

## Students' Perception On Non-Digital Game-Based Student Worksheet (ND-GBSW) for English Learning at SMP Negeri 1 Gerokgak

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**Abstract.** This study aimed to investigate the students' perceptions of the Non-Digital Game-Based Student Worksheet (ND-GBSW) strategy in English learning implemented by an English teacher at SMP Negeri 1 Gerokgak. This study applied Basic Interpretative Study that involved interview data collection as the primary data, and complemented by survey data collection as the secondary data. The instruments were developed based on the perception theories by Qiong (2017) and Robbins & Judge (2013). The participants were the 8B class students who had experienced the implementation of ND-GBSW with the Finding a Treasure game under Narrative Text topic. Only three students were chosen to participate in the interview phase based on the high, medium, and low score in the questionnaire phase. The quantitative data were analyzed using descriptive statistics, while qualitative data using Thematic Analysis. The findings showed that 8B class students generally perceived ND-GBSW with the Finding a Treasure game as an engaging activity that supported their English learning process and encouraged their collaborative skills. Several challenges occurred, particularly regarding the challenge level of the game activity and the clarity of the worksheet instructions.

**Keywords:** Game-Based Learning; Non-Digital Games; Student Worksheets; Students' Perception; Thematic Analysis.

### 1. INTRODUCTION

In order to help students achieve the expected English academic performance, many researchers and educators have been investigating more effective teaching strategies. Especially in English learning at school, many students are still struggling to keep up with the lesson in the given time and lose motivation. Moreover, when it is conducted monotonously and does not engage students' participation (Derakhshan et al., 2021; Kholili, 2023). This improvement is also required for supporting materials, such as student worksheets, which are essential tools for independent learning, theory deepening, and enhancing critical thinking skills (Almis, 2023; Rosianti & Wilujeng, 2023). When worksheets fail to engage students' interest, learners can easily lose focus and become less enthusiastic in completing the assigned tasks (Mufidah & Yaumi, 2022).

As people become more fluent in digital technology, many educators have developed student worksheets with digital tools, such as e-student worksheets (Ostian et al., 2023; Rosianti & Wilujeng, 2023; Wahyuni et al., 2021), or integrate them with quiz-like games (Dirgayasa et al., 2023; Sitepu, 2022). However, digitalization is not the only solution for improving student worksheets. Non-digital learning strategies can still be considered to improve students' engagement and motivation for this teaching tool, such as non-digital game-based learning. Non-Digital Game-Based Learning (NDGBL) is a learning approach that applies the existing physical games, such as cards, dice, and board games, or from teacher

innovation to enhance the learning environment (Hamid et al., 2022). This strategy has been applied by an English teacher at SMP Negeri 1 Gerokgak. She combined student worksheets with physical game activities, such as Finding a Treasure. This approach is termed Non-Digital Game-Based Student Worksheet (ND-GBSW). This ND-GBSW with the Finding a Treasure game involves full-fledged game mechanics by requiring students to locate scattered worksheets before they can work on the assigned learning tasks.

The implementation of ND-GBSW in this school shows that teachers continue to employ non-digital teaching even when the world is familiar with technology. This is in line with the statement by Naderi & Moafian (2023), the arrival of technology does not mean non-digital strategies can be ignored in language learning (Naderi & Moafian, 2023). Although most previous research has centered on digital games, research on NDGBL has recently increased due to the need to develop a more comprehensive understanding of game-based learning methods for effective classroom implementation (Annamalai et al., 2021; Aqilah et al., 2021; Balakrishna, 2023; Naderi & Moafian, 2023; Pratiwi et al., 2023; Russo et al., 2024; Simbolon, 2025). These researchers found that there is no significant difference between digital or non-digital game-based learning on the students' competencies, motivation, and their effective learning (Balakrishna, 2023; Hamid et al., 2022; Naderi & Moafian, 2023; Pranata, 2023; Russo et al., 2024).

