

The Role of Wordwall to Teach English Vocabulary for Students with Mild Intellectual Disabilities (MID)

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Abstract

Students with mild intellectual disabilities (MID) face significant challenges in English vocabulary acquisition due to delayed language development, limited working memory, and short attention spans, and traditional teaching strategies were often ineffective. Despite the potential of gamified digital media, there was limited research exploring the role of tools like Wordwall in supporting vocabulary instruction specifically for these learners. Therefore, this study aimed to explore the role of Wordwall in supporting English vocabulary learning for students with MID. This research employed a qualitative case study design. Using purposive sampling, data were collected through triangulation (classroom observation and semi-structured interview with three students and the English teacher) in one special-needs class in Semarang. The data were analyzed using thematic analysis. The findings revealed that Wordwall facilitated students' engagement and participation in vocabulary learning, supported vocabulary retention, active participation driven by Wordwall activities, practicality and flexibility of Wordwall perceived by teacher, and created a more interactive and enjoyable classroom environment for students with MID. This study contributed to inclusive digital pedagogy by showing how Wordwall as gamified tools can support vocabulary learning for students with MID.

Keywords: *gamified learning; Mild Intellectual Disabilities (MID); special education; vocabulary learning; Wordwall*

INTRODUCTION

Teaching English vocabulary to students with Mild Intellectual Disabilities (MID) remains a pedagogical challenge that requires innovative, empathetic, and adaptive strategies. In special needs school settings, teachers must accommodate the unique learning of students with cognitive impairments while delivering curriculum content in a way that is accessible and meaningful Julvianti et al. (2025). Vocabulary instruction is a particularly complex area for students with MID, as it involves the mastery of abstract linguistic forms, retention of new words, and application across contexts all of which are often impacted by the cognitive characteristics associated with MID (Notia & Akbarjono, 2024).

MID is a developmental condition characterized by an IQ range of 55–70 and significant limitations in adaptive functioning that appear before the age of 18 (Kristiana & Widayanti, 2021). Due to these cognitive characteristics, students with MID often show delays in language development, limited working memory capacity, difficulties with generalization, and a short attention span. These limitations can reduce how Wordwall is actually applicability to engage meaningfully with traditional language instruction methods, such as memorization-based learning

or textbook-heavy instruction (Nisa & Muzaini, 2024). Furthermore, they may struggle with task persistence, abstract reasoning, and interpreting verbal instructions, which further complicates their participation in conventional classroom activities. Emotional sensitivity and anxiety in performance-based settings can also act as barriers to academic success (Wåger & Bagger, 2024). Despite these challenges, students with MID have been shown to respond positively to structured, consistent, and multisensory teaching approaches, especially when the content is presented in a concrete and engaging manner Dunn et al. (2024). These learning characteristics indicate that students with MID require instructional strategies that are concrete, visually supported, and repeatedly practiced. Visual materials help students connect vocabulary with meaningful representations, while repeated exposure strengthens memory and facilitates vocabulary retention. Therefore, learning media that integrate visual support and interactive activities are considered more appropriate for teaching English vocabulary to students with MID.

The preliminary observations at a Special Needs School or *Sekolah Luar Biasa (SLB)* one of in Semarang, revealed that English vocabulary instruction for students with MID remains limited to basic functional topics. As a result, the practice of functional focused on simple and concrete vocabulary such as; animals, classroom objects, and immediate family members. Because of the teachers' ongoing efforts to ensure that long-term memory extended beyond the current lesson, this core focus was maintained not voluntarily, but out of necessity. In addition, although the school environment has been equipped with advanced technology, including modern computers, projectors, and reliable internet access, the use of digital learning aids is still contradictory, repetitive, and limited. Teachers still mostly use digital learning passively, limited to repeatedly showing YouTube videos (Bakla, 2022). Relying on one tool with low interaction, even with advanced infrastructure, leads to low student engagement and a lack of multisensory stimulation to overcome memory deficits. According to Haque, (2024) this clear imbalance between the potential of technology and its practical application highlights the urgent need for more engaging and diverse teaching tools in English vocabulary instruction. One digital learning platform that reflects these instructional needs is Wordwall. Unlike conventional learning media, Wordwall provides interactive activities, immediate feedback, and repeated practice through various game formats. These features allow teachers to present vocabulary in a more concrete and engaging way, making it more suitable for students with MID who often require structured learning experiences and continuous reinforcement.

