



## **Exploring students' word learning strategies in project based learning activities**

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**Abstract.** Vocabulary plays a crucial role in English language learning. Hence, students should have certain strategies to obtain sufficient vocabularies to facilitate their language learning. Word-learning strategies are ones that students can use to help them learn vocabularies more optimally. Therefore, this study aims to identify students' word-learning strategies and the obstacles they encounter during project-based learning activities. A case study method was employed to obtain the data using an in-depth interview and direct observation in the classroom. Six students and one English teacher were involved as research participants. The results identify that students use several word-learning strategies during the project-based learning activities. The strategies are definition; asking for word meaning to the teacher or looking up a dictionary, inference; inferring the word meaning from teacher's explanation, and association; understanding the word from context. Besides, the obstacles that students often encounter are related to lack of time during the learning activities and difficulty in remembering newly found vocabularies. Therefore, a comprehensive evaluation is necessary to improve students' language learning quality. In addition, further research related to the above-mentioned word-learning strategies are highly recommended to examine its effectiveness.

**Keywords:** *vocabulary, word-learning strategies, project-based learning.*

### **INTRODUCTION**

Vocabulary is the crucial things in the English language teaching program. This can be seen that vocabulary appears in every language skill teaching (listening, reading, writing, and speaking), and also aspects of language form. Students must develop efficient methods for studying vocabulary on their own because only a limited portion of the word list can be taught in the classroom. "The planned approaches that a word-learner takes as an agent of his or her own word learning" is referred to as "word-learning strategies." (Zimmerman, 2014). Therefore, in teaching vocabulary requires the strategies so that it can be conveyed effectively to students.

Students' vocabulary grows throughout students' lifetime through direct and indirect learning with various types of strategies. The numerous student strategies can be used to direct and assist in the development of their language abilities. For the learning material to be simple to understand, it is crucial that students complete more exercises and tasks under the guidance of the teacher for a longer amount of time. However, despite the fact

that word-learning strategies can improve students' vocabulary abilities, there are still certain challenges. The majority of language learners will concur that in order to gain vocabulary effectively, students require acquiring vocabulary abilities because non-regular vocabulary cannot be memorized without an extra amount of effort. (Susanto, Halim, & Nuwrun, 2019).

There are so many strategies that students can do to be master on words. These can be called as word-learning strategies and can be explored in vocabulary development. In addition, word-learning strategies are mental processes that a learner employs when they come across an unknown word while reading. The most frequently used word-learning strategies are using word parts, using context and using the dictionary. Meanwhile, several other word-learning strategies also include word building, definition clause, inference clause, and word associations (Brown & Lee, 2015; Graves, 2017). Therefore, word-learning strategies can be limited to learners' ways of learning new words through definition, inference, and association that can be explored through certain context or in a dictionary.

As a proponent of students' word-learning strategies, there are various kinds of learning methods that can be used, one of them is project-based learning (PBL) method. Because it can encouraged students to actively learn English, project-based learning is a good method for teaching English to Senior High School students (Syafaal, Melani, Syahrul, & Putri, 2022). The project itself can be interpreted as an activity that consist a lot of work and requires coordination and specialization of support staff to complete it. Thus, it is not the project that is the main core of this learning model but problem solving and implementing new knowledge experienced from project activities.

In project-based learning, students are given a task that is complex, challenging, complete, and real. The task can then be completed with the help of the right materials. Through the completion of appropriate assignments and the production of original works, students who learn through projects-based learning create their own knowledge (Halimatusyadiyah, Anasya, & Pajri, 2022). Making basic questions, concentrating on learning goals, participating actively in learning activities, student engagement, utilizing technology, and producing tangible artefacts are the six key aspects of project-based learning. Meanwhile, the characteristics of project-based learning involve improving students' critical thinking abilities so they may be creative and motivated to collaborate. It also enables students to acquire material independently and present their learning in a variety of ways (Dewi, 2022).

Like other learning models, project-based learning certainly has its advantages and disadvantages in the learning process as one of the supports for students' word-learning strategies. Mihic and Zavrski (2017) said that advantages discovered during the literature review include (1) when students are engaged and interested in the material, classroom management is made easier, (2) the teacher continuously picks up new ideas from supervising various projects with new students group each year, and (3) the teacher may find project-based learning to be more enjoyable, engaging and motivating. Meanwhile, the disadvantages of project based learning are (1) challenges in planning and execution and additional effort in these activities, and (2) student's lack of experience in more active learning roles and their negative resistance to change.

