



The Improving of the Student's Vocabulary Achievement through Crossword Game in the New Normal Era

Yolanda Dita Bella¹; Endang Mastuti Rahayu²

^{1,2}English Education Department, PGRI Adi Buana Surabaya, Indonesia

²Corresponding Email: endangrahayu@unipasby.ac.id, Phone Number: 0857 xxxx xxxx

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Abstract: This research attempted to verify improved vocabulary achievement using the Crossword Game for the eleventh-grade students of SMAN 1 Krian. The method used was classroom action research. The reason why this research was done is because of the pre-cycle outcome. Only five students passed the criteria of minimum score (KKM). So, the researcher wanted to give fun vocabulary learning through Crossword Games. This research was done in 3 cycles. And the subject was one class of eleventh-grade students, which was a class that consisted of 28 students. The instruments were observation, tests, and questionnaires. According to the data analysis, the second cycle's scores are higher than the first. From 17% in pre-test to 75% in post-test 1, it meant that there was an improvement about 58%. Post-test 2, the students passed 85%. Observation showed that students became more engaged when crossword games were used, and their activities dominated the learning process. As much as 92% of students gave a positive opinion about crossword games that said crossword was fun, engaging, and easy for students to study vocabulary. Therefore, teaching the English language using crossword puzzle games could improve the students' vocabulary achievement.

Abstrak: Penelitian ini bertujuan untuk membuktikan peningkatan pencapaian kosa kata dengan menggunakan Crossword Game pada siswa kelas sebelas SMAN 1 Krian. Metode yang digunakan adalah penelitian tindakan kelas. Alasan mengapa penelitian ini dilakukan karena hasil pra-siklus. Hanya 5 siswa yang lulus kriteria Nilai Minimal (KKM). Jadi, peneliti ingin memberikan pembelajaran kosa kata yang menyenangkan melalui Crossword Game. Penelitian ini dilakukan dalam 3 siklus. Subjek berjumlah 28 siswa dari kelas XI A2.5. Instrumen yang digunakan adalah observasi, tes dan angket. Analisis data menunjukkan bahwa skor pada siklus kedua lebih baik daripada siklus pertama. Dari 17% pada pre-test menjadi 75% pada post-test 1, yang menunjukkan ada peningkatan sekitar 58%. Pos-test 2 siswa lulus adalah 85%. Temuan observasi menunjukkan ketika permainan teka-teki silang digunakan, siswa menjadi lebih aktif dan aktivitas mereka mendominasi selama proses pembelajaran. Sebanyak 92% siswa memberikan pendapat positif tentang permainan teka-teki silang yang mengatakan bahwa teka-teki silang itu menyenangkan, menarik dan memudahkan siswa untuk mempelajari kosa kata. Oleh karena itu, pengajaran kosakata bahasa Inggris menggunakan permainan teka-teki silang dapat meningkatkan pencapaian kosakata siswa.

A. Introduction

Learning vocabulary is one of the essential parts of learning a language (Harahap et al., 2022). With grammar and pronunciation, speech is crucial to any language (Alda & Wati, 2021). One of the language components that helps students learn a language is vocabulary (Sadiyah et al., 2019). The four skills of writing, reading, listening, and speaking are necessary for language proficiency (Liando & Lumettu, 2017). Vocabulary is crucial to enhance the four English skills of listening, speaking, reading, and writing (Astriyanti & Anwar, 2016).

As was already noted, this demonstrates the significance of vocabulary in language learning. In this case, the researcher's analysis outcome of pupils in class XI A 2.5 SMAN 1 KRIAN, they need help expanding their knowledge of the English language, especially in vocabulary. Because of this, pupils found it hard to distinguish nouns, verbs, adjectives, and adverbs. It is challenging for students to comprehend and study English due to their lack of vocabulary knowledge (Pratolo & Hafizhah, 2022).

Teaching language in the new normal era is difficult for teachers. Many people believe that in the new normal era, teaching and learning will be more heavily influenced by technology (Culala, 2022). Creativity is needed in the new normal era. Teachers must be ready for 21st Century Education and attentive to technological advancements (Rahayu & Bandjarjani, 2022). The twenty-first century comes with its own set of changes and obstacles that demand teachers be educated, trained, and given the proper skills to meet the challenges of their vocation (Rahayu & Bandjarjani, 2021). According to (Rahayu & Bhaskoro, 2022), teachers play a significant part in helping students improve their vocabulary. It implies that the researcher needs to find a way that interests the students in learning the language.

