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The Utilization of Wordwall as a Multisensory English Vocabulary Learning Tool for Slow Learners: A Case Study of Teacher Experience

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ABSTRACT

This study examines the utilization of Wordwall as a multisensory instructional tool for teaching English vocabulary to slow learners in inclusive EFL classrooms at the junior high school level. Slow learners often encounter difficulties in vocabulary acquisition due to slower cognitive processing, limited working memory, and challenges in retention. Consequently, instructional approaches must incorporate repetition, explicit explanation, and adaptive strategies aligned with learners' cognitive characteristics. This research employed a qualitative case study design involving two participants: an English teacher and a shadow teacher experienced in teaching slow learners using Wordwall. Data were collected through semi-structured interviews and teacher reflective documents, and analyzed using thematic analysis to identify patterns related to multisensory instruction, pedagogical adaptation, and technology integration. The findings indicate that Wordwall functions as a complementary instructional tool that enhances learners' motivation, engagement, and participation. Its visual, auditory, and interactive features facilitate vocabulary learning through image-word association, pronunciation support, and repeated exposure. However, vocabulary mastery remains dependent on explicit instruction, scaffolding, and continuous teacher mediation. Teachers assume critical roles as instructional designers, facilitators, motivators, and evaluators, adapting content, pacing, and task complexity to meet learners' needs. Despite its pedagogical potential, several challenges were identified, including technological constraints, students' limited digital literacy, the need for differentiated instruction, and concerns regarding assessment validity. Overall, the study concludes that the effectiveness of Wordwall is determined not by its technological features alone but by its integration within adaptive and pedagogically informed instructional practices.

Keywords: Inclusive EFL Classrooms, Multisensory Instruction, Slow Learners, Teacher Scaffolding, Vocabulary Instruction

1. Introduction

In the digital era, educational landscapes across the globe have undergone profound transformations, with digital technologies increasingly integrated into teaching and learning processes (Almekhlafi, 2020).These technological advancements offer considerable potential for addressing the learning challenges faced by slow learners in EFL classrooms (Pérez-Jorge et al., 2025).Digital learning tools can provide interactive, visually rich, and engaging learning experiences that reduce cognitive load and support sustained attention (Khawaji, 2025). Consequently, the integration of technology in EFL instruction has become an important pedagogical strategy for creating more inclusive learning environments, particularly in facilitating vocabulary acquisition for slow learners whose needs are often insufficiently addressed through traditional instructional approaches.

Within the framework of inclusive education, classrooms are expected to accommodate students with diverse learning abilities, including those who experience slower learning progress. Inclusive education advocates educating learners with mild learning difficulties alongside their peers in regular classrooms through

appropriate instructional adaptations rather than segregated educational settings (Lindner & Schwab, 2025). In this context, slow learners are recognized as part of inclusive classrooms, as they do not present intellectual disabilities but demonstrate slower rates of cognitive processing and academic achievement compared to average learners (Salas García & Rentería, 2024).

Theoretically, slow learners are characterized by slower information processing speed, limited working memory capacity, reduced attention span, and difficulties in retaining newly learned information (dit Hreich et al., 2024)**.**These cognitive characteristics significantly affect language learning, particularly vocabulary acquisition, which requires repeated exposure, meaningful association, and retrieval practice. In EFL contexts, limited vocabulary knowledge places slow learners at a distinct disadvantage, as vocabulary mastery is fundamental to comprehension, communication, and the development of productive language skills (Alahmadi & Foltz, 2020).Without instructional strategies that align with their cognitive profiles, slow learners are more likely to experience persistent difficulties in vocabulary learning and overall EFL achievement (Merchán & Yasnaia, 2020)**.**

Vocabulary learning presents particular challenges for slow learners due to their slower processing speed, limited working memory, and difficulties in retention (Lee, 2022). Compared to average learners, slow learners often require more time, frequent repetition, and explicit instruction to acquire and retain new lexical items effectively (Oktarini et al., 2025).Vocabulary instruction for slow learners is most effective when new words are presented in concrete, contextualized, and meaningful ways that support the connection between form, meaning, and use (Rahmani et al., 2022). In EFL contexts, where exposure to the target language is limited, slow learners are especially dependent on instructional approaches that provide repeated input, visual support, and active engagement to reinforce vocabulary learning (Alahmadi & Foltz, 2020).

Teaching slow learners in inclusive EFL classrooms also presents substantial pedagogical challenges. Teachers must balance curriculum demands while simultaneously providing additional explanations, repetition, and scaffolding in mixed-ability classrooms (Ayana et al., 2024). These challenges are frequently intensified by limited instructional time, large class sizes, and insufficient preparation in inclusive pedagogy (Ghoneim et al., 2024). As a result, addressing the specific learning needs of slow learners without disrupting the overall pace of classroom instruction becomes difficult (Imran et al., 2024). This situation highlights the importance of flexible, engaging, and adaptive instructional approaches that can support diverse learners while minimizing additional instructional burden for teachers.