Therefore, with the rapid development of educational technology, digital learning platforms have gained popularity as tools to enhance engagement and accommodate diverse learning need (Pratama & Mulyani, 2024). One platform is Wordwall, a web-based application that enables teachers to create interactive, gamified activities for classroom instruction. Wordwall offers a variety of task formats such as matching, drag-and-drop, fill-in-the-blank, and sequencing, which are visually rich and easily customizable (Anisah, 2022). These features align well with the learning needs of students with MID, who benefit from structured visual input, repetition, and instant feedback. Previous studies have highlighted Wordwall's potential to increase motivation, focus, and enjoyment in learning activities Safitri et al. (2022). However, most existing research focuses on general education or vocational students, with little attention given to learners with intellectual disabilities.

Wordwall has been praised for its flexibility and accessibility. Teachers can create content tailored to their students' levels, and students can repeat activities as often as needed (Pradini & Adnyayanti, 2022). Moreover, its mobile-friendly and offline access features make it suitable for use in schools with limited digital infrastructure. Importantly, Wordwall does not require advanced technological skills, making it usable by both teachers and students in special needs school settings. According to Aprilia et al. (2024), students report that Wordwall-based tasks are enjoyable and help reduce the anxiety typically associated with tests or traditional assessments.

Previous research by Arsini et al.(2022), conducted descriptively through semi-structured interviews with 12 vocational students, revealed that the use of Wordwall was perceived positively in English vocabulary learning. Students felt that this application was able to increase creativity, learning motivation, concentration, and language skills, including reading, writing, listening, and speaking. These findings emphasize Wordwall's potential in supporting English for Specific Purposes (ESP) teaching, particularly in preparing students for the world of work. However, adjustments to the level of difficulty and topic selection are still needed to make its use more effective. The semi-structured interview approach from this study forms the basis for adaptation in the current study.

Despite the increasing adoption of Wordwall in classrooms across Indonesia, there is still a notable gap in research concerning its use specifically for students with MID. Most existing studies focus on general education students or those with different special needs, such as hearing impairments or general learning difficulties. Few have examined how Wordwall functions as a vocabulary learning tool in special needs school classrooms, especially for students with MID who have distinct cognitive processing styles and instructional needs. Additionally, many studies emphasize the platform's functionality or general engagement impact but do not explore the depth of student perception, the challenges faced by teachers during implementation, or the long-term effects on vocabulary retention Agustina et al. (2023). There is a need for localized, classroom studies that examine how Wordwall is actually applied for students with MID in real learning settings, identifying which strategies are effective, which are not, and the underlying reasons. Understanding these dynamics can help educators better plan for technology integration in special needs education (Anderson & Putman, 2023). Therefore, although previous studies have demonstrated the benefits of Wordwall in improving students' motivation and vocabulary learning, little is known about how the platform supports students with Mild Intellectual Disabilities in authentic classroom settings. This gap highlights the need for qualitative research that explores not only learning outcomes but also students' experiences, classroom participation, and teachers' perspectives during the implementation of Wordwall.

The significance of this research lies not only its focus on a digital instructional tool but also in its contribution to inclusive pedagogical practices within special schools. As schools strive to implement digital education in line with national and global trends, it is crucial that instructional innovations do not exclude learners with disabilities. Instead, technology should be used to bridge gaps in access, participation, and achievement. Therefore, this study seeks to address that gap by investigating the role of Wordwall in teaching English vocabulary to students with MID in one of the classrooms in a special needs school in Semarang. The research focuses on how the platform implemented to student's engagement, vocabulary retention, and participation during English lessons. Additionally, it explores the perspectives of the student, and teacher to gain a multi-dimensional understanding of Wordwall.

METHOD

This study employed a qualitative case study adopted from Schlunegger et al. (2024) design to explore the role of Wordwall as a vocabulary learning tool for students with MID in special needs school. This approach was particularly relevant for special needs education, where understanding the perspectives of students was essential for developing instructional strategies. By focusing on a single case within a special need classroom, this research aimed to present a rich, contextualized view of the teaching and learning process, student engagement, and teacher perspectives when using Wordwall. The research also focuses to answering research question on how the platform implemented to student's engagement, vocabulary retention, and participation during English lessons.