As technology advances, teaching media gradually changes to incorporate audio, visual, text, and animation (Rahayu & Bhaskoro, 2022). Moreover, learningapps.org may be imaginative and customized to fit any learning style (Nurkholis et al., 2022). Learningapps.org is a free online learning platform that allows teachers to construct a variety of learning activities, such as matching, filling in the gaps, word searches, crossword puzzles, maps, voting, ordering, and many more. Furthermore, this platform includes an exercise template with gaming aspects, making it appropriate for all pupils (Susanti et al., 2022).

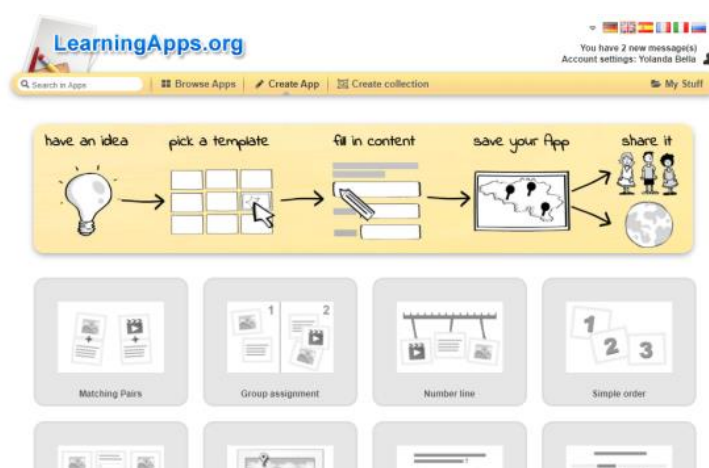


Figure 1. Learningapps.org Media

In line with (Panjaitan & Amaniarsih, 2021) learning process will be more exciting and fun by doing a game. According to (Nurhayati, 2015), a game is one means of teaching students that specific words are vital and essential. Many games can be used in the teaching-learning process. (Orawiwatnakul, 2013) Said that a way to help students retain new comments is to expose them to those words repeatedly by giving the crossword game as the media in the learning process. By (Anwar & Efransyah, 2018), the implementation of the crossword puzzle game received a positive response from students in the vocabulary learning process. Applying learning to the teaching process is good, especially in improving vocabulary fluency. (Fitriana, 2018) said that using Crossword Games makes the pupils more engaged and interested in English class. (Sunarko et al., 2019) Claimed that students would be entertained and stimulated to think of relevant words to fill the blank areas if a crossword puzzle teaching approach is used to teach vocabulary.

Among many games, crossword game is more attractive than others. The crossword game is a word game. To finish a crossword puzzle, the player must accurately fill all the blank squares with letters that form words. The words were based on the clues provided, which can be complete sentences, phrases, or words students can practice more on new words they have just learned from the textbook.

According to (Plaister in Anwar & Efransyah, 2018), there are some benefits of using crossword games in learning vocabulary, and they are; (1) students will be more engaged and motivated if they learn vocabulary through practice, (2) completing puzzles, students develop their problem-solving skills, (3) it is both engaging and challenging for students. It can keep students from getting bored with their boring lessons. In this case, the puzzle aims to enhance student attention, their understanding of the course materials, and the process itself, (4) by discussing the challenge in groups or the classroom, students are taught to think critically, (5) the group puzzle will make students have fun and enjoy learning English.

According to the above remark, crossword puzzles are a great way to improve vocabulary. This is also proved by the outcome of previous studies by (Nasrullah et al., 2021) conducted as researchers on Student's Vocabulary Mastery toward Crossword Puzzle Games. Student activity increased from 78.66% in cycle 1 to 97.66% in cycle 2. At the same

time, students' vocabulary mastery improved from 54% in cycle 1 to 90% in cycle 2. In summary, using crosswords improved students' vocabulary and engagement in teaching and learning English. This assumption is also reinforced by the previous result (Hidayat, 2016) in his research about Improving Students' Vocabulary Achievement through Word Games. According to a study, word games could inspire pupils and pique their interest in vocabulary learning while facilitating vocabulary learning. Both of the previous findings were done in junior high school. However, in this study, the researcher wanted to develop the research in senior high school.

B. Method

This research used classroom action research as its methodology. In classroom action research, the researcher assumed the role of an actual teacher to address issues and gain knowledge from situations experienced in the classroom. Through action research, educators carefully and gradually assess their practice while applying research methods (Khasinah, 2015). By (Madya in Amri, 2013) claimed that Classroom action research is a type of intervention to the teaching and learning process based on actual situations teachers encounter in their classrooms.