One instructional approach that aligns with the principles of inclusive education is multisensory learning. Multisensory learning refers to instructional practices that engage learners through multiple sensory modalities, including visual, auditory, and kinesthetic channels, to enhance comprehension and retention (Khasawneh, 2024; Saad, 2020). In this study, multisensory learning functions as a pedagogical framework for vocabulary instruction, particularly for slow learners whose cognitive characteristics benefit from repeated and varied sensory input. Empirical evidence suggests that multisensory instruction can reduce cognitive load, increase learner engagement, and improve language learning outcomes in EFL settings (Zhan & Cheng, 2025).The integration of digital technology has further strengthened the implementation of multisensory learning in inclusive classrooms(Covaci et al., 2018). One digital tool that has gained increasing attention in EFL education is Wordwall, a web-based interactive learning platform that allows teachers to create customizable, game-based activities such as matching exercises, quizzes, word searches, and visual vocabulary tasks(Fadhilah & Daulay, 2025). Wordwall supports multisensory learning by integrating visual representations, auditory input, and interactive engagement, enabling teachers to present vocabulary in more accessible and motivating ways for slow learners.

Previous studies have highlighted the effectiveness of digital and game-based tools in enhancing vocabulary learning in EFL contexts. Research shows that Wordwall improves vocabulary acquisition through interactive tasks, repeated exposure, and immediate feedback, while also increasing student motivation and engagement (Ayana et al., 2024; Sakkir et al., 2023). Similarly, the implementation of the Taboo game at the junior high school level in Indonesia demonstrated significant improvement in students' vocabulary mastery and recall due to its engaging and competitive format (Putri et al., 2025). In the domain of mobile-assisted learning, the Marbel Learn English application was found to support vocabulary retention, learner autonomy, and contextual understanding through gamified and multimedia features (Julaika & Fithriani, 2025). These findings align with research on technology-based multisensory instruction, which emphasizes that integrating visual, auditory, and interactive elements strengthens word form meaning connections by engaging multiple cognitive pathways (Fadhilah & Daulay, 2025; Zhan & Cheng, 2025). Collectively, these studies confirm the pedagogical value of digital and game-based approaches in supporting vocabulary development in EFL classrooms.

Although various studies have confirmed the potential of Wordwall with a multisensory approach in vocabulary learning, most studies still focus on learners in general without considering the cognitive characteristics of students(Ayana et al., 2024; Fadhilah & Daulay, 2025; Oktarini et al., 2025; Sakkir et al., 2023), especially slow learners, which are still relatively limited, even though slow learners have different learning needs, such as slower information processing, the need for structured repetition, and more explicit instructional support. In addition, the implementation of digital media in the context of inclusive classrooms has not been explored in depth, especially in relation to how these learning tools are adapted to accommodate diversity in abilities within a single classroom (dit Hreich et al., 2024). Existing research also tends to focus on student learning outcomes, while the perspective of teachers, particularly in relation to pedagogical strategies, instructional decision-making, and experiences in integrating multisensory digital tools, has received less attention. Furthermore, studies at the junior high school level are also relatively limited, even though this stage is an important phase in strengthening vocabulary foundations to support the development of more complex language skills. Thus, research is needed that specifically examines the use of Wordwall as a multisensory vocabulary learning tool for slow learners in the context of inclusive classrooms, reviewed from the perspective of teachers at the junior high school level.

To fill this research gap, this study was conducted to investigate the use of Wordwall as a multisensory English vocabulary learning tool for slow learners at the junior high school level. This study focuses on examining the role of teachers and pedagogical practices in applying Wordwall to facilitate vocabulary teaching in inclusive EFL classrooms. Specifically, this study explores how teachers adapt and integrate multisensory digital strategies to accommodate the cognitive characteristics and learning needs of slow learners. By placing this research at the junior high school level, this study seeks to provide a contextual understanding of teaching practices during the critical stage of vocabulary development.

This study especially to answer the following research questions:

1. How do English teachers utilize Wordwall as a multisensory tool in teaching vocabulary to slow learners?
2. What roles do teachers play in designing and implementing Wordwall-based vocabulary instruction for slow learners?
3. What challenges and instructional considerations do teachers encounter when using Wordwall to support slow learners' vocabulary development in EFL classrooms?

This study contributes to EFL education by examining Wordwall as a multisensory vocabulary tool for slow learners in junior high school, emphasizing teachers' roles in implementation. Expanding on research that focuses on instructional media or student outcomes, the findings offer practical implications for designing inclusive vocabulary instruction and integrating multisensory digital tools to meet the needs of slower-developing learners.

