastering the material, while 34.6% were considered to have gained good experience. Furthermore, 15.4% of learners required additional guidance to improve their knowledge of the material tested. Nonetheless, a small fraction, 11.5%, performed very well by achieving excellent understanding. This data provides an overview of the needs and abilities of students in English subjects in grade 4 SD Muhammadiyah 3 Parepare before starting further learning. By knowing the distribution of their levels of understanding, teachers can design more appropriate learning strategies, such as providing additional guidance to learners in need and adjusting the difficulty level of the material to suit their abilities.

Table 4

				Valid	Cumula-
		Frequency	Per cent	Percent	tive Percent
Valid	60.00	1	3.8	3.8	3.8
	66.67	3	11.5	11.5	15.4
	80.00	6	23.1	23.1	38.5
	86.67	13	50.0	50.0	88.5
	93.33	3	11.5	11.5	100.0
	Total	26	100.0	100.0	

Variations in students' English achievement at SD Muhammadiyah 3 Parepare in the post-test.

Based on post-test data for English subjects from grade 4 students of SD Muhammadiyah 3 Parepare, there are variations in the scores obtained. Most students, namely 50.0%, obtained a post-test score of 86.67. Furthermore, as many as 23.1% of students obtained a score of 80.00, followed by 11.5% of students who obtained a score of 66.67. In addition, some students obtained scores outside the range, with 11.5% each securing a score of 93.33 and 3.8% obtaining a score of 60.00. From these data, it can be concluded that most learners experience an improvement in English comprehension after taking the post-test. The variation in this value indicates that students' responses and acceptance of learning material vary. However, the overall post-test results showed an improvement in the learners' English comprehension, which suggests the effectiveness of previous learning.

Table 5

Variations in the student's level of understanding at SD Muhammadiyah 3 Parepare in the post-test.

			Fre-	Per	Valid	Cumulative
			quency	cent	Percent	Percent
	Val-	Perlu	1	3.8	3.8	3.8
id		Bimbingan				
		Cukup	3	11.5	11.5	15.4
		Baik	6	23.1	23.1	38.5
		Sangat	16	61.5	61.5	100.0
		Baik				
		Total	26	100.0	100.0	

Based on the post-test results of English subjects, grade 4 students of SD Muhammadiyah 3 Parepare showed a satisfactory level of achievement in general. In their post-test results, most learners, 61.5%, achieved a "Very Good" classification, indicating that most had mastered the material very well. In addition, 23.1% of learners were declared to have achieved the "Good" level, while 11.5% completed the "Sufficient" level. Only one student is judged to require additional guidance, classified as "Need Guidance". Overall, the post-test results improved students' understanding of English subjects. Although some achieve lower levels of achievement, most learners have achieved satisfactory levels of achievement, even most of whom reach the "Excellent" level. This shows the effectiveness of learning in improving their understanding of English material.

Discussions

The data analysis showed that most respondents responded positively to the web-based "modul ajar". They highlighted various aspects of acceptability, usefulness, and satisfaction with the learning outcomes they obtained online. One crucial point highlighted was the suitability of materials and activities to their interests and learning needs. This signifies that the web-based "modul ajar" successfully meets users' diverse preferences and needs, increasing their engagement and motivation in learning. The respondents also found the web-based "modul ajar" a valuable resource for language learning, especially in understanding English content and vocabulary. They highlight explicit instruction, visual support, and well-structured content as essential factors that have provided adequate learning experiences to facilitate understanding and retention of knowledge. The web-based "modul ajar" ease of use is also necessary, with most respondents finding it user-friendly and accessible. This phenomenon has contributed to an enjoyable learning experience and encouraged active participation in learning activities.

In addition, the positive response to the material's applicability in real-life situations and the excellent presentation of the material shows that the material provided is not only academically useful but also practical and relevant to learners' daily lives. The findings illustrate that the web-based "modul ajar" meets users' expectations and needs. By constantly paying attention to user feedback and innovative pedagogical approaches, the web-based "modul ajar" can continue to increase its effectiveness and significantly contribute to its users' educational development. In the context of element design, the analysis results show that many users respond positively to the visual aspects of the web-based "modul ajar". They state that the design of this web-based "modul ajar" is attractive and aesthetic, both in the smartphone and desktop versions. This indicates that the web-based "modul ajar" design has attracted users' attention regardless of the device used to access it. Most respondents also positively rated the web-based "modul ajar" use of colours, typefaces, and illustrations. This design helps enhance the user experience and create an engaging and fun learning environment. The consistency of content presentation across different screen sizes is also considered a strength of the web-based "modul ajar". This ensures users can access and interact with content seamlessly, improving the platform's accessibility and usability.