Some previous studies have done exploring students word-learning strategies in project-based learning. Project-based learning had great effects and useful in enriching students' vocabulary knowledge and communication ability (Kholis & Aziz, 2020; Shafaei, Poorverdi, & Parvizi, 2007). However, with the importance of mastering vocabulary in

learning English and starting many schools implementing project-based learning, it is necessary to explore appropriate and effective word-learning strategies. Meanwhile, all these previous studies only focused on junior high school students using quantitative method, and there are not many similar studies that lead to senior high school students using qualitative methods. Therefore, this research is very important to be carried out. Two research questions are raised in this study, namely 1) What are the word-learning strategies applied by students in project-based learning activities? and 2) What are the obstacles faced by students in applying word-learning strategies in project-based learning activities?

## LITERATURE REVIEW

Learning English as a foreign language requires sufficient vocabulary to play in the four language skills. In general, vocabulary can be defined as a list of words and their meanings, especially at the back of books used for teaching foreign languages. Vocabulary indeed plays a crucial role in learning a second language (Gregorie, Lyn Ching C, & Ilustre, 2022). A sound that expresses meaning and constitutes an autonomous linguistic unit is another definition of vocabulary. This suggests that vocabulary is an essential component of language; without vocabulary, language cannot be utilized to maintain all information (Kholis & Aziz, 2020).

In other words, dictionaries and words are constantly connected to vocabulary. A person's vocabulary is made up of all the terms they are familiar with and frequently use. It normally develops and grows with age, working as a crucial and practical tool for gaining knowledge and communication. A list or set of words for a specific language or a list or set of words that speakers of each language may use are referred to in an identical statement of vocabulary terms (Treiman, Decker, & Kessler, 2019; Wang, Teng, & Chen, 2015). That is, there is more than one word used by speakers of a particular language.

Vocabulary learning has a common role in taking part in the progress of one's language learning. Teaching vocabulary is crucial in every field, including speaking, listening, and writing. A person's ability to learn a language successfully or unsuccessfully depends on their vocabulary. A person's ability to comprehend what they read or hear will improve with a wider vocabulary, which will then enable them to employ the vocabulary in oral or written communication (Al-Khreshah & Al-Ruwaili, 2020). Programs that teach vocabulary can help students learn languages better since they can enhance their language and reading abilities. Learners of every language must possess a comprehensive vocabulary in order to successfully communicate and express themselves in that language (Sonbul & Schmitt, 2010).

Word-learning strategies refer to “the planned approaches that a word-learner takes as an agent of his or her own word learning” (Zimmerman, 2014). Word-learning strategies are used to make word-learner master at words or vocabulary. In this study, the term word-learning strategies used is similar to the term vocabulary learning strategies because there are many previous studies that equate the two terms (Ahmedovna, 2022; Alhatmi, 2019; Li, Ringstaff, Tripathy, Flynn, & Thomas, 2019).

Word-learning strategies include dictionary use, morphemic analysis, and contextual analysis. The usage of dictionaries educates students about the variety of word meanings as well as the significance of selecting the best definition for the given situation. The technique of determining a word's meaning by the analysis of its morphemes, or meaningful components, is called morphemic analysis. Contextual analysis refers to determining a word's meaning by carefully examining the surrounding language.

Typically, contextual analysis instruction teaches students to use both broad and specific context clues (Ahmedovna, 2022)

Word-learning strategies are also mental processes that a learner employs when they come across an unknown word while reading. The most frequently used word-learning strategies are using word parts, using context and using the dictionary. Meanwhile, several other word-learning strategies also include word building, definition clause, inference clause, and word associations (Brown & Lee, 2015; Graves, 2017). Therefore, word-learning strategies can be limited to learners' ways of learning new words through definition, inference, and association that can be explored through certain context or in a dictionary.