This research had several phases, several of which were cycled repeatedly. In line with (Amri, 2013), planning, acting, observation, and reflecting comprise the well-known Classroom Action Research cycle.

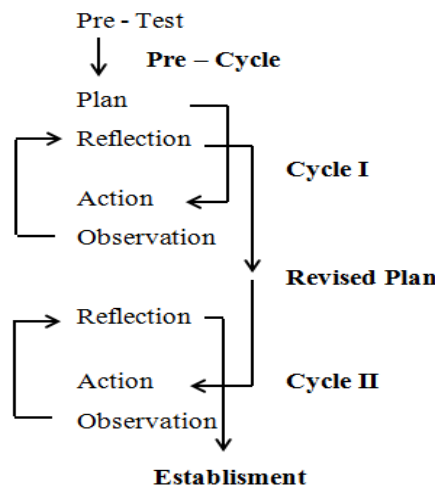


Figure 2. Execution Chart of Classroom Action Research
(Raka Joni as cited in Laksono & Siswono, 2018)

Planning and preparing the observation sheets used by the researchers to monitor the students' learning environment before the study were the first steps in this research. Following the observations, the researcher recommended interventions to enhance the student's language learning progress. The student's academic performance was evaluated in the final step of reflection.

The cycle, which may last two or three times, concludes when the researcher is content or pleased with the findings. This research had three cycles in its process: pre-cycle, cycle 1, and cycle 2. There was also the minimum criterion of mastery learning, which was 80. The cycle could be done when 80% of students reached the KKM. The subject of this research were students from senior high school of SMAN 1 KRIAN from class XI A2.5 consisting of 28 students (24 females and 4 males).

The instruments used to collect student data were observation, test, and questionnaire. In the observation stage, the researcher, as the teacher, did participant observation in class with classroom action research that used checklist notes for observation instruments. The collaborator was Riza Datul Amaliyah; each learning activity had to be documented by the collaborator as her tasks. During a 90 minutes learning process when playing a crossword game as a learning tool, students' activities, behavior, vocabulary skills, and interactions with teachers were recorded on an observation sheet. The observation sheet was used to gather essential data, including whether the teacher carried out activities by the teaching modules. The collaborator would observe the last actions that the researcher had carried out, such as opening greetings and praying, confirming the students' presence, and delivering apperception, followed by the core activities, such as instructing students to open the link that provided crossword game and helping them with their assignment, and in the last section giving the students feedback and also motivating them. This observation was carried out once every cycle.

The next stage was the test, which was divided into pre- and post-tests. Pre-test was administered before the treatment was given. It aimed to know the student's previous vocabulary. Post-test was given after treatment to see the improvement in students' vocabulary. This test used the objective since the researcher wanted to know student vocabulary achievement. The test was conducted using the subject of the descriptive text describing people. The test has 23 questions about adjectives, all consisting of matching pairs. The test was carried out twice during the first cycle. They were pre and post-test, and each test was completed for 15 minutes. For the second cycle, only 1 test was taken, a post-test using the same questions. The difference between post - the test in cycles 1 and 2 was; in the cycle, the group did one post-test. Then, in two-cycle processes, the post-test was done individually.

The last instrument was a questionnaire according to (Tambaritji & Atmawidjaja, 2020) questionnaire was administered to validate the result data about the students' responses. The researcher chose a close-ended questionnaire to justify the outcome. Questionnaires were conducted once after implementing the first cycle and the second cycle of classroom action research. There were 11 questions in the questionnaire. Questions 1-2 were asked whether students knew about crossword games; 14 or 50% of students answered that they are still a new media used in the learning process and have yet to play that game. The using crossword game media in the learning process was asked in numbers 3-9. The result was 19, or 67% of students, agreed that the crossword game was fun, and eased them in studying vocabulary. Students wanted to use crossword games in their learning process

as the media. 2 last questions inquired about the lack of crossword game media in the learning process, and 16 or 57% of students gave their opinion that crossword game has not a deficiency in the learning process. That means crossword games have a positive impact on learning vocabulary.

C. Result and Discussion

Result

The pre-test was administered in the first cycle, pre-cycle, or before applying the Crossword Game or classroom action research (CAR) as a preliminary study to identify actual student vocabulary and proficiency problems. In this cycle, there were 23 questions used to hold pre-test. According to the pre-test results, only five students, or 17% of the pupils, scored higher than the minimal requirements for mastery learning (KKM). On the other hand, the 23 students didn't fulfill that standard. The analysis revealed that almost all pupils in class XI 2.5 SMAN 1 KRIAN still had a common vocabulary. The researcher discovered the following student accomplishments from the diagram.