Respondents

This study was conducted in a Special Needs School or *Sekolah Luar Biasa (SLB)* located in Semarang. The classroom consisted of 12 students in range 14-15 years old, including 8 males and 4 females. They were served as the main subject to observed of this research. To support the data and provide triangulation, three students were selected based on the classroom teacher's recommendation to interviewed, particularly those who demonstrated better communicative ability during learning activities and one classroom teacher were selected as additional respondent to interview. All participants were selected using purposive sampling, based on their relevance to the research focus. The demographic information of the student participants, specifically their gender distribution, is presented in Table 1 below.

Instruments

This study uses two instruments: observation and semi-structured interviews supported by the researcher as the instrument, as commonly applied in qualitative research.

Observation sheets

Observations were carried out during English learning sessions where Wordwall was used. The researcher used structured observation sheets at several points; there are memory and vocabulary retention, classroom environment and student engagement, response to game-based learning media, feedback toward Wordwall, interaction, and social aspects.

Semi-structured interview guidelines

These were used to explore the perception, and observations of the three students were selected based on the classroom teacher's recommendation to interviewed, particularly those who demonstrated better communicative ability during learning activities and one classroom teacher who teach in that class regarding vocabulary learning using Wordwall media. Adapted from Arsini et al. (2022) sample interview questions included:

Table 1. Interview guidelines for three students with MID

No.	Question
1.	How did you feel when learning that way? What makes it difficult for you to remember English vocabulary?
2.	What do you think of learning English vocabulary using game media?
3.	What makes you feel confused, happy, or motivated during learning English vocabulary using games media?
4.	What do you think about using the Wordwall application to improve your English vocabulary?
5.	What things do you like or dislike while learning English vocabulary using the Wordwall application?

Table 2. Interview guidelines for classroom teacher

No.	Question
1.	How do you describe students' behavior during English vocabulary lessons with Wordwall?
2.	How would you describe the student's progress in learning English vocabulary over time?
3.	In your opinion, how effective is Wordwall in supporting English vocabulary learning for this student?

These instruments helped the researcher collect rich data. To ensure the validity of the instruments, expert judgment was sought from two specialists: (1) a doctoral-level supervising lecturer in English education with expertise in special needs pedagogy and (2) a special education teacher with extensive experience teaching students with MID. These experts reviewed the

observation sheets and interview questions to evaluate their clarity, relevance, and alignment with the research objectives.

Procedure

This study was conducted in multiple phases to guarantee organized data collection. The researcher conducted the study in one classroom, which was observed four times over one month, with one session each week. Each observation focused on how the teacher implemented Wordwall to teach English vocabulary and how students engaged during the learning activities. Field notes were taken to record classroom interactions and students' responses. After completing the four observations, an interview was conducted with the three students and one classroom teacher. Data collection used triangulation by combining observation and interview to ensure the credibility and depth of the findings. Ethical approval was obtained from the school principal, and informed consent was secured from all participants. The researcher also ensured confidentiality and voluntary participation.

Data analysis

The data were analyzed using thematic analysis following Braun and Clarke (2006) by the six-phase thematic analysis approach. First, the researcher familiarized herself with the data by repeatedly reading the observation sheets and interview transcripts from three students with MID and one English teacher. Second, initial codes were generated by identifying important features from both instruments, such as students' engagement, memory retention, reactions to game-based learning, and the teacher's perceptions. Third, these codes were organized into potential themes that represented recurring patterns across the data, including engagement, motivation, vocabulary retention, and instructional support. Fourth, the emerging themes were reviewed and refined to ensure that they accurately reflected the data and aligned with the research objectives. Fifth, each theme was clearly defined and named to highlight.

Wordwall in vocabulary learning for students with MID. And sixth, the researcher produced the report by describing and interpreting each theme, supported by relevant excerpts from observation notes and interview responses.

