# STUDENTS' PERCEPTION AND ATTITUDE ON 'CODEHUNTING' FOR OUTDOOR GRAMMAR LEARNING

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**Abstract:** For far too long, grammar lesson has been a concern amongst English teachers and a challenging journey for EFL learners. The conventional grammar learning process tended to be considered boring and complicated by students due to the monotonous teaching method used by teachers which leads to the students' disengagement. Therefore, the researchers tried to employ a new grammar teaching strategy called 'Code Hunting'. This survey research aimed to investigate the students' perspectives towards the use of Code Hunting in the grammar learning process. In this research, the researchers used a quantitative method with descriptive quantitative as the research design. The participants were 60 11th-grade students in one of the senior high schools in Batu, East Java. The findings of this research showed that most students strongly agreed that grammar learning through Code Hunting was easier to understand, far more engaging, and increased their willingness to learn grammar. This research implies that Code Hunting is an effective tool to teach grammar. Thus, it is recommended for English teachers to use Code Hunting and could be offered as a strategy to create an interesting learning experience, especially in the grammar learning process. Furthermore, it is suggested for future researchers to explore more of the students' perspectives using interview session in order to collect more in-depth information on the impact of Code Hunting.
Keywords: *perspective; attitude; language games; grammar mastery; outdoor learning; Code Hunting.*

## INTRODUCTION

Grammar mastery is crucial for English as a Foreign Language (EFL) learners as it aids in comprehending and constructing correct sentences. If EFL learners do not know the rules of grammatical structure of English, they will not be able to create sentences or even utterances properly. However, grammar for many students is considered a complicated and boring subject. They tend to dislike the idea of learning grammar, which results in the lack of their grammar mastery. Align with that, even students who are already exposed to grammar for several years are still facing struggles in developing good sentences and correct utterances due to its complexity (Larsen-Freeman & DeCarrico, 2019). Thus, teachers need to find a strategy to make students feel engaged during the learning process to help them understand grammar better.

In this digital era, teachers can take advantage of technology to make the grammar learning process more effective. According to Phuong (2022), applying technology in the learning and teaching process, especially in grammar, holds an important role as a tool in promoting open education. It also enhances the educational activities in the grammar learning process to be more effective. Students can deepen their understanding towards the topics that have been learned and look up to sources that can help them understand more effectively thanks to multi-dimensional information access, narrow certain spaces, save time optimally, and reduce distance.

On the other hand, the use of technology also has a drawback. As revealed by the findings of research conducted by Zahirah (2019) and Ali & Bharat (2021), the students felt that smartphones and online platforms decreased their social skills because they could not interact with other people (teachers nor friends). However, teachers can overcome this situation by using the right method of teaching which encourages students to use their

social skills to interact with their learning environment but does not put aside the use of technology in teaching such as outdoor learning combined with gamification.

The term outdoor learning has been used since back then when Aristotle proposed that learning should be given back to nature. According to Rivkin (1990), outdoor learning is necessary because the interaction between students and nature needs to be considered for students' development and outdoor learning activity supports this interaction. Outdoor learning refers to the idea of theoretical practice in the learning environment that is not classroom, so students can explore their surroundings in real time. As stated by Wells (2000), exposing students daily to natural settings can increase their cognitive abilities and enhance their focus. In this case, outdoor learning can be combined with gamification in the learning process to match nowadays computer-driven learning environments. Mosquera et al. (2024) defines that gamification is "the use of game elements and game design techniques in non-game contexts." It is used in many different contexts for various purposes, including language learning. One of the ways to integrate gamification with the use of technology with the outdoor learning activity is by conducting 'Code Hunting'.

'Code Hunting' is an activity developed by the researchers specifically to enhance the process of learning English grammatical structures in the classroom by combining both technology and outdoor-kinesthetic learning style. It is adapted from an Indonesian television game show called Mission: X. This game is an adventurous game done by asking a few groups of people to collect or find a specific item that has a clue on what to do or how to do a task. The first group that can solve the task wins and is guaranteed a present.

