



Developing Digital Worksheet in Reading Descriptive Text by Using QuizWhizzer Application

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ABSTRACT

This study aimed to develop a QuizWhizzer-based digital worksheet for teaching reading descriptive text to seventh grade students at MTsN 2 Medan. This study applied Research and Development (R&D) adapted from Borg and Gall's model. The data were collected through students' needs analysis questionnaires, teacher interviews, and expert validation. The participants were one English teacher, 30 seventh grade students, and two experts. The development process consisted of six stages. First, gathering data and information through interviews and questionnaires. Second, analyzing needs analysis data to identify students' needs, necessities, lacks, and wants. Third, designing the QuizWhizzer-based digital worksheet on descriptive text materials. Fourth, validating the product by two experts. Fifth, revising the product based on the experts' suggestions. Lastly, finalizing the product. The results showed that students had difficulties in

vocabulary, main ideas, and detailed information, and needed more interactive learning media. The first expert's validation score was 85% and the second expert's validation score was 82%, both categorized as "Very Good". The final worksheet integrated descriptive texts, supporting pictures, game-board features, varied exercises, and immediate feedback, and was considered feasible and suitable for teaching reading descriptive text and could support a more interactive learning process.

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INTRODUCTION

Reading is one of the most important language skills in English learning because it enables students to obtain information, enrich vocabulary, and improve comprehension (Grabe, 2009). Through reading activities, students are expected to understand ideas, identify important information, and interpret the meaning of a text. In the context of junior

high school education, reading is an essential skill that supports students' academic achievement and language development. However, many students still encounter difficulties in understanding English texts, especially descriptive texts.

Descriptive text is a type of text that aims to describe a particular person, place, animal, or object in detail. According to Gerot and Wignell (1994), descriptive text focuses on presenting the characteristics and features of a specific subject so that readers can imagine the object being described. To comprehend descriptive texts successfully, students need sufficient vocabulary mastery, reading comprehension skills, and the ability to identify detailed information and main ideas (Nuttall, 2005). Unfortunately, these aspects often become obstacles for students in learning reading.

Based on preliminary observation conducted at MTsN 2 Medan, several problems were identified in the teaching and learning process of reading descriptive texts. Students frequently experienced difficulties in understanding vocabulary, identifying the main idea, and comprehending the overall meaning of the text. These difficulties affected their reading achievement and reduced their motivation to participate actively in classroom activities. In addition, the worksheets used in the classroom mainly consisted of printed worksheets and textbook exercises that provided limited opportunities for interactive learning. As a result, students tended to feel bored and less engaged during reading lessons.

The advancement of digital technology has created opportunities for teachers to develop innovative learning materials that can increase students' engagement and motivation. One of these innovations is the use of digital worksheets. Digital worksheets are electronic learning resources that transform conventional worksheets into interactive learning materials that can be accessed through digital devices (Prista et al., 2023). According to Haqsari (2014), digital worksheets provide more flexible and interactive learning experiences by integrating multimedia elements such as pictures, videos, hyperlinks, and interactive exercises. Therefore, digital worksheets can create a more attractive learning environment and support students' learning needs.

One digital platform that can be utilized to develop interactive worksheets is QuizWhizzer. QuizWhizzer is a web-based educational platform that combines learning

activities with game elements (Deterding et al., 2011). The platform allows teachers to create interactive quizzes equipped with features such as avatars, game boards, leaderboards, instant feedback, and various question types. According to Wahyuningsih et al. (2021), QuizWhizzer can function as an interactive learning medium that promotes student participation and creates a more enjoyable learning atmosphere. Furthermore, Prensky (2001) argues that game-based learning increases students' motivation because it combines educational content with enjoyable challenges and rewards.

Several previous studies have demonstrated the benefits of QuizWhizzer in educational settings (Isnaini et al., 2025). Muthoharoh et al. (2024) found that QuizWhizzer significantly improved students' interest and motivation in English learning activities. Similarly, Felix et al. (2024) reported that the implementation of QuizWhizzer improved students' reading comprehension achievement, as indicated by the increase in students' average scores. Siregar and Seli (2025) also found that QuizWhizzer enhanced classroom interaction and learning motivation. In addition, Indah (2025) concluded that QuizWhizzer was effective in motivating students to learn vocabulary and improving vocabulary mastery.