There are an endless number of various teaching and learning approaches. There are five existing modifications to the approaches listed; for instance, a methodology's name may differ; 1) Place-Based Learning, participation in school or community projects helps to capture learning. It exposes students to the history, cultures, opportunities, and experiences of their community and uses these as a basis for learning immersion in any subject area; 2) Experience-Based Learning, students are led on a trip that begins with "place" as the beginning point and introduces them to a new cultural and contextual experience. The unique characteristic of experience-based learning is that it places the learner's experience at the centre of all teaching and learning decisions (Andresen, Boud, & Cohen, 2020). 3) Peer-to-Peer, Crowd-Sourced & Social Learning, the ability to evaluate and certify learner-created content while relying on student engagement should be a feature of social learning environments (Orooji & Taghiyareh, 2018). 4) Project-Based Learning, by spending a significant amount of time investigating and coming up with solutions to genuine, interesting, and challenging questions, problems, or challenges, students gain knowledge and abilities (Almulla, 2020). 5) Challenge-Based Learning, dealing with problems in the real world while learning. A motivating transdisciplinary approach to teaching and learning, challenge-based learning encourages students to employ technology used in daily life to address real-world issues. (Leijon, Gudmundsson, Staaf, & Christersson, 2022).

Project-based learning is a good method for teaching English to Senior High School students since it encourages them to practice their language skills. (Syafaal, Melani, Syahrul, & Putri, 2022). The project itself can be interpreted as an activity that consist a lot of work and requires coordination and specialization of support staff to complete it. Thus, it is not the project that is the main core of this learning model but problem solving and implementing new knowledge experienced from project activities.

A student-driven and teacher-facilitated method of learning is project-based learning. By asking questions that excite their innate curiosity, learners seek knowledge. An inquiry is the first step in every project. Under the guidance of the teacher, students formulate a question and are led through the research process. By developing a project to present to a chosen group of people, discoveries are demonstrated. One of the most effective methods for developing autonomous thinkers and learners is project-based learning. By creating their own queries, organizing their research, planning their learning, and employing a variety of learning methodologies, students deal with real-world challenges. This student-driven, inspiring method of teaching results in students who master important skills that will lay a solid foundation for their future (Bell, 2010).

## **METHOD**

The approach in this study used a qualitative approach in the form of a case study by exploring the object of research in the form of matters relating to students' word-learning strategies in project-based learning activities. Case studies are a design of inquiry found in many fields, especially evaluation, in which the researcher develops an in-depth analysis of a case, often a program, event, activity, process, or one or more individuals (Creswell & Creswell, 2018). The cases studied can be seen from teacher who have implemented project-based learning in the form of videos and scrapbooks and students who have implemented one of several types of word-learning strategies in learning vocabulary. Therefore, this case is the reason for using the case study method in this study.

This research was taken in one of the senior high school in Banjarmasin. This school was chosen as a research setting because of implementing project based learning in learning activities and having students who fit the criteria. The number of participants in this study were six students and one teacher. The students' participants were chosen with the help of purposive sampling methods from all 11th grade students with the criteria of implemented one of word-learning strategies and has the highest score in English. Meanwhile, teacher participants were selected with the criteria of applying project-based learning in teaching and learning activities in the classroom as well as adding data and to confirm the accuracy of the information. The project implemented by the teacher is in the form of video assignments and scrapbooks. The teacher also accompanies and assists students to completing one of the characteristics of project based learning (Halimatusyadiyah, Anasya, & Pajri, 2022).

In this study, the researcher used semi-structural in-depth interviews. Semi-structural interview is the question is not only which had been prepared, but can appear new questions during the question and answer to get a detailed view of the interview (Arafah, 2018). Questions in this in-depth interviews are created or developed to answer the research question and fulfil the objectives of this study. This study also used classroom observation for data collection techniques. The observation is focused on exploring students' word learning strategies and its application on project-based learning activities in second grade of senior high school in Banjarmasin according to the checklist provided by the researcher. This observation checklist is taken from previous research Anggraini (2020) that have similar goals.

The data analysis procedures are performed on the collected data in order to answer the research questions. Techniques of data analysis carried out by processing the result of data collection techniques. The data was analysed based on an interactive model of analysis promoted by Miles, Huberman and Saldana (2014). There are three different types of this model including; data condensation, data display, conclusion drawing or verification and data collection from an interactive cyclical process.

## **RESULT AND DISCUSSION**

Based on the data shown above, which was obtained from class observations and interviews with the teacher and several students, it was found that there were several projects that had been given by the teacher in student learning evaluation activities. Since vocabulary is crucial in learning English, it was also found that almost all students in this school have their own strategies in learning vocabulary through the project-based learning activities.