2. Method

This study employs a qualitative approach using a case study design to explore the utilization of Wordwall as a multisensory English vocabulary learning tool for slow learners from teachers' perspectives. Qualitative case studies allow researchers to examine a phenomenon in depth within its real-life context, particularly when the focus is on instructional practices in a specific setting (Creswell, 1994).In line with Yin (1984) this design is appropriate when the study involves a bounded system and a limited number of participants. Therefore, the case study approach is considered suitable to capture teachers' experiences and interpretations regarding the use of Wordwall in vocabulary instruction.

The participants of this study are two English teachers selected through convenience sampling. Convenience sampling is appropriate when participants are readily accessible and possess relevant experience related to the phenomenon under investigation (Alzaanin, 2020).The participants consist of one female teacher and one male teacher, both of whom have experience teaching English vocabulary to slow learners and have used Wordwall in their classrooms. Their involvement is expected to provide direct insight into instructional decision-making and classroom implementation, allowing the researcher to collect rich and context-specific data aligned with the research objectives.

Data were collected using multiple qualitative techniques to ensure depth and credibility (Babchuk, 2016). Semi-structured interviews served as the primary source, exploring teachers' perceptions and experiences in using Wordwall as a multisensory vocabulary tool for slow learners, with flexibility to probe while aligning with research objectives. Teacher reflective documents, including lesson plans and written reflections, supplemented the data, providing evidence of instructional practices and pedagogical decision-making (Creswell, 1994).

Data analysis follows a thematic analysis approach (Braun & Clarke, 2006). First, data familiarization is conducted by repeatedly reading interview transcripts and teacher reflective documents to gain an overall understanding of the data. Second, initial coding is applied by identifying meaningful units related to teachers' use of Wordwall, multisensory strategies, and instructional challenges for slow learners. Third, the codes are grouped into potential themes that represent recurring patterns across the data sources. Finally, the themes are reviewed, refined, and interpreted in relation to the research questions and the theoretical framework.

To ensure trustworthiness, triangulation is achieved by comparing interview data with reflective documents, while member checking is conducted by confirming key interpretations with the participating teachers. Ethical procedures include institutional approval and the protection of participants' confidentiality and anonymity. In addition, all collected data are securely stored and used solely for research purposes to maintain data integrity. Participants are also informed about the objectives of the study and their voluntary involvement, ensuring that the research process remains transparent and ethically responsible.

3. Results and Discussion

This section presents findings and discussion from semi-structured interviews and teacher reflections (Braun & Clarke, 2006), examining Wordwall as a multisensory vocabulary tool for slow learners in an inclusive junior high context. Inclusive practices emphasize differentiated instruction with simplified explanations, repetition, and scaffolding (Akhmetova et al., 2020). Wordwall enhances motivation and engagement through gamified and visual features, while deeper comprehension relies on explicit guidance (Huang et al., 2017). Its effectiveness depends on teachers' judgment, adapting use to students' attention and emotional readiness, highlighting adaptive technology integration (Salsabila et al., 2023).

1. Utilizing Wordwall as a Multisensory Tool in Vocabulary Learning for Slow Learners

Based on the analysis of semi-structured interviews and teacher reflective documents, the findings reveal that Wordwall is utilized as a multisensory instructional support tool implemented in a flexible and adaptive manner. Rather than functioning as the primary instructional medium, Wordwall is integrated strategically to enhance engagement and facilitate vocabulary comprehension among slow learners. This finding aligns with the concept of differentiated instruction, which emphasizes the need to adjust teaching strategies based on students' learning characteristics (Akhmetova et al., 2020).

a) Visual Support in Vocabulary Learning

Visual support is a key element in Wordwall-based vocabulary instruction, allowing teachers to pair words with images and text to create concrete representations. For slow learners, such visuals reduce abstraction and enhance comprehension. The English teacher noted that these features significantly aid students in understanding vocabulary.

> *"The visual display provided in Wordwall is particularly helpful for students. The pictures accompanying the vocabulary items make it easier for them to understand the meaning of the words, especially for those who struggle with abstract concepts." (English Teacher)*

Similarly, the shadow teacher stressed the importance of visual simplicity to prevent cognitive overload:

> *"The visual layout should not be too crowded or overly stimulating, because if the display is too busy, the student tends to lose focus and becomes easily distracted from the learning objective." (Shadow Teacher)*

These two perspectives collectively indicate that visual support serves a dual function: facilitating semantic comprehension and regulating attention. While the English teacher highlights the cognitive benefits of image-word association, the shadow teacher underscores the importance of visual control to prevent distraction. Together, the findings suggest that effective visual integration in Wordwall requires both meaningful representation and simplified design. From a cognitive perspective, visual input reduces lexical abstraction by anchoring vocabulary in concrete imagery. This finding aligns with multisensory learning theory, which posits that visual encoding strengthens memory retention by activating multiple cognitive pathways (Schlesinger & Gray, 2017). Additionally, dual-channel processing principles suggest that combining verbal and visual information enhances comprehension more effectively than text-only instruction (Mathias et al., 2021).

