The Effectiveness of Student Learning Motivation Using Wordwall Media in Tutoring Services

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Abstract

Learning motivation is an essential factor in academic achievement, yet many students still exhibit low engagement, lack of focus, and limited persistence. Similar conditions were found among Grade VIII students at SMP Negeri 1 Baitussalam, particularly during learning guidance sessions. To address this issue, interactive media that align with students' needs are required. Wordwall, a game-based digital platform, offers a potential solution by creating a more engaging and participatory learning atmosphere. This study examined the effectiveness of Wordwall in enhancing students' learning motivation within the context of guidance services. Using a quasi-experimental design with a one-group pretest–posttest, the research involved eight Grade VIII-4 students. The intervention consisted of Wordwall-based interactive quizzes, followed by a posttest to measure changes in motivation. The results revealed a significant improvement (p < 0.05) with an average N-Gain score of 0.90, categorised as high. The findings suggest that Wordwall effectively fosters students' interest, activeness, and persistence. In addition, its application in guidance sessions provides new insights into the broader use of digital media beyond classroom instruction. These results offer practical implications for teachers and counsellors to integrate interactive technology more creatively in supporting student motivation and academic outcomes.

Keywords: Academic Guidance, Learning Motivation, Wordwall Media

Abstrak

Motivasi belajar merupakan faktor penting dalam pencapaian akademik, namun masih banyak siswa yang menunjukkan keterlibatan belajar yang rendah, kurang fokus, dan tingkat ketekunan yang terbatas. Kondisi serupa ditemukan pada siswa kelas VIII di SMP Negeri 1 Baitussalam, khususnya pada kegiatan layanan bimbingan belajar. Untuk mengatasi permasalahan tersebut, diperlukan media pembelajaran interaktif yang sesuai dengan kebutuhan siswa. Wordwall sebagai platform digital berbasis permainan menawarkan solusi potensial dengan menciptakan suasana belajar yang lebih menarik dan partisipatif. Penelitian ini bertujuan untuk menguji efektivitas penggunaan Wordwall dalam meningkatkan motivasi belajar siswa dalam konteks layanan bimbingan belajar. Penelitian ini menggunakan desain kuasi-eksperimen dengan model satu kelompok pretest–posttest yang melibatkan delapan siswa kelas VIII-4. Intervensi dilakukan melalui kuis interaktif

berbasis Wordwall, kemudian dilanjutkan dengan posttest untuk mengukur perubahan motivasi belajar siswa. Hasil penelitian menunjukkan adanya peningkatan yang signifikan (p < 0,05) dengan nilai rata-rata N-Gain sebesar 0,90 yang termasuk dalam kategori tinggi. Temuan ini menunjukkan bahwa penggunaan Wordwall efektif dalam meningkatkan minat, keaktifan, dan ketekunan siswa dalam belajar. Selain itu, penerapan Wordwall dalam layanan bimbingan belajar memberikan wawasan baru mengenai pemanfaatan media digital secara lebih luas, tidak hanya terbatas pada pembelajaran di kelas. Hasil penelitian ini memiliki implikasi praktis bagi guru dan konselor dalam mengintegrasikan teknologi interaktif secara kreatif untuk mendukung motivasi belajar dan pencapaian akademik siswa.

Kata kunci: media Wordwall, bimbingan belajar, motivasi belajar

Introduction

Education is essentially an interactive process between teachers and students designed to achieve specific learning objectives. Within this process, instructional media serve a pivotal role, functioning not only as tools that clarify the transmission of knowledge but also as instruments that facilitate active student engagement. (Nurfadhillah, 2021) argue that learning media extend beyond merely supporting the delivery of content, as they also establish effective channels of communication that enable students to comprehend abstract concepts better. Since the instructional approaches of teachers do not always correspond to students' learning characteristics, the utilisation of appropriate media becomes imperative (Magdalena, 2021). Accordingly, teachers are increasingly required to employ creative and imaginative strategies to cultivate students' interest and motivation in the learning process (Andhika, 2020).