Moreover, non-digital learning media have been found to promote students' learning participation, collaboration, and satisfaction better than digital learning (Budiningsih et al., 2024). This is also in line with the studies on NDGBL from Simbolon (2025) and Naderi & Moafian (2023) for English learning. In her study, Simbolon (2025) found that non-digital games can improve the students' English learning skills and collaboration (Simbolon, 2025). Naderi & Moafian (2023) also found that non-digital games can improve the students' vocabulary mastery better than digital games (Naderi & Moafian, 2023). In the study by Mas'odi & Arma (2024), they found that direct interaction between teachers and students and physical materials can significantly increase students' engagement and understanding (Mas'odi & Arma, 2024). Therefore, NDGBL can provide physical activity and direct interaction that are less achievable through digital games, while also potentially supporting the students' vocabulary mastery and collaboration skills.

There are a few researchers who have tried to combine student worksheets with non-digital games. For instance, Sutalistya (2018) created a chain card game media that can be applied in student worksheets, and Mastuang (2020) developed a student worksheet on natural science with a card game named Kokami (Kotak Kartu Misterius). Additionally, Raupu et al.

(2022) and Khyoon and Zuhair (2024) also created similar student worksheets. However, they did not investigate the effects of the worksheets, and one did not use them as the main focus of the research. Moreover, only Sutalistya (2018), whose study provides the actual effect of the ND-GBSW strategy to learning. Consequently, there has been no study that provides how students perceive the advantages and disadvantages of these non-digital games combined with student worksheets. Moreover, the studies of the current students' perception toward student worksheets also have not explored the topic of non-digital games (Damayanti et al., 2020; Mufidah & Yaumi, 2022; Perry, 2025; Yusuf & Ali, 2022). Accordingly, it is important to conduct a study to explore this topic to provide a better understanding of this ND-GBSW strategy and to help the teachers in preparing more effective teaching method.

Therefore, this study aims to fill that gap by investigating how students at SMPN 1 Gerokgak perceive the use of ND-GBSW with the "Finding a Treasure" game in English learning. The findings are expected to provide insights for teachers to enhance students' engagement by utilizing non-digital media.

## **2. LITERATURE REVIEW**

Game-Based Learning (GBL) has become one of the most widely adopted instructional approaches for improving students' engagement and learning outcomes. GBL refers to the integration of complete game activities into the learning process to create meaningful learning experiences while balancing educational objectives with authentic problem-solving situations (Cózar-Gutiérrez & Sáez-López, 2016; Perrotta, 2013). Numerous studies have demonstrated that GBL contributes positively to students' knowledge acquisition, problem-solving skills, learning motivation, and academic achievement across various educational settings, including English language learning (Liu et al., 2020; Qian & Clark, 2016; Saputra et al., 2021; Widiana, 2022). These findings indicate that games are not merely recreational activities but can function as effective pedagogical tools to support meaningful learning.

In contexts where technological facilities are limited or smartphone use is restricted, Non-Digital Game-Based Learning (NDGBL) has emerged as an alternative instructional approach. NDGBL utilizes physical games, such as cards, board games, dice, or teacher-designed activities, to facilitate learning without relying on digital technology (Hamid et al., 2022). Previous studies reported that NDGBL provides learning outcomes comparable to digital game-based learning in terms of students' competencies, motivation, and learning effectiveness (Balakrishna, 2023; Naderi & Moafian, 2023; Pranata, 2023; Russo et al., 2024). Furthermore, NDGBL offers additional educational benefits, including greater social

interaction, collaboration, physical activity, cultural value integration, and opportunities for reflective learning, while reducing students' dependence on digital devices (Naik, 2014; Rahutami et al., 2019; Wang & Zheng, 2021; Widiانا et al., 2018). Consequently, NDGBL can serve as an effective complementary strategy alongside digital learning environments.

One instructional innovation derived from the NDGBL concept is the Non-Digital Game-Based Student Worksheet (ND-GBSW). Student worksheets are instructional materials containing learning activities, exercises, and practical tasks designed to facilitate independent learning and strengthen students' conceptual understanding (Almis, 2023; Astuti & Setiawan, 2013; Setianingrum et al., 2022). To enhance students' motivation and engagement, worksheets can be integrated with game-based activities. Unlike conventional worksheets, ND-GBSW embeds a complete physical game into the worksheet completion process, making the game an inseparable component of learning rather than merely an introductory activity or classroom icebreaker (Hamid et al., 2022). Previous studies have shown that integrating games into worksheets improves learning engagement, effectiveness, motivation, and comprehension (Handayani & Wiyatmo, 2016; Mastuang et al., 2020; Nikmah & Utami, 2023; Raupu et al., 2022; Rosianti & Wilujeng, 2023; Sitepu, 2022). In the present study, the ND-GBSW was implemented through the Finding a Treasure game, in which students searched for hidden worksheet materials before completing the assigned English learning tasks, thereby creating an interactive and enjoyable learning experience.