RESULTS AND DISCUSSION

This section presented the findings and discussion of the study based on classroom observations conducted over one month (four meetings per week), interviews with three students with Mild Intellectual Disabilities (MID), and an interview with the English teacher. The finding was explaining the research questions how the platform implemented to student's engagement, vocabulary retention, and participation during English lessons. To maintain ethical standards and participant confidentiality, pseudonyms were used for all participants. Students were referred to as S1 (15, female), S2 (14, male), and S3 (15, male), while the teacher was referred to as T1. The findings revealed that Wordwall was applied to support the learning of several English topics, including family tree, parts of body, colors, and numbers, through diverse activity formats, such as match-up tasks, labelled graphics, open-the-box activities, quizzes, and speaking cards. Most students showed positive engagement, actively participating in the activities, responding to questions enthusiastically, and demonstrating increased attention throughout the learning process.

Vocabulary Retention Supported by Wordwall Activities

The findings indicated that Wordwall played a significant role in supporting students' memory and vocabulary retention. Across the observation period, students demonstrated an improved ability to recall English vocabulary, particularly when activities involved visual elements and

interactive matching tasks. Compared to the initial observation sessions, students in later sessions demonstrated quicker recall and required less instructional support when completing similar Wordwall activities. The activities such as match up and labelled graphics enabled students to associate vocabulary items with corresponding images, which supported long-term memory retention. For students with MID, visual support was essential due to limitations in abstract thinking and memory processing, align with Kasmianti et al, (2021). However, this improvement was more evident in vocabulary recognition tasks than in independent vocabulary production

Visual Scaffolding as a Primary Mechanism for Vocabulary Recall

The findings indicate that Wordwall supported students' vocabulary retention primarily through visual scaffolding. While the previous theme highlights vocabulary retention outcomes, this theme explains the cognitive mechanism through which Wordwall supported students' memory and recall. Activities such as match up and labelled graphic enabled students to connect English vocabulary with concrete visual representations. Rather than relying on abstract word memorization, students engaged in meaning-making through images, symbols, and spatial placement.

Observational data showed that students responded more accurately and confidently when visual cues accompanied vocabulary items. Interview data supported this pattern.

S1 stated:

"...When I saw the picture, I knew the answer without the teacher helping me."

S2 emphasized that images helped him understand meanings more clearly:

"The pictures showed me what the word meant, so it was easier."

S3 added that visual cues reduced confusion during tasks:

"Without pictures, I was confused, but with pictures it was clear."

During observations, students demonstrated greater confidence and accuracy when vocabulary items were accompanied by visual cues. For instance, when learning parts of body and family tree, students were more likely to respond correctly with minimal teacher assistance when images were presented alongside words. In earlier sessions, students relied more on teacher prompts, whereas in later sessions they responded more independently when similar visual-based tasks were presented. This pattern suggests that visual scaffolding reduced cognitive load and supported information processing for students with MID, whose learning characteristics often include limitations in abstract reasoning and working memory.

These findings are consistent with previous study from Karabıyık et al, (2023), who emphasized that visual scaffolding reduces cognitive load for learners with intellectual disabilities by supporting working memory and comprehension. By presenting vocabulary through images, Wordwall enabled students with MID to process information more effectively and respond with greater independence over time.

Repetitive Exposure Through Varied Activity Formats

Another analytical pattern that emerged was the role of repetition embedded within varied Wordwall activity formats. Although vocabulary topics such as colors and numbers were revisited across sessions, the activities were presented using different formats, including open the box, quizzes, and speaking cards.

This variation allowed repetition without monotony. Students encountered the same vocabulary items multiple times but through different interaction modes, which appeared to

strengthen retention while maintaining engagement. Students acknowledged the importance of repeated exposure.

S2 stated:

“...Even though the words were the same, the games were different, so it was not boring.”

S1 similarly noted:

“I remembered the words because we used them many times in different games.”

S3 added:

“When the word came again, I already knew it.”