Nevertheless, empirical observations indicate persisting challenges. Initial findings in class VIII-4 of SMP Negeri 1 Baitussalam demonstrated limited enthusiasm for learning, characterised by low participation in discussions, diminished attention to lesson content, and passive attitudes in completing assignments. The homeroom teacher likewise confirmed that many students exhibited declining motivation, particularly during afternoon sessions, thereby necessitating more engaging and interactive learning approaches. Moreover, students with demonstrable academic potential had not been able to develop optimally due to the limited variety of pedagogical techniques employed.

Theoretically, this phenomenon may be examined through motivational frameworks. Maslow's hierarchy of needs suggests that learning motivation emerges when fundamental requirements such as safety, recognition, and self-actualization are adequately fulfilled. The observed decline in motivation indicates that these needs have not been sufficiently met within a monotonous instructional environment. Similarly, Deci and Ryan's Self-Determination Theory (SDT) underscores the significance of satisfying students' psychological needs for autonomy, competence, and relatedness. When instructional practices provide minimal opportunities for independence, limited cognitive challenge, and insufficient meaningful interaction, intrinsic motivation tends to deteriorate. Complementarily, constructivist perspectives articulated by Piaget and Vygotsky highlight that knowledge construction is most effective when students are actively engaged in experiential learning. Vygotsky's concept of the Zone of Proximal Development (ZPD) further asserts that optimal development requires guided support and interactive collaboration. Consequently, traditional methods characterised by minimal use of interactive media hinder the creation of a stimulating and motivational learning environment.

Previous studies consistently emphasise the importance of innovative and interactive instructional media in enhancing learning motivation. (Maulidina, 2025) demonstrated that creative media integration significantly increases student engagement and participation. In line with this, recent studies have highlighted Wordwall as a game-based digital learning platform that effectively supports gamification in education. Wordwall provides various interactive features such as quizzes, crossword puzzles, matching games, and word-based challenges that create a fun and competitive learning atmosphere. A literature review by (Enggar et al, 2025) concluded that Wordwall is effective as a gamification medium in increasing students' learning motivation, improving thinking skills, and fostering competitiveness through interactive digital activities.

Empirical research further supports these findings across different educational levels and subjects. (Firdaus & Rulviana, 2024) found that the application of Wordwall media significantly increased elementary students' learning motivation in IPAS subjects, with motivation levels rising from moderate to very high categories. Similarly, (Imron, 2023) reported a significant effect of Wordwall media on students' learning motivation in Akidah Akhlak lessons at the junior secondary level, as evidenced by a high N-Gain score. Literature review studies conducted by (Niamilah, 2025) and (Sisca et. al, 2025) also confirmed that Wordwall enhances students' participation, attention, learning enthusiasm, and confidence, while promoting active and enjoyable learning experiences aligned with students' developmental characteristics. Additionally, research by (Yani & Dafit, 2025) demonstrated that Wordwall significantly improved students' learning motivation compared to conventional learning media.

Although the effectiveness of Wordwall in classroom instruction has been widely documented, most previous studies have focused on formal classroom learning contexts and subject-based instruction (Abdul, 2025). The implementation of Wordwall within tutoring or guidance services particularly as a strategy to enhance students' learning motivation remains relatively underexplored. Tutoring services play a vital role in supporting students who experience learning difficulties and low motivation, yet they often rely on conventional approaches that lack interactivity (Yani & Dafit, 2025). Therefore, exploring the integration of game-based digital media such as Wordwall in tutoring services is both relevant and necessary.

Based on this research gap, the present study aims to evaluate the effectiveness of Wordwall as an instructional medium in tutoring services to enhance the learning motivation of class VIII-4 students at SMP Negeri 1 Baitussalam. This study is expected to contribute empirically to the development of innovative guidance practices and provide practical insights for teachers and school counselors in utilizing interactive digital media to foster students' motivation and academic development.