Students' perception constitutes another important theoretical foundation of this study. Perception refers to the process through which individuals receive, organize, and interpret sensory information to construct meaningful understanding of their experiences (Qiong, 2017; Robbins & Judge, 2013). In educational settings, students' perceptions represent their interpretations and evaluations of learning experiences, instructional strategies, and teaching materials based on their interactions within the classroom (Apsari et al., 2019; Tarmiji et al., 2016). According to Qiong (2017), perception develops through three sequential stages: selection, organization, and interpretation, while Robbins and Judge (2013) explain that perceptions are influenced by characteristics of the perceiver, the learning object, and the surrounding situation. Therefore, investigating students' perceptions of ND-GBSW is essential because positive perceptions may indicate that the instructional strategy successfully promotes engagement, motivation, and meaningful learning, whereas negative perceptions may provide valuable feedback for improving future instructional design. Previous empirical studies consistently demonstrate positive student responses toward both worksheets and game-based learning. Damayanti et al. (2020), Mufidah and Yaumi (2022), Perry (2025), and Yusuf and

Ali (2022) reported that well-designed worksheets support students' motivation, autonomy, conceptual understanding, and learning participation. Similarly, Lu and Lien (2020), Jihan and Maharsi (2024), Russo et al. (2025), Balakrishna (2023), and Simbolon (2025) concluded that game-based learning, including non-digital games, enhances students' engagement, self-efficacy, interaction, and learning achievement. Although previous research has confirmed the educational value of worksheets and game-based learning separately, as well as the effectiveness of NDGBL, empirical studies specifically investigating students' perceptions of Non-Digital Game-Based Student Worksheets (ND-GBSW) remain scarce. This gap provides the theoretical foundation for the present study, which seeks to examine students' perceptions of ND-GBSW implemented through the Finding a Treasure game in English language learning at SMP Negeri 1 Gerokgak.

### 3. RESEARCH METHOD

This study employed a Basic Interpretative Study with a qualitative approach to explore students' perceptions of the implementation of Non-Digital Game-Based Student Worksheets (ND-GBSW) using the *Finding a Treasure* game in English language learning. A cross-sectional questionnaire survey was used to support the qualitative findings and provide an overall description of students' perceptions (Ary et al., 2010; Creswell, 2014).

The study was conducted at SMP Negeri 1 Gerokgak, Bali. Participants were selected using purposive sampling. Thirty-two students from Class VIII-B who had experienced ND-GBSW completed the questionnaire. Subsequently, three students representing high, moderate, and low perception levels were selected through intensity sampling for semi-structured interviews to obtain more in-depth information.

Data were collected using a close-ended questionnaire and a semi-structured interview guide. The questionnaire consisted of 32 four-point Likert-scale statements developed based on Qiong's (2017) perception process and Robbins and Judge's (2013) perception factors, covering six dimensions: selection, organization, interpretation, perceiver factors, target factors, and situational factors. The interview guide was designed to explore students' experiences and perceptions of using ND-GBSW. Both instruments were administered in Bahasa Indonesia to ensure participants clearly understood the items and interview questions.

The instruments were validated by two expert judges. The questionnaire obtained a content validity coefficient of 0.88, while the interview guide achieved 1.00, indicating very high content validity. The questionnaire also demonstrated very high reliability with a Cronbach's Alpha coefficient of 0.843.

Questionnaire data were analyzed descriptively using mean scores and perception categories based on Koyan's (2012) criteria. Interview data were analyzed using Thematic Analysis (Braun & Clarke, 2006). Finally, the quantitative and qualitative findings were integrated to provide a comprehensive understanding of students' perceptions of the implementation of ND-GBSW.

#### 4. RESULTS AND DISCUSSION

This study was conducted at SMP Negeri 1 Gerokgak, Bali, to investigate students' perceptions of the implementation of Non-Digital Game-Based Student Worksheets (ND-GBSW) using the *Finding a Treasure* game in English learning. Data were collected in April 2026 through questionnaires and semi-structured interviews. The questionnaire was administered immediately after students completed the ND-GBSW activity, while interviews were conducted one week later with three students representing high, moderate, and low perception levels. Questionnaire data were analyzed using descriptive statistics, whereas interview data were analyzed using thematic analysis. Four major themes emerged from the qualitative findings: Engaging Learning Experience, Supporting Learning, Collaboration, and Implementation Challenges.