However, the shadow teacher's concern regarding overstimulation reflects principles of cognitive load theory, which warns that excessive visual complexity may hinder rather than facilitate learning (Byundyugova et al., 2021). This balance between clarity and simplicity is structurally evident in the Wordwall Matching activity designed for vocabulary learning. As illustrated in Figure 1, each lexical item is paired with a single, focused image to minimize distraction while reinforcing semantic association.

Figure 1. Example of wordwall matching activity used for vocabulary instruction

The integration of visual support in Wordwall significantly enhances vocabulary learning for slow learners by providing concrete representations that reduce abstraction and aid comprehension. Insights from both the English teacher and the shadow teacher emphasize the importance of balancing meaningful imagery with visual simplicity to optimize cognitive processing and maintain focus. This approach aligns with multisensory learning theory and dual-channel processing principles, showing that combining visual and verbal information strengthens memory retention and understanding. These findings suggest that thoughtfully designed visual elements in Wordwall serve as an effective pedagogical tool, supporting both semantic comprehension and attentional focus in vocabulary acquisition.

b) Auditory Reinforcement and Repetition

Auditory reinforcement and repetition were identified as essential mechanisms in strengthening vocabulary retention for slow learners. Both teachers described repetition as a necessary instructional strategy.

> *"Drilling and repetition techniques are necessary for students who require more time to process information. They often need explanations to be repeated several times, particularly when learning new vocabulary and pronunciation." (English Teacher)*

The perspective of the English teacher emphasizes repetition as a structured instructional strategy embedded within classroom practice. In contrast, the shadow teacher's account reflects how repetition is enacted more flexibly in response to students' immediate learning needs. This shift illustrates how the same pedagogical principle is applied across different roles, moving from planned instructional design to real-time support during learning difficulties.

> *"When the student begins to feel confused or loses focus while using Wordwall, I immediately provide assistance by explaining the vocabulary again slowly and in simpler language, ensuring that he can follow the task step by step." (Shadow Teacher)*

Collectively, these statements reveal that repetition operates both as a planned instructional strategy and as responsive scaffolding during learning breakdowns. This shared emphasis on repetition highlights that auditory input alone is insufficient without pedagogical mediation. Repetition plays a crucial role in vocabulary acquisition, as lexical knowledge develops incrementally through repeated exposure and contextual reinforcement (Teng, 2016). The English teacher institutionalizes repetition within structured drilling, whereas

the shadow teacher applies it as adaptive scaffolding during moments of cognitive breakdown. Such layered reinforcement reflects multisensory integration principles, where auditory input strengthens retention when paired with guided explanation (Schlesinger & Gray, 2017). The inclusion of guided pronunciation and repetition exercises in the lesson plan further confirms that auditory support is deliberately embedded in instructional design. Consequently, Wordwall's auditory features.

c) Interactive Engagement through Wordwall

Interactive engagement through gamified activities was another prominent feature identified in the findings. Teachers observed noticeable differences in student participation during Wordwall-based lessons.

> *"During lessons that use Wordwall, students show noticeably more positive responses. They appear more enthusiastic, more willing to participate, and more confident in attempting answers compared to conventional textbook-based instruction." (English Teacher)*

The English teacher's statement highlights increased student enthusiasm and participation as a result of gamified learning activities. Building on this perspective, the shadow teacher provides a more nuanced view by positioning Wordwall primarily as a motivational tool rather than a means for achieving deeper vocabulary mastery.

> *"In my observation, Wordwall is quite effective for motivating the student at the beginning of the lesson, functioning as an ice-breaking activity. However, for deeper vocabulary understanding, direct and guided instruction is still more effective." (Shadow Teacher)*

Collectively, these responses suggest that Wordwall increases motivation and participation, yet does not independently guarantee deep lexical mastery. Gamified digital environments are widely recognized for enhancing learner motivation and engagement (Covaci et al., 2018). The English teacher's observations reflect this motivational benefit. However, the shadow teacher's differentiation between motivation and mastery indicates that engagement alone does not ensure cognitive depth.Research on gamification suggests that interactive mechanics primarily influence affective dimensions rather than sustained conceptual processing (Huang et al., 2017).The interactive tasks outlined in the lesson plan, therefore function as complementary reinforcement tools rather than standalone instructional solutions.The structured integration of interactive Wordwall activities is explicitly documented in the Core Learning Activities section of the lesson plan. As presented in Figure 2, students are required to engage in Matching, Group Sort, and Quiz formats, demonstrating active participation rather than passive involvement.