Adapting from this concept, the researchers tried to bring out the game to the grammar learning process, especially in teaching tenses. In bringing out the idea into a real-life situation, the researchers found limitations on how to bring the imagery in a real learning situation. Therefore, the Mission: X concept was combined with a similar outdoor GPS- based game called Geocaching. Palmárová & Lovászová (2012) stated that Geocaching is an actual real-time or real-life outdoor game about treasure hunting that uses GPS-enabled devices. Players navigate to a specific coordinate by using GPS and then attempt to find the geocache (container) hidden at that location. However, the researchers tried to adapt this concept by switching the geocaches with printed QR codes and swap the GPS coordinates by using a clue of where the specific QR code is hidden.

A similar learning process was once conducted in a study by Palmárová & Lovászová (2012) but under different scenarios. In that study, the learning process was heavy on the use of GPS and doing real life geocaching activity, but it did not have a standpoint whether it could be used for teaching English especially for grammar learning or not. The participants were also only pupils aged 10-14. Hence, the researchers want to find out the result of using a similar method done by Palmárová & Lovászová's (2012) study but modified and under a different scenario. Thus, this present study aimed to explore students' perspective and attitude on the use of an innovative teaching method, 'Code Hunting', combining outdoor activity and technology to enhance grammar learning. The research question is as follows: (1) What are the students' perspective on the usefulness of 'Code Hunting' as outdoor grammar learning activity? (2) What are the students' attitude toward 'Code Hunting' as outdoor grammar learning activity?

## METHOD

This survey study aimed to examine students' perspective and attitude on the use of 'Code Hunting' as an outdoor learning activity to learn grammar. The participants were 60 11th-grade senior high school students in one of the high schools in Batu, East Java. The implementation of 'Code Hunting' involved explaining the Present Perfect Tense inside of the classroom, followed by an outdoor activity where students searched for QR codes to complete grammar tasks. The first group who can finish the task correctly and faster than any other groups is declared as the winner and guaranteed a present.

A four-point Likert scale questionnaire with 17 items ranging from strongly agree (4) to strongly disagree (1) adapted from Castillo-Cuesta (2020), Eltahir et al. (2021), Cabrera-Solano (2022), and Alhebshi & Gamlo (2022) was used to collect data, focusing on perception on usefulness and attitude. It was adapted to focus more on the use of 'Code Hunting' as the outdoor learning activity to teach English grammar related to Present Perfect Tense. Besides, it validated by an English language teaching expert and tried out revealing that it was valid since the r-count for all items was more than the r-table (>0.361) and highly reliable since the

Cronbach's Alpha coefficients for both dimensions were more than 0.8

The final data obtained from the questionnaire were explained into more details in the form of descriptive statistics. In analyzing the data, Microsoft Excel was used to draw each items' percentage of agreement and average and present the categorizations in the form of tables. The categories were separated by applying the formula developed by Natawiria and Riduwan (2010) as seen in Table 1.

Table 1. *Classification of Categories*

| Category | Mean Percentage |
|---|---|
| Strongly Agree | 75% - 100% |
| Agree | 50% - 74.99% |
| Disagree | 25% - 49.99% |
| Strongly Disagree | 0% - 24.99% |

## RESULTS AND DISCUSSION

The results offer a detailed breakdown of two dimensions (usefulness and attitude) related to the students' perspectives on the use of Code Hunting as an outdoor learning activity to teach grammar.

*Results of students' perspective on the usefulness of Code Hunting as an outdoor learning activity to teach grammar*

The result of students' perspectives on the usefulness of Code Hunting as an outdoor learning activity to teach grammar can be seen in Table 2.

Table 2. *Students' perspective on the usefulness of Code Hunting as an outdoor learning activity to learn grammar*