Although previous studies have shown the effectiveness of QuizWhizzer as a learning medium, most of them focused on evaluating its impact on learning outcomes or motivation (Riyoga et al., 2024). Limited attention has been given to the development of QuizWhizzer as a digital worksheet specifically designed for reading descriptive texts. Furthermore, existing implementations often use only basic QuizWhizzer features, such as multiple-choice questions, without integrating reading materials, supporting images, or varied exercise types. Therefore, there is a need to develop a more comprehensive QuizWhizzer-based digital worksheet that accommodates students' learning needs and supports reading comprehension activities.

This study was conducted to develop a QuizWhizzer-based digital worksheet for teaching reading descriptive text to Seventh Grade students at MTsN 2 Medan. The development process was based on students' needs analysis and followed the Research and Development model proposed by Borg and Gall (2003). Through this study, the researcher

expected to produce an interactive and engaging learning medium that could support students' reading comprehension and increase their motivation in learning descriptive texts.

METHOD

This study applied Research and Development (R&D) adapted from Borg and Gall's (2003) model. The study was conducted at MTsN 2 Medan and involved one English teacher, 30 seventh grade students, and two experts. The data were collected through students' needs analysis questionnaires, teacher interviews, and expert validation sheets. The development procedure consisted of six stages: gathering data and information, analyzing data, designing the product, validating by experts, revising the product, and producing the final product (Fayrus, 2022). The collected data were analyzed using both qualitative and quantitative approaches. Qualitative data from interviews were analyzed descriptively to identify students' needs in learning reading descriptive text, while quantitative data from questionnaires and expert validation were analyzed using percentage calculations. The percentage score was calculated using the formula proposed by Sugiyono (2019):

$$P = \frac{f}{N} \times 100\%$$

Where:

P = Percentage of the score

f = Total score obtained from respondents

N = Total number of respondents

RESULTS

Gathering Data and Information

The questionnaire results revealed that students encountered several difficulties in learning reading descriptive texts, particularly in understanding unfamiliar vocabulary, identifying main ideas, and comprehending the content of texts. Many students also reported limited understanding of descriptive text structures and considered their reading ability to be relatively low. In addition, the findings showed that students needed more engaging learning materials to support their reading comprehension and improve their learning

outcomes. Most students expressed positive attitudes toward the use of digital learning media and expected learning activities that were more interactive, interesting, and motivating.

The interview results supported the questionnaire findings. The English teacher explained that students frequently experienced difficulties in vocabulary mastery and identifying the main ideas of descriptive texts. According to the teacher, limited vocabulary knowledge often prevented students from fully understanding the content of a text and affected their motivation during reading activities. The teacher also stated that the worksheets commonly used in the classroom mainly consisted of printed worksheets and textbook exercises, which were useful for practice but lacked interactive features. Furthermore, the teacher suggested that a digital worksheet should include descriptive text materials, supporting pictures, varied exercise types, and attractive game-based features. Similarly, the questionnaire results showed that students preferred a QuizWhizzer-based digital worksheet integrated with visual elements, varied exercises, and interactive activities to make reading lessons more engaging and effective.

Analyzing Data

The analysis was conducted based on Hutchinson and Waters' (1987) framework, which consists of necessities, lacks, and wants. The findings showed that students' necessities were related to understanding descriptive texts, identifying main ideas, comprehending detailed information, and improving vocabulary mastery. The students' lacks were reflected in their difficulties in understanding vocabulary, recognizing text structures, and identifying important information in descriptive texts. Meanwhile, the students' wants indicated a strong preference for interactive learning media that incorporate pictures, game-based activities, immediate feedback, and varied exercise types.

Based on these findings, it was concluded that students needed a more engaging learning medium that could support reading comprehension while increasing their motivation and participation. Therefore, a QuizWhizzer-based digital worksheet was considered suitable to address these learning needs.

Designing Product

Based on the needs analysis results, the researcher developed a QuizWhizzer-based digital worksheet focusing on descriptive text materials for seventh grade students. The worksheet contained reading passages related to familiar topics, such as places, animals, and objects commonly found in students' surroundings. The product was designed by integrating descriptive text materials with supporting pictures, game-board features, and various exercise types. The exercises included multiple-choice questions, multiple-response questions, true-false activities, and short-answer questions. In addition, immediate feedback was provided to help students identify their mistakes and improve their understanding during the learning process (Hedtrich & Graulich, 2018).

Validation by Experts

After the digital worksheet had been developed, it was evaluated by experts to ensure its quality, validity, and suitability for classroom use. The interpretation of the validation results followed the criteria adapted from Sugiyono (2019).