Observational data showed that students became increasingly familiar with the task structures and demonstrated faster response times, indicating growing cognitive automaticity in vocabulary recognition. This finding indicates that repeated exposure alone is insufficient unless it is presented through varied and engaging activities. In the present study, students repeatedly encountered the same vocabulary in different Wordwall formats, allowing them to reinforce vocabulary knowledge without experiencing boredom. This extends the findings of Made et al. (2025), who emphasized the importance of repeated practice for vocabulary acquisition. This suggests that repeated exposure through varied formats supported the gradual consolidation of vocabulary knowledge rather than surface-level memorization. Overall, these findings indicate that Wordwall supports vocabulary retention for students with MID by combining visual scaffolding with structured repetition, enabling meaningful and sustained vocabulary learning.

Observable Student Engagement as an Indicator of Motivation

This theme examines how student engagement developed during the implementation of Wordwall-based vocabulary instruction. Observational data showed that engagement evolved across sessions, moving from initial excitement toward more sustained and purposeful participation, as reflected in longer attention spans, reduced off-task behavior, and increased willingness to participate. For students with Mild Intellectual Disabilities (MID), observable engagement functioned as a key indicator of learning motivation. To understand how this engagement emerged and evolved, the following section examines students' engagement development across learning sessions. In this context, student engagement functioned not as an end goal, but as a facilitating condition that enabled learners with MID to remain attentive and receptive to vocabulary instruction.

Development of Student Engagement Across Sessions

During the initial sessions, students showed curiosity and excitement when Wordwall was first introduced, expressed through smiling, laughter, and spontaneous verbal responses. As the sessions progressed, engagement became more stable and focused. In later sessions, students maintained attention for longer periods, followed instructions with fewer reminders, and demonstrated reduced off-task behavior. This progression indicates that student engagement was not limited to a short-term novelty effect. Instead, familiarity with Wordwall activities allowed students to focus more on learning tasks rather than on understanding activity procedures. Supported by interview session, students expressed excitement and curiosity toward Wordwall activities.

(S1) “At first, I felt excited because it was like playing a game.”

(S2) “I laughed and felt happy when Wordwall was first used...”

(S3) “After using it many times, I could focus more on the lesson.”

This finding align with (Putra & Ain, 2026), this sustained engagement suggests that Wordwall created a learning condition in which students were more cognitively ready to access vocabulary instruction, rather than merely reacting to external stimulation. As students' engagement became more stable over time, specific instructional features of Wordwall, particularly competitive and social elements, played an important role in sustaining their motivation. However, unlike previous studies involving mainstream learners, sustained engagement in the present study was strongly supported by visual cues and structured task sequences that matched the cognitive characteristics of students with MID. This suggests that the effectiveness of Wordwall depends not only on its game elements but also on how teachers adapt the activities to students' learning needs.

Competitive and Social Elements as Motivational Drivers

Competitive elements such as scoring and turn-taking played a significant role in motivating students. Rather than creating pressure, these features encouraged active participation and fostered healthy competition. Over time, students became more confident in volunteering, taking turns, and responding independently; whereas in earlier sessions some students waited for teacher prompts, in later sessions they increasingly initiated participation on their own. Peer support was also evident, as students encouraged one another and celebrated correct answers together. This combination of competition and collaboration contributed to a positive classroom atmosphere and supported students' motivation throughout the learning sessions.

Interview data also revealed that competitive and social features supported students' motivation.

S2 reported:

"I wanted to get scores, so I tried to answer."

S1 noted increased confidence in participation:

"I wanted to answer by myself in front of the class."

S3 emphasized peer support during activities:

"....My friends helped me, and we felt happy together."

Overall, the findings indicate that Wordwall supported student engagement through a gradual process, where initial excitement developed into sustained motivation. Similar to findings by Hikmah et al. (2025), competitive and social features combined with interactive task design, enabled students with MID to remain engaged and motivated across learning sessions. Importantly, engagement in this context did not function as an end in itself, but as a facilitating condition that enabled students with MID to remain attentive, confident, and receptive to vocabulary learning activities across sessions.

Wordwall in Creating a Supportive Classroom Environment

This theme explores how Wordwall contributed to the creation of a supportive classroom environment for students with Mild Intellectual Disabilities (MID). Observational data showed that students' positive responses to Wordwall extended beyond initial enjoyment and were reflected in increased emotional comfort, confidence, and willingness to participate across sessions. Students consistently expressed excitement when Wordwall activities were introduced and frequently requested to use the platform again, indicating that the learning environment was perceived as enjoyable and emotionally safe.