Core Activity (50 minutes)	Exploration	**C. Let's Observe** 1. The teacher displays pictures of the classroom and objects in it (classroom, whiteboard, desk, cupboard, pen, pencil, dictionary, uniform, flower). 2. Students observe the pictures and answer simple questions, such as: "What things are in the classroom?""Do you see a cupboard?" 3. The teacher introduces new vocabulary from the text "Our Lovely Classroom" alongwith the pronunciation and meaning of the words. 4. Students take turns repeating the pronunciation of the vocabulary words.	**C. Let's Observe** 1. The teacher displays large, clear pictures (one picture per word). 2. Students observe and point to the pictures together with the teacher. 3. The teacher asks very simple questions, for example: "What is this?" (the teacher provides options if necessary) 4. Students repeat the vocabulary with guidance and repetition.
	Elaboration	1. Students play Wordwall – Matching to match vocabularywords and pictures. 2. Students play Wordwall – Group Sort to group vocabulary words into categories: ▪ Things in the classroom ▪ Animals 3. Students repeat the vocabulary words that appear on the screen. Students take a short Wordwall Quiz with a minimum accuracy rate of 70%.	1. Students play Wordwall – Matching Picture with teacher assistance. 2. Students group simple vocabulary words using Wordwall – Group Sort (only 2 categories). 3. Students say the vocabulary words together with the teacher. 4. Students participate according to their abilities without a score target.

Figure 2. Excerpt from lesson plan (core activities section) showing wordwall matching, group sort, and quiz tasks

Wordwall gamified activities effectively enhance student motivation and participation, particularly at lesson openings. The English teacher noted increased enthusiasm, active engagement, and confidence, while

the shadow teacher highlighted that deeper vocabulary mastery still relies on guided instruction. These findings indicate that Wordwall serves primarily as a motivational and reinforcement tool rather than a standalone cognitive strategy. Structured activities such as Matching, Group Sort, and Quizzes facilitate active involvement, complementing traditional instruction and supporting learning outcomes without replacing the need for direct teaching.

d) Instructional Adaptation and Collaborative Support

Instructional adaptation emerged as the overarching framework that governed the effective use of Wordwall. The integration of digital activities was consistently adjusted to align with learners' cognitive readiness and processing capacity.

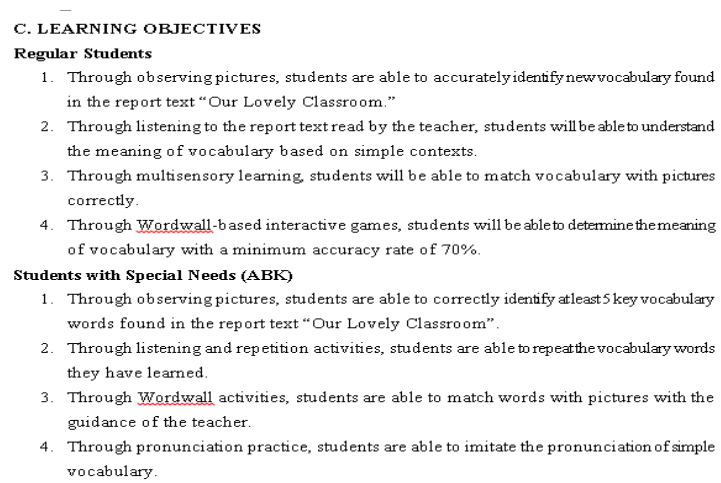
> *"I intentionally reduce the vocabulary target for slow learners. While regular students may learn up to twenty words in one session, slow learners usually focus on approximately ten words to avoid cognitive overload." (English Teacher)*

The English teacher's explanation emphasizes quantitative adjustment as a strategy to accommodate learners' cognitive limitations. Complementing this perspective, the shadow teacher highlights qualitative adaptation through individualized guidance during instructional delivery.

> *"The main material is delivered to the whole class, while individual assistance is provided to ensure the student understands the vocabulary through simplified explanation and step-by-step guidance." (Shadow Teacher)*

Together, these accounts demonstrate that instructional adaptation operates at both the planning and implementation levels. The English teacher modifies learning targets to regulate cognitive demand, whereas the shadow teacher provides real-time scaffolding to ensure comprehension. These statements illustrate that technology integration is embedded within a differentiated and collaborative instructional structure. Differentiated instruction emphasizes tailoring content complexity, pacing, and expectations according to students' readiness levels (Lindner & Schwab, 2025). The intentional reduction of vocabulary quantity reflects this adaptive orientation.

This differentiation is formally documented in the lesson plan under the Learning Objectives and Assessment Indicators section, where vocabulary targets and expected competencies differ between regular learners and those with special needs. The differentiated instructional targets are explicitly outlined in the learning objectives section of the lesson plan. As illustrated in Figure 3, regular students are expected to achieve higher vocabulary mastery levels, while students with special needs are provided with reduced vocabulary loads and guided matching tasks.



C. LEARNING OBJECTIVES

Regular Students

1. Through observing pictures, students are able to accurately identify new vocabulary found in the report text "Our Lovely Classroom."
2. Through listening to the report text read by the teacher, students will be able to understand the meaning of vocabulary based on simple contexts.
3. Through multisensory learning, students will be able to match vocabulary with pictures correctly.
4. Through Wordwall-based interactive games, students will be able to determine the meaning of vocabulary with a minimum accuracy rate of 70%.