Table 1. Categories for Validation Scores (Sugiyono, 2019)

Score Range	Category
81% - 100%	Very Good
61% - 80%	Good
41% - 60%	Fair
21% - 40%	Less
≤20%	Very Less

The validation process involved two experts who evaluated the product based on four aspects: linguistics, process, product and content, and layout. The validation results from both experts are presented in Tables 2 and 3.

Table 2. First Expert Validation Result

No	Criteria	Total	Maximum Scores	Scores
1	Linguistics	5	25	21
2	Process	5	25	21
3	Product and Content	5	25	21

No	Criteria	Total	Maximum Scores	Scores
4	Layout	5	25	21
Total		20	100	85
Average		85/100 x 100% = 85%		

Table 3. Second Expert Validation Result

No	Criteria	Total	Maximum Scores	Scores
1	Linguistics	5	25	20
2	Process	5	25	20
3	Product and Content	5	25	21
4	Layout	5	25	21
Total		20	100	82
Average		82/100 x 100% = 82%		

Based on the validation results, expert's 1 gave a score of 85% and expert's 2 gave a score of 82%, which was categorized as "Very Good." These results indicate that the developed QuizWhizzer-based digital worksheet was feasible in terms of linguistic quality, process, product and content, and layout. Several revisions were made based on the experts' suggestions, including adding questions, improving the activity sequence, and providing clearer titles and guiding questions before producing the final product.

Revising the Product

Several improvements were made to enhance the quality of the QuizWhizzer-based digital worksheet, including adding more questions, improving the sequence of learning activities, providing clearer titles, and adding guiding questions before reading activities. These revisions were intended to improve the organization, clarity, and effectiveness of the worksheet in supporting students' reading comprehension. After the revision process, the worksheet became more structured and better aligned with students' learning needs and the instructional objectives.

Finalizing Product

After incorporating the experts' suggestions, the worksheet consisted of descriptive text materials, supporting pictures, varied exercise types, game-board features, and immediate feedback. The final product was designed to support students' reading comprehension and increase their motivation through interactive learning activities. Therefore, the developed worksheet was considered suitable for teaching reading descriptive text to Seventh Grade students at MTsN 2 Medan.

DISCUSSION

The findings showed that students experienced difficulties in understanding vocabulary, identifying main ideas, and comprehending descriptive texts. In addition, students needed more interactive learning media to support reading activities. These findings support Hutchinson and Waters (1987). Learning materials should be developed based on students' necessities, lacks, and wants (Hutchinson & Waters, 1987). Based on the needs analysis, a QuizWhizzer-based digital worksheet was developed by integrating descriptive texts, supporting pictures, game-based features, and varied exercises. The use of visual elements and interactive activities was intended to help students understand texts more easily and increase their engagement during learning (Huerta et al., 2025). Furthermore, QuizWhizzer provides immediate feedback and game-board features that can create a more enjoyable learning environment. This finding is in line with Prensky (2001), who argues that game-based learning can increase students' motivation and participation.

The validation results also indicated that the developed worksheet was feasible for use in teaching reading descriptive text. expert's 1 gave a score of 85% and expert's 2 gave a score of 82%, both of which were categorized as "Very Good." The experts suggested several improvements, including adding questions, improving the activity sequence, and providing clearer titles and guiding questions. After revision, the worksheet became more organized and suitable for classroom implementation.

These findings are consistent with previous studies showing that QuizWhizzer can enhance students' motivation and engagement in learning (Hermawan & Suharto, 2025).

However, unlike previous studies that mainly used QuizWhizzer as an assessment tool (Fitriyani et al., 2024), this study developed it as a complete digital worksheet. Therefore, the developed QuizWhizzer-based digital worksheet can serve as an alternative learning medium to support reading comprehension and create a more interactive learning process for Seventh Grade students.

CONCLUSION

This study was conducted through six stages of Research and Development by Borg and Gall. The first stage, gathering data and information, was conducted through teacher interviews and student questionnaires to identify learning needs in reading descriptive text. The second stage, analyzing data showed that students had difficulties in vocabulary, main ideas, and detailed information, while showing interest in interactive learning media. The third stage was designing a QuizWhizzer-based digital worksheet containing descriptive texts, images, and various exercises. The fourth stage was expert validation, where the product obtained scores of 85 and 82 from two experts, indicating a very good. The fifth stage involved revising the product based on experts' suggestions, including improvements to the content and activities. The final stage was final product, resulting in a revised, validated, and feasible QuizWhizzer-based digital worksheet for teaching reading descriptive text. Therefore, future researchers are recommended to conduct broader implementation with more participants and different school settings, explore different genres and different grade.

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