Interview data further supported these observations by illustrating how Wordwall reduced learning-related anxiety and encouraged active participation over time. Rather than functioning merely as a novelty-based motivational tool, Wordwall appeared to shape classroom conditions

that supported students' emotional engagement and confidence. The emotionally supportive environment created through Wordwall reduced students' fear of making mistakes, which is particularly important for learners with MID who often experience anxiety in language learning contexts.

Emotional Safety and Confidence

S1 reported feeling happy and confident when learning with Wordwall, particularly when matching vocabulary with pictures and participating in front of the class. Her preference for the *open the box* activity indicated that visually structured and predictable tasks facilitated comprehension and reduced anxiety across sessions:

"I felt happy when learning using Wordwall, especially when matching words with pictures. Open the box for numbers was easy to understand."

S2 also reported increased confidence when using Wordwall, especially because the activities felt less demanding and more enjoyable than traditional tasks:

"I was not afraid to answer because it felt like a game..."

Similarly, S3 expressed that Wordwall reduced his anxiety when participating in class activities:

"I felt more confident because I could see the pictures and try again if I was wrong."

These findings suggest that visual structure, task predictability, and game-based learning environments reduce learning-related anxiety and promote emotional safety for learners with intellectual disabilities.

Sustained Motivation and Reduced Boredom

S2 demonstrated consistent enthusiasm throughout the observation period. While his prior interest in English contributed to his engagement, Wordwall helped sustain his motivation across sessions rather than producing a short-term novelty effect:

"Learning with Wordwall was fun and exciting. I could remember the vocabulary easily, and I always wanted to use it again."

Similarly, S3 expressed a clear preference for Wordwall-based activities over traditional worksheets:

"I liked learning with games like Wordwall more than worksheets because worksheets were boring."

S1 similarly reported that repeated Wordwall activities helped her remain engaged during lessons:

"...I did not feel bored because we learned with games."

These responses indicate that interactive and game-based activities reduced boredom and supported a more engaging and emotionally supportive classroom environment over time. Overall, the findings indicate that Wordwall supported the creation of a supportive classroom environment by fostering emotional safety, confidence, and sustained engagement. This finding supports prior research on game-based learning from Pratiwi et al. (2024), which suggests that motivation develops gradually when learners are repeatedly exposed to interactive tasks rather than relying on short-term novelty effects. Through structured visual support and interactive task design, Wordwall encouraged students with MID to participate actively without fear of making mistakes, and its positive effects were maintained beyond initial novelty.

Active Participation Driven by Wordwall Activities

Wordwall activities encouraged active participation among students during vocabulary learning sessions. In this study found that students frequently volunteered to come to the front of the class, responded verbally to questions, and interacted directly with learning materials. Similar patterns were reported by Fikri et al. (2025), these behaviors were accompanied by positive body language, such as smiling, clapping, and eager movements, indicating increased confidence and willingness to participate.

Compared to traditional worksheet-based instruction, students showed fewer passive behaviors and sustained attention for longer periods during Wordwall sessions. Over time, students required fewer prompts to engage, suggesting that participation developed gradually rather than as a short-term reaction. For students with MID, active engagement supported sustained attention and cognitive processing. Through its interactive design, Wordwall promoted learning by doing and reinforced vocabulary learning through repeated, meaningful participation.

Instructional Practicality and Flexibility of Wordwall Perceived by Teacher

Students' Classroom Behavior During Wordwall-Based Instruction

Data from the teacher interview indicated positive changes in students' classroom behavior during Wordwall-based English vocabulary lessons. The students demonstrated higher levels of participation, enthusiasm, and social interaction. During activities, students encouraged peers, engaged in turn-taking, and participated in friendly competition, reflecting increased confidence and a stronger sense of classroom belonging. These behaviors suggest that Wordwall created a learning environment that supported inclusive participation for students with Mild Intellectual Disabilities (MID).

This finding aligns with previous studies from Rye (2025), indicating that game-based digital learning tools promote active participation and positive social interaction by creating low-pressure, collaborative classroom environments for learners with special educational needs.