##### Questionnaire Results

The questionnaire findings show that students generally perceived the implementation of ND-GBSW positively. The overall mean score was 3.18, which falls into the Positive category based on Koyan's (2012) classification. All six perception indicators also obtained positive mean scores. Perceiver Factors achieved the highest mean score (3.24), indicating favorable attitudes, motivation, and learning experiences, whereas Target Factors received the lowest mean score (3.06). Nevertheless, the results demonstrate that students responded positively to every aspect of the implemented ND-GBSW.

**Table 1.** Students' Perceptions toward ND-GBSW.

| Indicator           | Mean Score | Category |
|---------------------|------------|----------|
| Selection           | 3.23       | Positive |
| Organization        | 3.13       | Positive |
| Interpretation      | 3.14       | Positive |
| Perceiver Factors   | 3.24       | Positive |
| Target Factors      | 3.06       | Positive |
| Situational Factors | 3.13       | Positive |
| Overall Mean        | 3.18       | Positive |

Source: Research Data (2026).

The questionnaire results provide an overview of students' positive perceptions toward ND-GBSW. To gain a deeper understanding of the experiences underlying these responses, the interview findings were analyzed thematically.

## **Interview Findings**

### ***Engaging Learning Experience***

The first theme indicates that students perceived ND-GBSW as an engaging learning activity. Participants consistently reported that integrating the *Finding a Treasure* game into the worksheet made English learning more enjoyable and less monotonous than conventional worksheet activities. The opportunity to search for hidden worksheet pieces, work in groups, and solve problems together increased their interest and maintained their attention throughout the lesson. One participant stated: *"It was more interesting because we searched for the papers outside the classroom. It made the lesson more enjoyable than doing ordinary worksheets."* (HL) Overall, students described the activity as enjoyable, motivating, and capable of creating a more active learning atmosphere.

### ***Supporting Learning***

The second theme shows that students perceived ND-GBSW as supporting their English learning process. Participants explained that the worksheet activities encouraged them to read more carefully, discuss answers with teammates, and understand the lesson through collaborative problem-solving. Several students also reported learning new vocabulary and becoming more confident in completing English tasks. However, students with lower English proficiency experienced difficulties understanding some worksheet instructions and vocabulary. Consequently, teacher guidance remained important during the implementation of the activity. Despite these challenges, participants generally agreed that ND-GBSW helped them understand the learning materials more effectively.

### ***Collaboration***

Collaboration emerged as another important theme. Students reported that the activity encouraged communication, cooperation, and idea sharing while completing both the game and worksheet tasks. Working in groups enabled students to assist one another in solving problems and completing the assigned tasks. Although minor communication problems occurred during the paper-searching stage, participants agreed that teamwork became stronger during the worksheet discussion. Overall, the interview findings indicate that ND-GBSW promoted positive peer interaction throughout the learning process.

### **Implementation Challenges**

Despite the overall positive perceptions, several implementation challenges were identified. Students mentioned difficulties related to understanding worksheet instructions, limited English vocabulary, locating the hidden papers, and the time required to complete the activity. These challenges were experienced more frequently by students with lower English proficiency. Nevertheless, participants generally considered these difficulties manageable and continued to view the activity positively. The findings suggest that clearer instructions, appropriate game difficulty, and effective time management could further improve future implementations of ND-GBSW.

The findings of this study indicate that students generally perceived the implementation of Non-Digital Game-Based Student Worksheets (ND-GBSW) using the *Finding a Treasure* game positively in English learning. The positive overall mean score (3.18) and the interview findings demonstrate that integrating non-digital games into worksheet activities not only created a more engaging learning environment but also supported students' learning processes, collaboration, and classroom participation. These findings suggest that combining game mechanics with structured worksheet activities can provide meaningful learning experiences while maintaining students' active involvement throughout the lesson.