| No | Item | Scale | | | | Mean | Category |
|---|---|---|---|---|---|---|---|
| | | SD | D | A | SA | | |
| 1 | Playing Code Hunting is helpful for developing my grammar mastery related to Present Perfect Tense. | 2 (1%) | 1 (1%) | 28 (41%) | 29 (57%) | 85% | Strongly Agree |
| 2 | Playing Code Hunting helps me deepen my understanding towards the use of Present Perfect Tense. | 0 (0%) | 6 (6%) | 27 (40%) | 27 (54%) | 84% | Strongly Agree |
| 3 | Learning Present Perfect Tense by playing Code Hunting helps me understand it better than using the regular method. | 0 (0%) | 9 (9%) | 27 (42%) | 24 (49%) | 81% | Strongly Agree |
| 4 | Playing Code Hunting improves my concentration and ability to recognize and use Present Perfect Tense in correct grammatical structures. | 0 (0%) | 4 (4%) | 32 (48%) | 24 (48%) | 83% | Strongly Agree |
| 5 | Playing Code Hunting makes me understand the context of using Present Perfect Tense. | 0 (0%) | 5 (5%) | 27 (40%) | 28 (55%) | 85% | Strongly Agree |
| 6 | I feel that I've developed my comprehension towards Present Perfect Tense due to using Code Hunting in the learning process. | 0 (0%) | 4 (4%) | 31 (46%) | 25 (50%) | 84% | Strongly Agree |
| 7 | I can answer questions given related to Present Perfect Tense because of the use of Code Hunting. | 0 (0%) | 7 (7%) | 32 (49%) | 21 (43%) | 81% | Strongly Agree |
| 8 | The activities done when playing Code Hunting are effective and help me solve some problems related to Present Perfect Tense that were difficult before. | 0 (0%) | 6 (6%) | 26 (39%) | 28 (55%) | 84% | Strongly Agree |
| 9 | Playing Code Hunting motivates me to improve my grammar mastery related to Present Perfect Tense. | 0 (0%) | 3 (3%) | 26 (38%) | 31 (60%) | 87% | Strongly Agree |
| 10 | Playing Code Hunting makes me participate more in the activities to learn Present Perfect Tense. | 0 (0%) | 4 (4%) | 30 (45%) | 26 (51%) | 84% | Strongly Agree |
| 11 | Playing Code Hunting makes me more active and dynamic in the process of learning Present Perfect Tense. | 0 (0%) | 8 (8%) | 30 (46%) | 22 (45%) | 81% | Strongly Agree |

According to Table 2, the first item had an average percentage of 85%, meaning that the students strongly agreed that applying language games such as 'Code Hunting' could help them develop their grammar mastery. In the second item, the percentage reached 84%, which showed that the students strongly agreed that they were able to understand more related to the grammatical structures by using 'Code Hunting' in the learning process. The average percentage in the third item counted to 81%, indicating that the students strongly agreed that understanding grammar structures using the regular or traditional method was boring and not attractive for them, that they preferred to be taught using 'Code Hunting' because it was easier to understand. In the fourth item, the average percentage showed 83%, meaning that the students strongly agreed that

when they were studying grammar structures using 'Code Hunting', it helped them concentrate more and to be better in using and recognizing certain grammar tenses. In the fifth item, the average percentage was 85%, indicating that students strongly agreed that they were able to indicate and understand the context of certain grammar structures better due to the use of 'Code Hunting'. In the sixth item, its average percentage reached 84%, meaning that the students strongly agreed that by integrating 'Code Hunting' in their learning process, it helped them comprehend more about certain grammar tenses. In the seventh item, the average percentage amounted to 81%, meaning that the students strongly agreed that 'Code Hunting' is beneficial to help them answer questions related to the use of grammatical structure. The eighth item got an average percentage of 84%, indicating that students strongly agreed that the problems that they had related to grammar structures that were difficult before were solved due to the activities

performed during 'Code Hunting'. Furthermore, the ninth item got an average percentage of 87%, meaning that the students strongly agreed that they were motivated more to increase their grammar mastery after playing 'Code Hunting'. In the tenth item the average percentage amounted to 84%, indicating that the students strongly agreed that playing 'Code Hunting' increased their willingness to participate in the grammar learning activities. The last item got an average percentage of 81%, meaning that the students strongly agreed that 'Code Hunting' created a grammar learning environment that allowed them to be more active and dynamic.

*Results of students' attitude on the use of 'Code Hunting' as an outdoor learning activity to learn grammar*
The result of the students' perspective on their attitude on the use of Code Hunting as an outdoor learning activity to teach grammar can be seen in Table 3.