Students with Special Needs (ABK)

1. Through observing pictures, students are able to correctly identify at least 5 key vocabulary words found in the report text "Our Lovely Classroom".
2. Through listening and repetition activities, students are able to repeat the vocabulary words they have learned.
3. Through Wordwall activities, students are able to match words with pictures with the guidance of the teacher.
4. Through pronunciation practice, students are able to imitate the pronunciation of simple vocabulary.

Figure 3. Excerpt from the lesson plan illustrating differentiated learning objectives for regular and special needs students in vocabulary instruction

These findings demonstrate that visual support, auditory reinforcement, interactive engagement, and instructional adaptation operate as an integrated instructional system rather than discrete elements. While each component contributes to comprehension, retention, and participation, none independently ensures vocabulary mastery. Visual clarity supports attention, auditory repetition strengthens memory, interactive tasks enhance

motivation, and instructional adaptation regulates cognitive demand. Therefore, the effectiveness of Wordwall is contingent upon its integration within adaptive, mediated, and differentiated teaching practices that are aligned with learners' cognitive readiness.

2. Teachers' Roles in Designing and Implementing Wordwall-Based Vocabulary Instruction

The implementation of Wordwall in vocabulary instruction demonstrates that teachers assume multiple pedagogical roles that extend beyond merely operating digital tools. In the context of slow learners, these roles involve careful instructional planning, guided facilitation, motivational support, and continuous evaluation. Such multifaceted roles indicate that the effectiveness of Wordwall is highly dependent on teachers' pedagogical decisions rather than the technology itself.

a) Teachers as Instructional Designers and Facilitators

While Wordwall provides multisensory features, its pedagogical value depends on how learning activities are designed and facilitated in practice. The transition from digital affordance to meaningful learning occurs through intentional content selection and guided implementation.From the design perspective, vocabulary items are carefully selected and adapted based on students' cognitive readiness. As expressed in the interview:

> *"When preparing Wordwall activities, I do not include all vocabulary from the textbook. I intentionally select simple, concrete, and familiar words, especially those related to classroom objects or daily contexts, because slow learners need something they can easily visualize. I also reduce the number of words in one session to prevent cognitive overload and allow them to focus on understanding meaning rather than memorizing too many items." (English teacher).*

The English teacher's explanation highlights pedagogical filtering and quantitative adjustment as foundational steps prior to digital integration. Complementing this perspective, the shadow teacher emphasizes the collaborative dimension of instructional preparation, where simplification and procedural modification are jointly determined to ensure accessibility:

> *"Before the lesson, we usually discuss which vocabulary items are suitable for the students who need additional support. Sometimes the tasks are simplified, the number of questions is reduced, and the instructions are adjusted so that they can follow the activity step by step without feeling pressured." (Shadow teacher).*

Together, these accounts demonstrate that multisensory integration is preceded by structured pedagogical regulation. Teachers actively manage cognitive load before students interact with the digital platform, ensuring that technological affordances remain aligned with learners' readiness levels.During classroom implementation, facilitation further mediates the learning process to ensure effective engagement with the multisensory components:

> *"Although Wordwall is interactive, the students still need structured guidance. I usually demonstrate how to answer first, explain the instructions slowly, and check their understanding before they begin. Without that explanation, some of them may feel confused and disengage from the activity." (English teacher).*

The English teacher's statement underscores the importance of explicit modeling and procedural clarity during execution. Extending this facilitative role, the shadow teacher provides real-time scaffolding to support comprehension:

> *"During the activity, I stay near the students who need additional support. When they hesitate or appear uncertain, I restate the instructions in simpler language and sometimes point directly to the images or words on the screen to help them connect the meaning." (Shadow teacher).*

Taken together, these findings indicate that instructional design and facilitation function as mediating mechanisms between technological affordances and student comprehension. Conceptually, this dual role aligns with differentiated instruction, which emphasizes adapting content and learning processes according to students' readiness (Lindner & Schwab, 2025). It also resonates with scaffolding principles, where structured guidance gradually supports learner autonomy. Thus, multisensory technology alone does not ensure accessibility; rather, pedagogical mediation transforms digital interaction into structured and meaningful learning.

b) Teachers as Motivators

Following instructional structuring and guided facilitation, teachers also regulate the affective dimension of learning. The multisensory and game-based nature of Wordwall creates emotional engagement, yet this engagement requires pedagogical direction to remain academically meaningful.