One of the most prominent findings is that students perceived ND-GBSW as an engaging learning activity. Students reported that the *Finding a Treasure* game reduced boredom, increased attention, and motivated them to participate actively in English learning. This finding supports the perception theory proposed by Qiong (2017), which explains that individuals tend to pay greater attention to learning stimuli that are interesting and meaningful. Similarly, Robbins and Judge (2013) argue that perception is influenced by personal experiences and environmental stimuli. In this study, the combination of physical movement, problem-solving, and teamwork created a learning environment that attracted students' attention and encouraged sustained engagement.

These findings are consistent with previous studies on game-based learning. Liu et al. (2020) reported that game-based learning increases students' engagement and motivation by providing meaningful learning experiences. Likewise, Crocco et al. (2016) emphasized that enjoyment plays an important role in improving students' learning participation. The present study extends these findings by showing that similar benefits can also be achieved through non-digital game-based learning integrated into student worksheets. Rather than relying on digital technology, the physical and collaborative nature of the *Finding a Treasure* game successfully maintained students' interest throughout the learning activities.

Another important finding is that students perceived ND-GBSW as supporting their learning process. Participants explained that completing worksheet tasks through collaborative discussion encouraged them to understand the lesson more effectively, develop critical thinking, and enrich their English vocabulary. However, students with limited vocabulary and lower English proficiency still required teacher guidance to interpret worksheet instructions and complete the learning tasks. This finding indicates that game-based worksheets function as learning support rather than replacing the teacher's instructional role.

This result is consistent with Bado (2022), who argues that teacher facilitation remains essential during and after game-based learning activities to help students connect game experiences with learning objectives. Likewise, Nikmah and Utami (2023) and Rosianti and Wilujeng (2023) found that integrating games with student worksheets improves students' learning experiences and supports learning outcomes. Therefore, the effectiveness of ND-GBSW appears to result from the combination of meaningful learning tasks, collaborative interaction, and appropriate teacher guidance.

The study also found that ND-GBSW encouraged collaboration among students. Throughout the activity, students communicated, exchanged ideas, and worked together to solve worksheet tasks. Although minor communication problems occurred during the paper-searching stage, students reported that teamwork became stronger during worksheet completion and classroom discussion. These findings indicate that the collaborative design of ND-GBSW not only supported task completion but also promoted positive peer interaction during English learning.

This finding supports Naik (2014), who states that non-digital games provide opportunities for social interaction and collaborative learning. Similarly, Ke (2008) argues that cooperative game structures produce more positive learning attitudes than competitive or individual learning activities. In the present study, cooperation became one of the main factors contributing to students' positive perceptions because the activity required them to communicate, exchange ideas, and solve problems collectively.

Despite the overall positive findings, several implementation challenges were identified. Students experienced difficulties in understanding worksheet instructions, locating the hidden papers, managing the available learning time, and interpreting unfamiliar English vocabulary. These challenges were particularly experienced by students with lower English proficiency. Nevertheless, the challenges did not substantially reduce students' positive perceptions toward the activity, suggesting that they were viewed as manageable rather than discouraging.

These findings imply that successful implementation of ND-GBSW depends not only on attractive game mechanics but also on careful instructional planning. Teachers should provide clear worksheet instructions, adjust the difficulty level of the game, and allocate sufficient learning time to ensure that students remain focused on achieving the intended learning objectives. By addressing these aspects, ND-GBSW has the potential to become an effective alternative instructional strategy that promotes engagement, collaboration, and meaningful English learning experiences.

## 5. CONCLUSION AND SUGGESTION

This study investigated students' perceptions of the implementation of Non-Digital Game-Based Student Worksheets (ND-GBSW) using the *Finding a Treasure* game in English learning at SMP Negeri 1 Gerokgak. The findings indicate that students generally perceived ND-GBSW positively. The implementation of ND-GBSW increased students' engagement, motivation, collaboration, and participation during English learning while also supporting their understanding of the learning materials. Although several challenges were identified, such as limited vocabulary, difficulties in understanding instructions, and time management, these did not substantially affect students' overall positive perceptions. The findings suggest that ND-GBSW can serve as an effective alternative instructional strategy for creating more interactive and collaborative English learning.

This study was limited to one class in a single school; therefore, the findings cannot be generalized to other contexts. Future research is recommended to involve larger participant groups, different educational settings, and various English learning topics to further examine the effectiveness of ND-GBSW on students' learning outcomes and language skills.

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