Table 3. *Students' attitude on the use of Code Hunting as an outdoor learning activity to learn grammar*

| No | Item | Scale | | | | Mean | Category |
|----|------|----|---|---|----|------|----------|
| | | SD | D | A | SA | | |
| 12 | I enjoy learning Present Perfect Tense by playing CodeHunting to develop my grammar mastery. | 0 | 5 | 26 | 29 | 85% | Strongly Agree |
| | | 0% | 5% | 38% | 57% | | |
| 13 | I like learning Present Perfect Tense by playing outdoorgame through Code Hunting because I can play and discuss with my friends. | 0 | 7 | 15 | 38 | 88% | Strongly Agree |
| | | 0% | 7% | 21% | 72% | | |
| 14 | I like learning Present Perfect Tense through playing CodeHunting because it encourages me to answer the questions. | 0 | 4 | 27 | 29 | 85% | Strongly Agree |
| | | 0% | 4% | 40% | 57% | | |
| 15 | During the learning process, I feel encouraged andenthusiast when playing Code Hunting. | 0 | 4 | 31 | 25 | 84% | Strongly Agree |
| | | 0% | 4% | 46% | 50% | | |
| 16 | While learning Present Perfect Tense using Code Hunting,I love and enjoy getting feedback after doing the task. | 0 | 2 | 29 | 29 | 86% | Strongly Agree |
| | | 0% | 2% | 42% | 56% | | |
| 17 | If I have the chance, I will choose to play Code Hunting toimprove my grammar mastery in the learning process. | 0 | 7 | 33 | 20 | 80% | Strongly Agree |
| | | 0% | 7% | 51% | 41% | | |

According to Table 3, the twelfth item's average percentage reached 85%, indicating that the students strongly agreed that learning English tenses using Code Hunting was enjoyable to develop their grammar mastery. The highest average percentage was shown in the thirteenth item, demonstrating that 88% of the students strongly agreed that they enjoyed grammar learning in which they could play and have discussion with their friends and Code Hunting allowed them to do that. In addition, the fourteenth item got an average number of

85%, indicating that the students strongly

agreed that they favour learning grammar by answering the questions while playing games because Code Hunting encouraged them to do so. In the fifteenth item, the average percentage was 84%, meaning that the students strongly agreed that Code Hunting resulted in encouragement and enthusiasm for them during the grammar learning process. Furthermore, the sixteenth item showed an average percentage of 86%, meaning that the students strongly agreed that they felt fond and enjoyable when getting feedback from the teacher after doing the task related to grammar questions through playing Code Hunting. The last item got

an average percentage of 80%, indicating that the students agreed if they had the chance, they would choose performing Code Hunting to help them increase their grammar mastery instead of using the regular method.

This study explored high school students' perspectives towards the use of 'Code Hunting' in learning grammar. The results showed that most of the participants gave very positive responses, shown from the average percentages of the students' responses in the questionnaire reaching above 80% for each item.

Regarding the usefulness of 'Code Hunting', it was found that the students strongly agreed that 'Code Hunting' helped them develop their grammar mastery. Code Hunting significantly fostered the students' grammar mastery by integrating outdoor activities with grammar learning which found that it effectively enhances the students' grammar comprehension. This method addresses what most Indonesian students face. As highlighted in Daskan's (2023) study, which exposed that most students were lacking in their grammar mastery due to the low level of understanding that they had towards the use, concept, and context of the grammar rules. But on the other hand, if the teacher explains grammar items and uses an engaging method, 88% of them feel satisfied. This shows that without an appropriate learning and teaching method, students would still face some struggles to use grammar not only in academic or classroom settings but also in real life situations. Taking evidence from the current situation, 'Code Hunting' could be used as an alternative method to teach grammar in the classroom. Engaging teaching methods such as Code Hunting enhances satisfaction and motivation among students. This is supported by a study conducted by Yıldırım & Akamca (2017), revealing that students exposed to outdoor settings in the learning process had increased their cognitive ability significantly. Thus, implementing Code Hunting in the grammar learning process can effectively foster the students' comprehension and motivation.