According to the explanation above, several strategies were found that were used by students, among others dictionary use, definition, inference and word associations or context. Based on the theory of Ahmedovna (2022); Brown and Lee (2015); and Graves, Schneider and Ringstaff (2017), the strategies found in this study can be called as word-learning strategies. These strategies refer to students' efforts in learning or enriching vocabulary which in this study is more specific through the project-based learning activities. Students do use different strategies in learning vocabulary, but they also tend to try several strategies. In this case, students are not only monotonous using one strategy, they can use several strategies simultaneously or alternately during learning.

In its application, these word-learning strategies in project-based learning enable students to enrich their vocabulary as well as understand learning material. Students combine strategies by also utilizing various learning media in project activities to support them in achieving learning goals. This makes students more active and provides opportunities for students to use several relevant skills according to the given project. This will also make the 'work' and the language skills are developed as pointed out by Brunetti, Petrell and Sawada (2003).

Although there were several strategies found in this study, based on the findings, most of the students used the dictionary use strategy in learning vocabulary through the project-based learning activities. The use of the dictionary is the most widely used because it is considered the easiest strategy to implement and allows students to support vocabulary learning. It is also called if the use of a dictionary is used as validation material from students' memories of the meaning of certain vocabularies. This is in accordance with the study conducted by Al-Khresheh and Al-Ruwaili (2020) that memorable strategy is categorized as a favourite strategy for students.

Apart from using the dictionary, it was found that word associations or context strategies were also widely used by students in learning vocabulary through the project-based learning activities. Students who choose this strategy usually look at sentences or even the text as a whole until they can finally draw conclusions about what the vocabulary means. In addition, this strategy is also used by students in determining the meaning of the word chosen in the dictionary use strategy. Since in the dictionary there are usually several word choices, students must analyse the context and adjust the choice of vocabulary. It is related to the study conducted by Ahmedovna (2022) who stated that word-learning strategies include dictionary use, morphemic analysis and contextual analysis. However, the morphemic analysis of the strategies referred to in this study were not found with the assumption that these strategies were not in accordance with the educational level of the students who were participants (high school students).

Another strategy used is definition and inference. Although similar, the use of definition and inference strategies usually depends on the teacher's answers. When the teacher directly mentions the meaning of a vocabulary, it is usually referred to as a definition. However, if the teacher only describes and requires students to infer a vocabulary meaning, then it is called inference. This is consistent with the study by Brown & Lee (2015) and study by Graves (2017).

Aside from the strategies used by students, in this study it was also found that project-based learning was liked by lots of student. Students and even teachers also said that project assignments made learning more enjoyable, students were more active in learning activities and could explore many things including new vocabulary. This is in line with the research conducted by Kholis and Aziz (2020) and Filippatou and Kaldi (2019) which

states that the use of project-based learning is useful in enriching students' vocabulary and making learning more fun and meaningful.

Still, of the many students who like project-based learning activities, there are also students who feel they don't like project-based learning in a number of conditions. One of the less favourable conditions is when it requires students to work in a group, which makes some students feel uncomfortable. Besides that, both teachers and students find the project-based learning is time consuming and requires some preparation. This finding is totally in line as explained by Halimatusyadiyah, Anasya and Pajri (2022) about the disadvantages in project-based learning activities.

Talking about the obstacles students face in learning vocabulary through the project-based learning activities, students state that the obstacle most often encountered is inefficiency in learning time. This is overcome by classroom management and full support by the teacher in the learning process. In this study the teacher provided support by writing some vocabulary that was considered difficult and relevant to the context of the learning material along with its meaning on the blackboard. This is expected to be a support for students in learning vocabulary. This statement is also in accordance with the study of Farjami and Aidinlou (2013) which says that students need to get used to remembering vocabulary and its meaning in large numbers in each lesson.

## CONCLUSION

Learning vocabulary is really important in language learning, so the students should be equipped by sufficient knowledge of how to learn vocabulary effectively. Of many strategies, word-learning strategies are in general more frequently used by the students since they are closely related to the learning activities, especially in project-based learning activities. The results of this study concluded that students use several word-learning strategies such as definition by asking for word meaning to the teacher or looking up a dictionary, inference by inferring the word meaning from teacher's explanation, and association by understanding the word from context. In addition, the obstacles that students often encounter are related to lack of time during the learning activities and difficulty in remembering newly found vocabularies. Therefore, improving students' language learning quality is needed through a comprehensive evaluation. Further research related to these word-learning strategies are highly recommended to examine its effectiveness.