Methods

This study employed a quantitative approach with a quasi-experimental design, as the research aimed to objectively measure students' learning motivation through numerical data analysis using statistical techniques. The quasi-experimental design was chosen because the study was conducted in real classroom settings, where full control over external variables was not feasible. Specifically, the One Group Pretest-Posttest Design was applied, in which a single group was assessed before (pretest) and after (posttest) the intervention, allowing comparison of students' motivation levels prior to and following the use of Wordwall in tutoring sessions. The population consisted of all 30 students of class VIII-4 at SMP Negeri 1 Baitussalam in the 2025/2026 academic year, identified in preliminary observations as having relatively low motivation, particularly during afternoon lessons.

Sampling was conducted using purposive sampling, with criteria based on students who demonstrated moderate to low levels of motivation, as determined by an initial questionnaire. From this, 8 students were selected as research subjects. Although small in number, this was deemed sufficient given that experimental studies emphasize treatment effectiveness and control of variables rather than generalization to larger populations. (Lakens, 2022) notes that if the population is fewer than 100, all should ideally be included; however, in experimental contexts, smaller samples are acceptable when based on clear criteria. Similarly, (Charisi, 2025) emphasizes that experimental research prioritizes variable control, treatment consistency, and measurement accuracy over sample size.

The primary research instrument was a learning motivation questionnaire developed based on educational psychology indicators. The questionnaire covered six key aspects: intrinsic motivation, perseverance, interest, enthusiasm, learning focus, and positive responses toward learning. It was designed using a four-point Likert scale, namely Strongly Agree (SA), Agree (A), Disagree (D), and Strongly Disagree (SD). The instrument consisted of 30 items, including both favorable and unfavorable statements

aligned with the established indicators. It was adapted from the questionnaire developed by Ahdayani (2021). Instrument validity was tested using the product moment correlation, while reliability was assessed through Cronbach's Alpha, indicating a satisfactory level of internal consistency.

In addition to the questionnaire, this study employed observation sheets and documentation as supporting instruments. Observation sheets were used to record students' active engagement during tutoring sessions with Wordwall, while documentation (photos, videos, and field notes) served as evidence of research activities. The use of multiple instruments was intended to strengthen validity through data triangulation. Data analysis proceeded in three stages: first, a normality test using the Shapiro–Wilk method, which is suitable for small samples; second, a Paired Sample t-test to determine significant differences between pretest and posttest motivation scores; and third, an N-Gain analysis to measure the extent of improvement, categorized as low, medium, or high (Rahman & Al-anshori, 2024).

Based on the Shapiro–Wilk normality test conducted on a sample of 8 students, the significance values for the pretest (0.615) and posttest (0.180) were both greater than 0.05, indicating that the data were normally distributed. Therefore, the analysis was continued using the parametric Paired Sample t-Test to examine differences before and after the intervention. Furthermore, the improvement in learning motivation was analysed using the N-Gain formula to determine the effectiveness of Wordwall in enhancing students' learning motivation, with the formula expressed as follows:

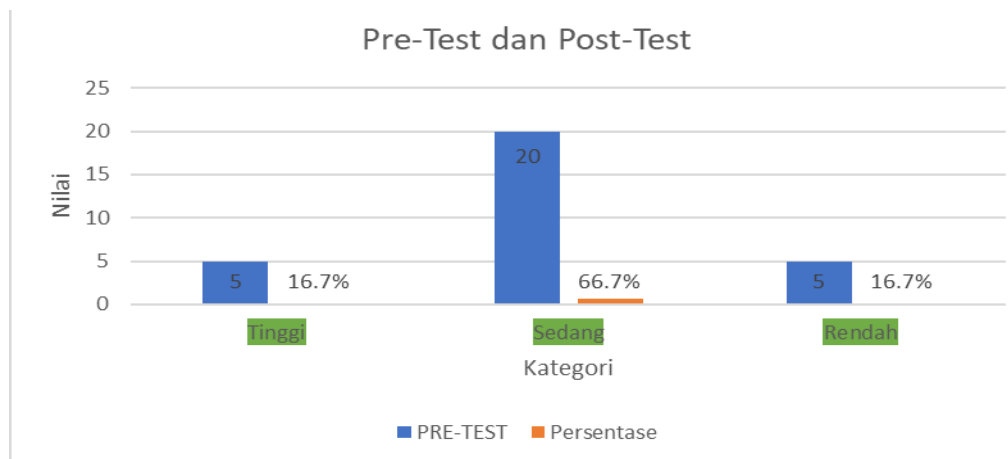$$N\ Gain = \frac{Posttes\ Score - Pretes\ Score}{Ideal\ Score - Pretes\ Score}$$