The analysis results show that many respondents consider the language used in this web-based "modul ajar" easy to understand, short, and by user needs and preferences. This increases user engagement with learning materials and helps them focus on key concepts and information. These findings highlight the importance of practical elements and language design in creating a positive and effective learning experience for portal users. By keeping user feedback in mind and enhancing the web-based "modul ajar" visual and functional aspects, the platform can continuously improve its effectiveness and attract diverse learners. Thus, the web-based "modul ajar" provides easy and user-friendly access and presents materials that suit users' needs and preferences. This makes it an effective learning tool for increasing students' understanding and engagement in the learning process. By continuously developing and updating this platform according to user feedback, the web-based "modul ajar" has the potential to become one of the premier learning resources for learners at various levels of education.

The results of the pre-test and post-test evaluation of English subjects in grade 4 SD Muhammadiyah 3 Parepare provide an exciting picture of student achievement and learning effectiveness. An in-depth analysis of this data will enable a better understanding of student progress and provide valuable insights into practical learning approaches. The pre-test results show significant variation in students' understanding of English material. Although many students score relatively uniformly around the grade point average, some achieve above-average grades, while others score below average. This shows a diversity in students' understanding of the material before starting further learning. This variation shows the need for a differentiated learning approach, where learning strategies and methods are tailored to each student's needs and abilities. It is important to note that students' initial understanding before starting further learning can be an essential indicator for teachers in designing effective learning. By understanding students' initial level of understanding, teachers can tailor learning approaches to meet their individual needs, thus helping Page **61**

to improve overall learning achievement. The pre-test results also provide a more detailed picture of the distribution of students' grades. A wide range of scores from 40 to 100 indicates a significant difference in students' understanding of the material tested. Most students scored around the grade point average, indicating consistency in achievement. Nevertheless, some students score above average, while others score below average. Various factors, such as previous educational background, level of motivation, and learning methods, can influence this variation in achievement. Therefore, teachers need to pay attention to these individual differences in designing learning that suits the needs of each student. A differentiated approach can help ensure that all students get the support they need to reach their maximum potential.

Furthermore, from the post-test results, there is a significant improvement in students' understanding of English. Many students experienced an improvement in their post-test scores, with post-test averages much higher than pre-test averages. This shows that the web-based "modul ajar" has positively contributed to students' understanding of English material. Post-test results also show that most students score above the average score. Although there was variation in the results of grades obtained, with some students obtaining lower scores and some students obtaining higher than average scores, overall, there was a significant improvement in students' understanding of English. In addition, the post-test results also reflect that most students achieve a satisfactory level of achievement. Many students are declared to have completed an "Excellent" level in their post-test results, which shows that most of them have mastered the material very well. In addition, most students are also declared to achieve the "Good" level, while only a few reach the "Enough" level. This shows that the web-based "modul ajar" improves students' overall English comprehension and helps most of them achieve satisfactory levels.

However, despite improving understanding, some students still need additional guidance. This shows that while the web-based "modul ajar" is adequate for most students, not all students respond similarly. Therefore, a more differentiated approach must be taken to assist students needing it. These pre-test and post-test evaluations provide valuable insights into the effectiveness of the web-based "modul ajar" in improving students' understanding of the English language. The data shows that it effectively improves students' overall grades, with most students obtaining above-average scores and achieving satisfactory levels of achievement. While some students still need additional guidance, overall, post-test results show a significant improvement in students' English comprehension after teaching using the web-based "modul ajar". Therefore, it can be concluded that the web-based "modul ajar" significantly impacts the English learning of grade 4 students of SD Muhammadiyah 3 Parepare.

Conclusion

To enhance the effectiveness of the web-based "*modul ajar*" for English learning, it's crucial to focus on improving technology quality, ensuring reliable internet connectivity, enhancing LMS navigation and accessibility, tailoring learning materials to individual learner needs, and leveraging LMS features for interactive learning. By investing in high-quality technology and reliable internet access, ensuring the LMS is user-friendly and accessible, personalising learning materials to cater to different learning styles, and encouraging interactive features like discussion boards and chats, educators can create a more robust learning environment. This comprehensive approach addresses the technical aspects and considers students' personalised learning needs, fostering an engaging and practical learning experience that ultimately leads to improved learning outcomes.