An extension from what is stated above, in 'Code Hunting', the students' struggles were tried to be overcome by giving them a learning environment based on their preferences and needs in this computer-driven era, related to the use of technology in the learning process including using their own mobile phone. As Son (2018) said that the way we are learning and teaching nowadays have changed due to the growth of technology. He also claimed that using educational technologies (EdTech) frequently in the learning environment needs to be emphasized during the language learning process. Hence, using technology in the learning process could help students get a better understanding of grammar rules. This idea was tried to be implemented in the 'Code Hunting' activity by combining outdoor learning activity with the use of technology by using the students' mobile phone to solve the tasks given. Results indicated significant improvement in understanding Present Perfect Tense rules, as students engaged actively in real-world applications. It also helped them to deepen their understanding towards the use of Present Perfect Tense in sentences by applying the correct rules. This is supported by Baharudin and Yunus (2018) who said that integrating technology in the learning process could enhance teaching efficacy, supporting the use of language games to bolster grammar mastery, particularly among teenage EFL learners. Phuong (2022) similarly found that integrating technology in the students' grammar learning process boosted their performance better than limiting the access for using technology inside the classroom. Therefore, educators should embrace creative approaches, permitting mobile phone use to foster an interactive learning environment.

Moreover, the researchers also found that the students felt fond of the way 'Code Hunting' provided a learning environment that was new to them. By integrating language games through 'Code Hunting' and using technology in the grammar learning process, this approach helped them understand the grammar rules better than when they were taught using the regular methods. Taking evidence from a study conducted by Kumayas and Lengkoan (2023), regular or traditional methods in the process of teaching and learning English still using 'chalk-and-talk' have become outdated because they were not suitable for students' needs nowadays, decreased their motivation in learning, and also created a feeling of boredom. In this era, learners are exposed to diverse approaches to task-based activities to foster better participation and engagement throughout the lesson including game applications with engaging interfaces (Zarzycka-Piskorz, 2016). Therefore, if teachers still cannot follow the wave of technological growth, it will affect their students' learning outcomes and grammar comprehension. This is aligned with Yaccob and Yunus's (2019) statement which proposed that the advantage of language games to improve the grammar learning and teaching process are

necessary and essential in order to help them foster their grammar mastery.

Exposing students to the new learning environment by integrating 'Code Hunting' to the learning process breaks the students' limits to speak their thoughts and enables them to express themselves freely. Integrating 'Code Hunting' in the learning process could make this happen because 'Code Hunting' promotes a shift from a teacher-centred into students- centred by providing activities that support student-centred learning (SCL). According to Pastini and Lilasari (2023) teacher-centred instruction, with its concern only on transferring passive knowledge and common approaches, often meets a situation in which it cannot fulfill the individual learning styles and interests of each student which could lead into serious issues such as students' lack of engagement, a lack of control over learning, and eventually the limited ability to acquire critical 21st-century skills. Therefore, the specific learning environment provided by 'Code Hunting' was meant to provide this experience in the learning process to stimulate the students' creativity, enhance their critical thinking skills, and also strengthen their ability to work in a group. Which resulted in an outcome where the students felt fond and enjoyed the learning process better, and they were able to use their creativity to solve the tasks by utilizing technology while also working in a group with their peers. This result is in line with a study conducted by Pastini and Lilasari (2023) which revealed consistent evidence supporting the effectiveness of SCL in enhancing students' academic performance. It also improved the learning outcomes, heightened student engagement, and increased motivation.

Exploring more to the findings of this research, it was found that playing 'Code Hunting' boosted the students' concentration and ability to recognize and understand the context of the grammar rules when they were given a task or question. 'Code Hunting' helped students develop their comprehension towards grammar rules which makes them easily answer questions related to the use of grammar rules in sentences. These findings are in line with previous research conducted by Łodzikowski and Jekiel (2019), stating that language games are perceived as useful resources because it can increase learners' engagement in class in comparison without using language games inside of the classroom. By integrating 'Code Hunting' they also understood the use of Present Perfect Tense in a sentence or when trying to create sentences. This is consistent with the findings of the study conducted by Cabrera-Solano (2022), due to the use of language game learning, the students noticed that using this approach helped them enhance their concentration and ability to identify and apply new words as well as grammar rules in the target language. Learning grammar should not be as boring as it already is. Grammar learning that is too dependent on rules often leads to the students' lost interest and decreasing their willingness to learn grammar. Therefore, English learners are more interested in learning particular grammar through specific language games that include them to do tasks related to grammar structure in real-life contexts (Yaccob and Yunus, 2019). The use of games in the English learning process not only affected the classroom environment to be better but also fostered the students' performance academically in the target language (Delgado-Algarra, 2020).