## REFERENCES

- Ahmedovna, O. S. (2022). Independent Word Learning Strategy. *Web Of Scientist: International Scientific Research Journal*, 997-1002.
- Alhatmi, S. (2019). Vocabulary Notebook Keeping as A Word Learning Strategy: State of the Art Review of Research on L2 Learners' Use of the Strategy. *British Journal of English Linguistics*, 45-59.
- Almulla, M. A. (2020). The Effectiveness of the Project-Based Learning (PBL) Approach as a Way to Engage Students in Learning. *SAGE Open*, 1-15.
- Bai, Z. (2018). An Analysis of English Vocabulary Learning Strategies. *Journal of Language Teaching and Research*, 9, 849-855.

- Besthia, W. (2018). A Survey on Vocabulary Learning Strategies: A Case of Indonesian EFL University Students. *IOSR Journal of Research & Method in Education*, 8, 29-34.
- Gregorie, D., Lyn Ching C, P., & Ilustre, R. G. (2022). Vocabulary Acquisition and Learning Strategies in Second Language Learning: A Review Paper. *International Journal of English Language Studies*, 58-62.
- Halimatusyadiyah, N., Anasya, S. W., & Pajri, A. (2022). The Effectiveness of The Project Based Learning Model in The Independent Learning Curriculum. *Jurnal Kewarganegaraan*, 6, 4836-4844.
- Hamza, F. S., Yasin, M. S., & Aladdin, A. (2017). The Use and Evaluation of Vocabulary Learning Strategies Among Sudanese EFL Learners. *Arab World English Journal (AWEJ)*, 234-250.
- Kholis, M., & Aziz, I. N. (2020). The Effect of Project Based Learning on Students' Vocabulary Achievement at Second Grade of Islamic Junior High School. *Journal of English Education and Technology*, 1, 1-19.
- Leijon, M., Gudmundsson, P., Staaf, P., & Christersson, C. (2022). Challenge Based Learning in Higher Education - A Systematic Literature Review. *Innovations in Education and Teaching International*, 609-618.
- Li, L., Ringstaff, C., Tripathy, R. G., Flynn, K., & Thomas, L. (2019). Improving Elementary School Students' Vocabulary Skills and Reading Comprehension through a Word Learning Strategies Program. *Annual Meeting of the American Educational Research Association* (pp. 1-12). Toronto: Grantee Submission.
- Liu, J., & Zhang, J. (2018). The Effects of Extensive Reading on English Vocabulary Learning: A Meta-analysis. *English Language Teaching*, 11, 1-15.
- Shafaei, A., Poorverdi, M., & Parvizi, B. (2007). Use of Project Based Learning in Increasing Students' Vocabulary Knowledge & Communicative Ability.
- Sonbul, S., & Schmitt, N. (2010). Direct Teaching of Vocabulary After Reading: Is It Worth the Effort? *ELT Journal*, 64, 253-260.
- Subon, F. (2016). Direct Vocabulary Instruction: The Effects of Contextualised Word Families on Learners' Vocabulary Acquisition. *Procedia - Social and Behavioral Sciences*, 284-291.
- Syafaal, B., Melani, M., Syahrul, & Putri, H. P. (2022). The Effect of Project Based Learning on English Achievement of Explanation Text. *Journal of Multidisciplinary Research and Development*, 265-271.
- Treiman, R., Decker, K., & Kessler, B. (2019). Adults' Sensitivity to Graphotactic Differences within the English Vocabulary. *Applied Psycholinguistics*, 40, 167-182.
- Wang, B. T., Teng, W. C., & Chen, H. T. (2015). Using iPad to Facilitate English Vocabulary Learning. *International Journal of Information and Education Technology*, 5, 100-104.
- Xu, X., & Hsu, W.-C. (2017). A New Inventory of Vocabulary Learning Strategy for Chinese Tertiary EFL Learners. *TESOL International Journal*, 12, 7-31.



- Zarrin, S., & Khan, Z. (2014). A Study of Vocabulary Learning Strategies Among Undergraduate Learners of A.M.U. *US-China Foreign Language*, 12, 76-82.
- Zimmerman, C. B. (2014). Teaching and learning vocabulary for second language learners. In M. Celce-Murcia, D. Brinton, & M. A. Snow (Eds.). Boston: National Geographic Learning.