Acknowledgments:

We sincerely thank Muhaimin Abdullah for his invaluable contributions as a Web designer, significantly improving the accessibility and user-friendliness of web-based "*modul ajar*". Nasrullah AS, for his technical assistance in ensuring the smooth operation and greatly facilitating the research process. We also expressed our sincere gratitude to the SD Muhammadiyah 3 Parepare family for providing research facilities and creating a conducive environment for research. The permission granted by Majelis Dikdasmen PDM Page **62**

Parepare was crucial to facilitate research and allows us to carry out our research without delay. We sincerely appreciate the support and support given by these individuals and institutions, which are crucial to the successful completion of this research. Their contributions not only improve the quality of our research but also profoundly impact our understanding of the impact of online Merdeka curriculum teaching modules on the outcome of students' English language learning.

Disclaimer Statement

This article is part of a dissertation titled "Pengembangan Modul Ajar Kurikulum Merdeka Mapel Bahasa Inggris Berbasis Website Pada Sekolah Dasar di Kota Parepare." It has been compiled as a requirement to obtain an academic degree from the Education Study Program, Postgraduate Program, Universitas Muhammadiyah Makassar. All data, analysis, and conclusions presented in this dissertation are the result of the author's research and thoughts under the guidance of Andi Tenri Ampa and Erwin Akib. The author declares that the content of these articles is original and integral to the dissertation. It has not been published or submitted for publication in any journal. Any information or citations from other sources have been mentioned in the bibliography and adhere to scientific writing rules. The author is not responsible for any misuse or misinterpretation of the content of this dissertation by any party. The opinions and findings presented in this dissertation are solely the author's responsibility and do not reflect the views or policies of the institution where the author studies or the academic advisor.

Biographies

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Authorship and Level of Contribution

Conceptualizations, P.T.H., A.T., E.A., and S.Y.L; methodology, A.T. and E.A.; software, P.T.H., and S.Y.L.; formal analysis, A.T. and E.A.; writing—original draft preparation, P.T.H., and S.Y.L.; writing—review and editing, P.T.H., and S.Y.L. All authors have read and agreed to the published version of the manuscript.

Glossary of Terms

Modul Ajar: Lesson Plan Merdeka Curriculum: Independent Curriculum (New Curriculum in Indonesia) Penilaian Pembelajaran di Sekolah Dasar: Learning Assessment in Elementary School

References

- Alismaiel, O. A., Cifuentes-Faura, J., & Al-Rahmi, W. M. (2022). Social Media Technologies Used for Education: An Empirical Study on TAM Model During the COVID-19 Pandemic. Frontiers in Education, 7. https://doi.org/10.3389/feduc.2022.882831
- Alkiş, N., & Temizel, T. T. (2018). The impact of motivation and personality on academic performance in online and blended learning environments. *Educational Technology and Society*, 21(3).
- Armstrong, S. N., Early, J. O., Burcin, M. M., Bolin, K., Holland, N., & No, S. (2018). New Media Tools Impact on Online, Health Science Students' Academic Persistence and Support: Lessons Learned from Two Pilot Studies. *TechTrends*, 62(3). https://doi.org/10.1007/s11528-018-0261-1
- Astiti, A. D., Murti, R. C., & Hakiki, M. (2023). Development of web-based digital libraries as learning resource facilities in elementary schools. *Jurnal Kajian Informasi & Perpustakaan*, 11(1). https://doi.org/10.24198/jkip.v11i1.42192
- Bälter, O., Kann, V., Mutimukwe, C., & Malmström, H. (2023). English-medium instruction and impact on academic performance: A randomized control study. *Applied Linguistics Review*. https://doi. org/10.1515/applirev-2022-0093
- Fadhillah, N., Handayani, S., & Handayani, M. N. (2022). Website-Based E-Module Development To Improve Students' Cognitive Learning Outcomes on Fish Product Production Materials. *PEDAGOGIA: Jurnal Ilmu Pendidikan*, 20(2), 91–102.
- Hamdan, K., & Amorri, A. (2022). The Impact of Online Learning Strategies on Students' Academic Performance. In *E-Learning and Digital Education in the Twenty-First Century*. https://doi.org/10.5772/intechopen.94425
- Hollister, B., Nair, P., Hill-Lindsay, S., & Chukoskie, L. (2022). Engagement in Online Learning: Student Attitudes and Behavior During COVID-19. Frontiers in Education, 7. https://doi.org/10.3389/ feduc.2022.851019
- Ilin, V. (2022). The role of user preferences in engagement with online learning. *E-Learning and Digital Media*, 19(2). https://doi.org/10.1177/20427530211035514
- Junça Silva, A., & Almeida, N. (2023). Can engagement and performance be improved through online training on emotional intelligence? A quasi-experimental approach. *International Journal of Educational Management*, 37(2). https://doi.org/10.1108/IJEM-03-2022-0092
- Kuncahyono. (2018). Pengembangan E-modul (Modul Digital) Dalam Pembelajaran. Journal of Madrasah Ibtidaiyah Education, 2.
- Luyun Gao. (2023). Student Engagement in Fully Online Learning Environment Impact on the Academic Retention. Applied & Educational Psychology, 4(8), 30–37. https://doi.org/10.23977/appep.2023.040805
- McGuinness, C., & Fulton, C. (2019). Digital literacy in higher education: A case study of student engagement with e-tutorials using blended learning. *Journal of Information Technology Education: Innovations in Practice*, 18. https://doi.org/10.28945/4190
- Mustadi, A., Wibowo, S. E., & Sayekti, O. M. (2023). The Development of E-Modules for Language Politeness Learning in Independent Curriculum-Based Elementary School. Jurnal Kependidikan: Jurnal Hasil Penelitian Dan Kajian Kepustakaan Di Bidang Pendidikan, Pengajaran Dan Pembelajaran, 9(2), 408. https://doi.org/10.33394/jk.v9i2.7366
- Park, C. W., & Kim, D. G. (2020). Perception of instructor presence and its effects on learning experience in online classes. *Journal of Information Technology Education: Research*, 19. https://doi. org/10.28945/4611
- Price, J. (2017). ODU Digital Commons The Influence of Cognitive Load on Infotec Students Participating in Online Learning. Old Dominion University.
- Primayana, K. H. (2022). The Effectiveness Of Using Teaching Modules In The Independent Curriculum In Elementary Schools. *Edukasi: Jurnal Pendidikan Dasar*, 3(2). https://doi.org/10.55115/edukasi.