As articulated in the interview:

"When Wordwall is used, the classroom atmosphere becomes more lively. Students who are usually passive appear more confident and willing to participate because the activity feels like a game rather than a formal test. They are less anxious about making mistakes and more eager to try." (English teacher)

The English teacher's statement highlights the emergence of positive affective responses, particularly increased confidence and reduced anxiety. Building on this perspective, the shadow teacher further emphasizes how interactive and competitive elements sustain students' attention and participation during learning activities:

"The interactive and competitive elements encourage students to respond more actively. Even those who tend to withdraw during conventional instruction show increased attention and enthusiasm when the task involves game-based interaction." (Shadow teacher)

Together, these accounts indicate that multisensory gamified instruction reduces anxiety and increases participation, particularly among slow learners who often experience academic hesitation. Nevertheless, engagement alone does not automatically translate into conceptual understanding. Teachers therefore redirect attention toward vocabulary meaning rather than mere competition or scoring. This pedagogical regulation aligns with gamification theory, which argues that game mechanics enhance motivation only when aligned with clear instructional objectives (Covaci et al., 2018). In this sense, motivation is not incidental but strategically managed.

c) Teachers as Evaluators

Extending beyond engagement, teachers also utilize Wordwall as a diagnostic instrument. The immediate feedback generated through interactive quizzes allows teachers to interpret students' vocabulary comprehension in real time.

As described in the interview:

"Through Wordwall, I can observe patterns in students' responses. I can see which vocabulary items are consistently answered correctly and which ones still cause difficulty. However, I do not rely solely on the scores; I usually follow up by asking them to pronounce the words or explain the meaning to ensure that their understanding is not based on guessing." (English teacher)

The English teacher's statement emphasizes the use of performance data as an initial indicator of student understanding, while simultaneously highlighting the need for verification beyond automated results. Complementing this perspective, the shadow teacher underscores how these observed difficulties are immediately addressed through instructional adjustment and reinforcement:

"When students repeatedly select incorrect answers, we immediately provide clarification and sometimes repeat the explanation using visual or oral reinforcement. The activity becomes a way to diagnose misunderstanding and adjust the next instruction." (Shadow teacher)

Together, these accounts demonstrate that multisensory digital activities are interpreted through pedagogical judgment, where automated scores are not treated as definitive indicators of mastery. Wordwall provides immediate performance data; however, teachers contextualize and validate these results through follow-up questioning, repetition, and guided explanation. Thus, evaluation becomes a continuous and interpretive process rather than a purely digital measurement.

The implementation of Wordwall-based vocabulary instruction for slow learners underscores the significance of teachers' multifaceted roles as instructional designers, facilitators, motivators, and evaluators. Through careful content selection, structured guidance, affective support, and continuous interpretation of students' responses, teachers actively mediate the learning process to ensure both accessibility and meaningful engagement. These interconnected roles indicate that the effectiveness of Wordwall is not derived from the

technology itself, but from deliberate pedagogical decisions that align with learners' cognitive readiness and learning needs.

3. Challenges and Instructional Considerations in Using Wordwall to Support Slow Learners' Vocabulary Development in EFL Classrooms

Although Wordwall provides multisensory affordances that support vocabulary instruction, its implementation in inclusive EFL classrooms reveals several interrelated challenges. The findings indicate that technological tools do not operate in pedagogical isolation; rather, their effectiveness depends on contextual readiness, instructional adjustment, and continuous regulation. The challenges identified in this study can be synthesized into four major themes: technological readiness, digital literacy, pedagogical differentiation and pacing, and assessment engagement balance.

a) Technological Readiness and Resource Constraints

One of the most immediate challenges concerns infrastructural limitations. The availability of devices and the stability of internet connectivity significantly influence the smooth execution of Wordwall-based activities.

As explained in the interview:

"Sometimes we do not have enough devices for all students, so they need to share or take turns using Wordwall. This arrangement can reduce individual practice time and occasionally disrupt the flow of the lesson." (English teacher)

Similarly, this challenge is further reflected in the shadow teacher's account, which highlights how connectivity issues directly influence students' concentration during the activity:

"If the internet connection becomes slow, the students have to wait for the activity to load. During that waiting time, they often lose focus and their attention shifts away from the task." (Shadow teacher)

These responses indicate that technological readiness is a foundational prerequisite for effective digital instruction. In addition, limitations in the free version of Wordwall restrict access to certain premium features, reducing activity variation and flexibility. From a critical standpoint, these constraints demonstrate that digital innovation alone cannot guarantee instructional improvement. Without sufficient infrastructure, technology may inadvertently create interruptions that affect learning continuity. Therefore, institutional support and technical preparation become essential components of sustainable digital integration.

b) Students' Digital Literacy and Learning Autonomy

Beyond infrastructure, students' digital readiness also presents a significant challenge. Some slow learners initially struggle to navigate the Wordwall interface independently, which shifts attention away from vocabulary comprehension toward technical operation.