Table 1. N-Gain

N-Gain Score	Categorization
High	g ≥ 0,7
Moderate	0,3 ≤ g < 0,7
Low	g < 0,3

Table 2. Research Flow

Stage	Procedure	Descripsion
1	Preparation	Developing research instruments (questionnaire, observation sheet, documentation) and conducting a pilot test.
2	Pretest	Administering the learning motivation questionnaire before the intervention to measure baseline conditions.
3	Treatment	Implementing tutoring sessions using *Wordwall* as the instructional medium across several meetings
4	Observation and Documentation	Recording students' engagement through observation sheets and collecting supporting evidence (photos, videos, field notes).
5	Posttest	Re-administering the learning motivation questionnaire to identify changes following the intervention.
6	Data Analysis	Conducting normality testing, Paired Sample t-Test, and N-Gain analysis to evaluate the effectiveness of the intervention.

Result and Discussion

Picture 1. Categories of Students' Learning Motivation

Based on the results presented in the table, the majority of students (20 students, 66.7%) were classified in the medium category, while the high and low categories each comprised 5 students (16.7%). These findings indicate that students' initial learning motivation tended to be at a moderate level. To examine whether there was a significant difference in motivation before and after the intervention using Wordwall, a Paired Samples t-Test was employed.

Table 3. Paired Samples Test

	Paired Differences					t	df	Sig. (2-tailed)
	Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Differences				
				Lower	Upper			
Pair 1 pre_test – pos_test	14,375	5,069	1,792	-18,613	-10,137	-8,021	7	.000

The results of the Paired Samples t-Test revealed a mean difference of 14.375 between pretest and posttest scores, with a t-value of -8.021 at a degree of freedom (df) = 7. The significance value obtained was 0.000 (p < 0.05), indicating a statistically significant difference between pretest and posttest results. In other words, students' learning motivation improved substantially following the intervention through the use of Wordwall.

Table 5. Pretest, Posttest, and N-Gain Scores of
Students' Learning Motivation

Name	Pre	Post	N-Gain Score	%
AS	60	74	0,78	78
HN	66	82	1,33	133
KA	58	81	1,15	115
MNM	61	70	0,53	53
MWH	57	70	0,62	62
MK	66	75	0,75	75
RH	62	73	0,69	69
R	63	83	1,33	133
MEAN	61,625	76	0,90	90

Based on the N-Gain calculation, the average pretest score of students (61.63) increased to 76 in the posttest, resulting in an average N-Gain of 0.90 (90%), which falls into the high category. At the individual level, most students demonstrated significant improvement in learning motivation, although some variation was observed. For instance, students HN and R

achieved the highest N-Gain values of 1.33 (133%), while student MNM recorded the lowest increase at 0.53 (53%). Overall, these findings confirm that the use of Wordwall effectively contributed to enhancing students' learning motivation.

Table 6. Aspects of Learning, Motivation Achievement

No	Aspect	Pretest	Postest
1.	Intristik	42%	46%
2.	Extrinstik	43%	45%

The table indicates an improvement in students' learning motivation following the use of Wordwall. Intrinsic motivation increased from 42% to 46% (a 4% difference), while extrinsic motivation rose from 43% to 45% (a 2% difference). These results underscore the positive contribution of Wordwall to enhancing students' learning motivation.

Discussion

The utilisation of interactive media such as *Wordwall* in tutoring services makes a significant contribution to enhancing students' learning motivation. *Wordwall*, which offers a variety of features such as quizzes, matching pairs, word randomisation, and group games, functions not only as a playful medium but also as an evaluative instrument in the learning process (Niken et., al., 2025). The findings of this study indicate that the implementation of Wordwall as an interactive medium in tutoring services significantly enhanced students' learning motivation. This improvement is evidenced by the statistically significant difference between pretest and posttest scores ($p < 0.05$) as well as a high average N-Gain score of 0.90. These results confirm that Wordwall is effective in fostering students' motivation, interest, activeness, and persistence during learning activities.