v3i2.2481

- Resdiana, W. (2021). Persepsi Mahasiswa Di Kelas Bahasa Inggris Blended Learning Sebagai Dampak Karantina Covid-19 Menggunakan Pbleq (Perceptions of Blended Learning Environments Questionnaires). Apollo Project: Jurnal Ilmiah Program Studi Sastra Inggris, 10(1), 25–38. https:// doi.org/10.34010/apollo.v10i1.4700
- Skulmowski, A., & Xu, K. M. (2022). Understanding Cognitive Load in Digital and Online Learning: a New Perspective on Extraneous Cognitive Load. In *Educational Psychology Review* (Vol. 34, Issue 1). https://doi.org/10.1007/s10648-021-09624-7
- Solikhah, I. (2022). Revisiting the EFL curriculum in the outcome-based education framework and freedom to learn program. *Journal of Social Studies Education Research*, 13(2).
- Suriaman, A., Rahman, A., & Noni, N. (2018). Developing web-based english instructional material oriented to promote independent learning at indonesian university context. *Journal of Language Teaching* and Research, 9(2). https://doi.org/10.17507/jltr.0902.15
- Syafei, S. S., & Mawardi, M. (2022). POGIL Model Integrated Flipped Classroom Assisted Learning Management System (LMS) for Learning Solution in ERI 4.0. Jurnal Penelitian Pendidikan IPA, 8(2). https://doi.org/10.29303/jppipa.v8i2.1298
- Syawal, S., Patahuddin, P., Abdullah, M., & Esnara, C. B. (2023). Virtual traveling strategies in teaching writing during COVID-19 pandemic. *Research Journal in Advanced Humanities*, 4(2), 61–71. https:// doi.org/10.58256/rjah.v4i2.1042
- Wang, S., Bao, J., Liu, Y., & Zhang, D. (2023). The impact of online learning engagement on college students' academic performance: The serial mediating effect of inquiry learning and reflective learning. *Innovations in Education and Teaching International*. https://doi.org/10.1080/14703297.2023.22 36085
- Wise, A., Chang, J., Duffy, T., & Del Valle, R. (2004). The effects of teacher social presence on student satisfaction, engagement, and learning. *Journal of Educational Computing Research*, 31(3). https:// doi.org/10.2190/V0LB-1M37-RNR8-Y2U1
- Zekaj, R. (2023). The Impact of Online Learning Strategies on Students' Academic Performance: A Systematic Literature Review. International Journal of Learning, Teaching and Educational Research, 22(2). https://doi.org/10.26803/ijlter.22.2.9