As stated by the English teacher:

"At the beginning of implementation, they require very clear and detailed instructions because they are not yet familiar with the platform. Without guidance, they may feel confused about how to select answers or move to the next question." (English teacher)

This need for structured support is further reinforced by the shadow teacher's account, which illustrates how step-by-step guidance becomes essential when students encounter difficulties in operating the platform independently:

"I usually guide him step by step, especially when he does not understand how to click, drag, or choose the correct answer. If not accompanied, he may hesitate and stop participating." (Shadow teacher)

These excerpts demonstrate that digital tools require prior orientation and gradual familiarization. Without adequate scaffolding, students may experience cognitive overload caused by interface navigation rather than lexical processing. Instructionally, this implies that teachers must allocate time for demonstration and guided practice before expecting independent use. Digital literacy, therefore, becomes part of the learning objective itself. In inclusive classrooms, technological competence cannot be assumed; it must be cultivated alongside language development.

c) Pedagogical Differentiation and Learning Pace Adjustment

Another central challenge lies in balancing task difficulty and processing time. Slow learners require simplified vocabulary input and extended time to process information, while many Wordwall activities are

structured around speed and automatic progression. The English teacher emphasized the importance of difficulty regulation:

> *"I have to select simple and familiar vocabulary items. If the words are too difficult or abstract, they become confused and disengaged from the activity." (English teacher)*

This concern is further emphasized by the shadow teacher, who highlights the affective impact of task difficulty and time pressure on students' confidence and willingness to participate:

> *"When the activity feels too hard or too fast, he loses confidence and becomes reluctant to continue. He needs additional time to think before choosing an answer." (Shadow teacher)*

These responses reveal that differentiation is not optional but essential. Teachers adjust vocabulary complexity, reduce the number of items, extend time limits, or switch to practice mode instead of timed quizzes. Such adaptations prevent frustration and preserve learners' confidence. From a pedagogical perspective, this reflects the necessity of aligning digital task structure with cognitive readiness. Time pressure, while motivating for some learners, may become counterproductive for slow learners. Therefore, flexibility in pacing and task modification is crucial for inclusive digital instruction.

d) Assessment Accuracy and Engagement Regulation

While Wordwall provides automatic scoring and immediate feedback, evaluation accuracy remains a concern. Digital scores may not fully represent students' depth of vocabulary understanding. As articulated in the interview:

> *"From the score, I can see their performance patterns, but sometimes students answer correctly without fully understanding the meaning. Therefore, I usually ask them to explain or pronounce the word afterward." (English teacher)*

The English teacher's statement indicates that digital performance data function primarily as preliminary indicators rather than definitive evidence of comprehension. To ensure validity, follow-up questioning and verbal verification are employed to confirm whether correct responses reflect genuine understanding. This limitation is further reinforced by the shadow teacher, who emphasizes that game-based results alone are insufficient to capture students' actual vocabulary comprehension:

> *"For deeper understanding, direct explanation and repetition are still necessary. The game result alone does not always show whether the student truly comprehends the vocabulary." (Shadow teacher)*

These findings highlight a dual challenge in using Wordwall for slow learners: while the platform enhances participation and multisensory engagement, motivation alone does not guarantee mastery. Teachers address this by combining Wordwall activities with oral questioning, repetition, and contextual explanations, ensuring formative assessment captures both accuracy and conceptual understanding. Implementation challenges technological readiness, digital literacy, differentiation, and assessment regulation are interconnected, requiring adaptive pedagogical strategies. Both the English teacher and shadow teacher emphasize that Wordwall's effectiveness depends on continuous instructional adjustment, contextual sensitivity, and integration with direct teaching, demonstrating that digital tools function optimally only within carefully regulated and responsive teaching practices

4. Conclusion

This study examined the use of Wordwall as a multisensory instructional tool to support slow learners' vocabulary development in inclusive EFL classrooms. The findings indicate that Wordwall's effectiveness does not stem solely from its digital or gamified features, but from how teachers pedagogically design, facilitate, and evaluate its implementation. Multisensory elements visual, auditory, and interactive became meaningful only when aligned with students' cognitive readiness and supported through differentiated instruction. Furthermore, teachers played essential roles as instructional designers, facilitators, motivators, and evaluators, continuously adjusting vocabulary complexity, pacing, and assessment strategies. The collaboration between the English teacher and the shadow teacher strengthened adaptive support, ensuring that engagement through Wordwall translated into structured vocabulary learning rather than superficial participation.

Despite these contributions, the study has several limitations. The research was conducted within a specific educational context involving a limited number of participants, which may restrict the generalizability of the findings. In addition, the data were primarily derived from interviews and lesson plan documentation

without systematic classroom observation or direct analysis of students' learning outcomes. As a result, the study may not fully capture the complexity of real-time instructional interaction and student responses.

Future research is recommended to involve a broader range of schools and participants to enhance contextual diversity. Incorporating classroom observation, student perspectives, and measurable vocabulary achievement data would provide a more comprehensive understanding of how digital multisensory tools function in inclusive EFL settings. Further investigation into long-term vocabulary retention and learner autonomy development is also suggested to deepen insights into sustainable technology integration.

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