The effectiveness of Wordwall observed in this study is consistent with numerous previous studies across different educational levels and subject areas. (Dyan, 2025) demonstrated that the use of Wordwall in

mathematics learning at vocational schools successfully fostered students' learning motivation by creating an enthusiastic and engaging classroom atmosphere. Their qualitative findings revealed that Wordwall encouraged active participation and supported independent curriculum implementation, reinforcing the role of digital gamified media in motivating learners. Similarly, (Russhaimah et. al., 2024) found that Wordwall increased students' motivation in thematic learning at the elementary level, as reflected in improvements across cognitive, affective, and psychomotor domains. These findings align with the present study, where students showed increased enthusiasm and active involvement during tutoring sessions (Thifal, 2025).

In addition, (Silviani & Rusnilawati, 2024) reported that Wordwall significantly improved students' learning motivation in Islamic Religious Education and Character Education at the senior high school level, with statistical results showing a meaningful increase between pretest and posttest scores. This further supports the current findings that Wordwall is not limited to specific subjects but is effective across various learning contexts, including tutoring services. Similar conclusions were drawn by (Lestari et al., 2025), who emphasized that Wordwall's gamification-based approach increased students' creativity, competitive spirit, and motivation in learning mathematics at the elementary level.

The present study also revealed improvements in both intrinsic and extrinsic motivation aspects. Intrinsic motivation increased as students experienced enjoyment, curiosity, and a sense of challenge when engaging with Wordwall-based quizzes. This finding is consistent with, who found that Wordwall significantly influenced students' motivation in Social Studies learning by transforming passive learning into an interactive experience. Extrinsic motivation, on the other hand, was enhanced through elements such as competition, instant feedback, and rewards embedded within Wordwall activities. (Warikoo, 2025) similarly reported that Wordwall media effectively increased both motivation and learning outcomes in Pancasila Education by providing immediate feedback and engaging digital interactions.

Moreover, the use of Wordwall in tutoring services addresses students' motivational needs as explained by Self-Determination Theory. The platform supports autonomy by allowing students to interact independently with learning tasks, competence through progressively challenging quizzes, and relatedness through collaborative and competitive learning experiences. This aligns with findings from (Safitri et al., 2022) and (Zeng et al., 2024) who confirmed that Wordwall significantly increased students' learning motivation across elementary and junior secondary levels using experimental designs. Despite its proven effectiveness, Wordwall does present several technical limitations, such as restricted features in the free version, dependence on internet connectivity, and limited customization options. These constraints have been noted in previous studies (Simsek & Yilmaz, 2025) (Purnamasari, 2025). However, as demonstrated in this study and supported by prior research, such limitations do not substantially reduce Wordwall's effectiveness in enhancing learning motivation. Instead, its strengths as an interactive, accessible, and enjoyable learning medium outweigh these challenges.

Overall, the findings of this study corroborate existing literature that positions Wordwall as an effective gamification-based learning medium capable of enhancing students' motivation across educational levels and subject areas. Importantly, this study extends previous research by demonstrating that Wordwall is also highly effective when implemented in tutoring services, not only in formal classroom instruction. By integrating both intrinsic and extrinsic motivational elements, Wordwall creates a meaningful and engaging learning experience that supports students' motivation in the digital learning era.

Conclusion

This study shows that the use of *Wordwall* in tutoring services effectively enhances students' learning motivation, as indicated by a significant improvement between pretest and posttest scores (N-Gain = 0.90, high category). The findings imply that teachers and school counsellors can

utilise interactive digital media to foster both intrinsic and extrinsic motivation, thereby creating more engaging and meaningful learning environments. However, this study is limited by its small sample size, focus on a single school, and short intervention period. Future research is recommended to involve larger and more diverse participants as well as longer implementation to strengthen the generalizability of the results.

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