Students' Vocabulary Learning Progress Over Time

The teacher also reported gradual progress in students' English vocabulary learning across sessions. T1 observed that students became increasingly familiar with task procedures, required fewer instructional prompts, and responded more independently over time. Vocabulary improvement was more evident in recognition tasks than in independent production, indicating steady development rather than immediate mastery.

This pattern supports prior research from Pradana & Hermawan, (2025), suggesting that learners with intellectual disabilities benefit from repeated and structured exposure to vocabulary, which strengthens retention and recall gradually rather than producing instant learning gains. From the teacher's perspective, Wordwall was perceived as an effective, practical, and flexible instructional tool. T1 highlighted that Wordwall simplified lesson preparation, provided various activity templates, and reduced reliance on printed worksheets, enabling multiple activity formats to be integrated within a single lesson. As stated by the teacher:

"Wordwall helped me prepare teaching materials more easily. It was simple, provided many templates, and saved paper. I could use different types of activities and quizzes in one lesson."

Despite these advantages, the teacher noted that some students continued to experience difficulties with reading and spelling. Therefore, Wordwall activities were most effective when combined with clear visual support to enhance comprehension. The findings show that Wordwall supported English vocabulary learning for students with Mild Intellectual Disabilities (MID) mainly through visual support, repetition, and interactive activity design. This aligns with previous studies highlighting the importance of visual-based instruction for learners with limited

abstract thinking and memory processing (Qasserras, 2024). By linking vocabulary to images and structured tasks, Wordwall helped students recall words more effectively across learning sessions.

Unlike studies that report immediate learning effects from digital games, this study found that vocabulary improvement developed gradually. Students showed faster recall and greater independence over time, particularly in vocabulary recognition rather than production. This suggests that Wordwall functioned as a scaffolding tool that supported early stages of vocabulary learning, rather than directly promoting independent vocabulary use. Student responses also developed across sessions. While initial excitement was evident, engagement became more stable and focused over time as students became familiar with the activities. This indicates that Wordwall's effectiveness was not limited to novelty but was supported by consistent task structure and repeated exposure.

In classroom implementation, Wordwall was perceived as practical and flexible, allowing varied activities within a single lesson and reducing reliance on worksheets. However, some students continued to experience difficulties with reading and spelling, indicating that Wordwall was most supported when combined with clear visual support. Overall, the findings suggest that Wordwall supported vocabulary learning for students with MID through gradual development, sustained participation, and structured visual assistance, reinforcing its role as a supportive instructional tool rather than a standalone solution.

CONCLUSION

This study suggests that Wordwall supports English vocabulary learning for students with Mild Intellectual Disabilities (MID) by integrating visual support, structured repetition, and interactive activities. This conclusion is based on classroom observations conducted over four learning sessions and triangulated interview data from three students with MID and one English teacher, which consistently demonstrated improvements in students' vocabulary recognition, classroom participation, and engagement. These features facilitated vocabulary recognition and recall while sustaining students' attention and engagement during learning sessions. Vocabulary improvement was more evident in recognition than in independent production, reflecting the cognitive characteristics of learners with MID. Visual cues and predictable task structures reduced cognitive load and anxiety, enabling students to participate more confidently and consistently over time.

Beyond cognitive development, Wordwall contributed to the creation of a supportive and enjoyable classroom environment. Increased confidence, reduced boredom, and greater willingness to participate were observed across sessions. From the teacher's perspective, Wordwall functioned as a practical and flexible instructional tool that supported lesson variation and minimized reliance on worksheets, although strong visual support remained essential for students with limited reading and spelling skills.

Nevertheless, this study was limited to a single classroom with a small number of participants, which restricts broader generalization. Vocabulary development was primarily observed in recognition tasks, indicating that Wordwall serves more effectively as a scaffolding tool than as a comprehensive solution for independent language production. The findings imply that digital learning platforms can enhance inclusive vocabulary instruction when implemented with clear structure, visual reinforcement, and consistent guidance. For educators and practitioners in special needs education, technology should not merely function as entertainment but as a structured pedagogical support that addresses both cognitive and emotional learning needs. Thoughtful integration of interactive tools such as Wordwall can help create accessible, engaging, and emotionally safe learning environments for students with MID.

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