Regarding the students' attitude towards the use of 'Code Hunting' as an outdoor learning activity to teach grammar, the finding showed that the students enjoyed learning tenses by playing games through 'Code Hunting'. Before using language games, they struggled with grammar items even after completing the lessons because they find traditional explanations confusing and unpleasant. Integrating language games in the grammar learning process brings about the sentiment that teaching and learning of grammar should not be done in isolation but in a proper context and authentically (Yaccob and Yunus, 2019). This method helps students to comprehend grammar better and makes the subject less daunting. The process of grammar learning needs to be taught with an intention to increase an active interaction by implementing the targeted grammar items and by giving them the opportunity to use the targeted language freely (Daskan, 2023). Hence, playing 'Code Hunting' could help them to understand grammar better because it was easier to understand grammar rules by playing language games because conducting a learning process that utilizes the correct way and method of teaching based on the students' needs really affects the outcome of the course regarding the students' grammar mastery (Effendi et al., 2017).

Furthermore, the outcome of the questionnaire showed that learning grammar through interactive methods, such as utilizing language games and allowing them to discuss with their peers is more preferable by students over traditional memorization and writing. Most teachers restrict the students from having discussions with their

peers, but in fact, allowing them to have discussions helps them to deepen their understanding. According to Yaccob and Yunus (2019), utilizing language games in the grammar learning process holds an essential role to foster the students' ability and confidence to use grammar rules correctly in performing language skills including when solving riddles and problems. Therefore, encouraging the students to apply grammar in real-life settings through outdoor games such as 'Code Hunting' could increase their grammar mastery. This finding is also found in a study conducted by Yavuz et al. (2020) revealing that language games improve fluency and engagement by encouraging students to use grammar rules in context.

Moreover, it was also found that integrating 'Code Hunting' in the learning process helped students boost their motivation to improve their grammar mastery. Integrating games to grammar learning could give huge impacts on the students' engagement during the learning process such as setting goals, concentrating on tasks, building enthusiasm, enjoying the learning experience, collaborating, and meeting their learning needs (Ardi and Rianita, 2022). 'Code Hunting' promoted students to explore and learn new things by doing group tasks which encouraged them to take risks and make decisions in the process of the grammar learning, resulting in the students' confidence when performing language skills using grammar items correctly. This is supported by a study conducted by Phuong (2022) revealing that the outcomes of the teaching and learning process were better if teachers could choose suitable methods to teach. These approaches not only help teachers prepare the lessons better but also it gives impacts on the students to have more chances to master the lessons better at school so that they can freely and confidently explore and use their insights from what they have learned inside of the classroom and use it in real life situations.

In addition, the finding also showed that the students strongly agreed that playing 'Code Hunting' encouraged them to actively answer the questions related to grammar structures due to the competitive and engaging learning environment. This finding is supported by Can's (2023) study stating that interactive learning through games enhance the students' engagement and provide a dynamic learning experience. The use of games also acted as a motivational factor for them to use the targeted language creatively and communicatively other than offering relaxation and enjoyment to them as the participants. The statement is in line and reflected on the outcome of the data which showed that the students indeed were encouraged to learn and answer questions related to the Present Perfect Tense. Moreover, the finding also showed that the students tended to like and enjoy getting feedback from the teacher after they did the task. The same result was also found in the Cabrera-Solano's (2022) study which revealed that the students appreciated the way teachers gave them feedback after doing the task by supporting them with clear instructions and positive feedback. Additionally, students preferred learning through games like 'Code Hunting' for mastering grammar, consistent with Alhebshi and Gamlo's (2022) study, which found mobile language games more enjoyable and participative than traditional methods. Overall, students responded positively to 'Code Hunting,' indicating it could be an effective strategy for teaching grammar.

## CONCLUSION

This study found that integrating 'Code Hunting' as an outdoor learning activity significantly enhanced students' grammar mastery and motivation. The interactive and engaging nature of the activity meets the needs of modern learners. However, the study is limited by its small simple size and focus on a single grammatical concept, Present Perfect Tense. To explore more on the students' perception and attitude on the use of 'Code Hunting' to improve their grammar mastery, future researchers should explore its long- term impact and their applicability to other grammatical structures.

## ACKNOWLEDGEMENT

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