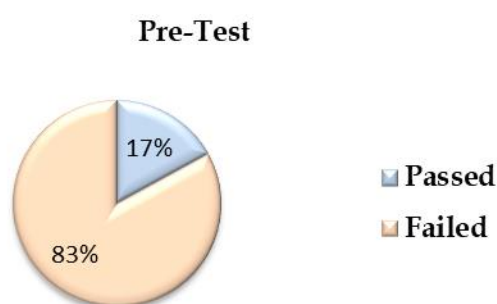


Figure 3. Percentage Student's Score on Pre-Test in Pie - Diagram

In the second cycle, the researcher created a plan for the lessons to be taught while also considering the current problems and how to solve them. During the planning phase, the following activities were carried out: (1) additionally, the researcher created a teaching module on the descriptive text that focuses on describing people, (2) in addition to developing a teaching module, (3) the researcher also made an observation sheet so that they could monitor the activities of both the students and the researcher throughout the learning process and evaluate whether they were already in harmony with the lesson plan, the researchers then designed a crossword game, (4) the author constructed a vocabulary exam based on Descriptive Text about Adjectives after creating the games.

In addition to creating a lesson plan, the researcher also made observation sheets to track student and researcher actions during the teaching and learning process and determine if they followed the lesson plan. To gather information and determine whether any students' test scores had improved between the pre-and post-tests, the researcher additionally created post-test 1. Also, the researcher establishes success criteria. The

minimum standards for mastery learning (80) were 80% of the students' vocabulary scores, or higher than 85% can be considered successful.

The researcher, as a teacher, treated the students by doing Crossword Games in their learning process adopted from LearningApps. At this point, the researcher executed steps based on the preliminary plan. The cycle I action was completed by implementing the created lesson plan into practice for the teaching and learning process. Before students participated in the game at the first meeting, the researcher was a teacher and presented the content to the students through the lesson plan. (1) The researcher required the students to watch a video about Descriptive Text in Person., (2) From the video, the students wrote the information about adjectives, (3) The teacher asked the students to play a crossword game about adjective words that students had written, (4) The teacher divided students into four groups, the student had to describe their friends in front of the class using new vocabulary that students had been found, (5) The students collected information from their friends, (6) The students arranged their sentences and tried to convey their findings, (7) The teacher concluded the discussion by encouraging students to study hard.

Students scored higher on post-test 1, which was administered at this stage. Students reacted by paying the teacher greater attention and by raising questions about concepts they were unfamiliar with. The researcher discovered the following student accomplishments from the diagram.

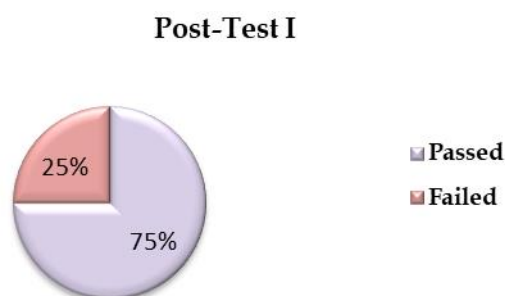


Figure 4. Percentage Student's Score on Post-Test I in Pie-Diagram

Twenty-one students passed the Minimum Standard of Mastery Learning on Post-Test I, and the class percentage rose to 75%. The observation sheet in the first cycle consists of five indicators: analyzing the adjectives in the video, writing down the adjectives in the video, presenting the results of information related to adjectives, cooperation in groups, and participating in the discussion. As a result, from the first to the third indicator, the answer was 'yes' in the observation sheet, which showed that pupils were interested in learning through the use of the crossword game. While the fourth and fifth indicators were dominated by 'occasional' answers, this caused the class situation to be a little crowded and made students less focused.

Students still needed to attain the required score for the assessment of their post-test. It was shown that 25% of pupils could not achieve the 80 score requirement for mastery learning. Hence, using the crossword game to increase pupils' vocabulary did not produce desirable outcomes. A further cycle has to be moved as a result.

The researcher created an action research strategy focused on students' vocabulary issues within the prior cycle. Alongside developing teaching strategies, the writer also created observation sheets to monitor pupil and researcher actions during the teaching-learning process and determine that they were in line with the teaching materials that had been developed previously. To determine whether students' scores increased from Post-Test 1 to Post-Test 2, the researcher also created Post-Test 2.

Based on the created learning activities, the researcher put the teaching-learning activities into practice in this phase. (1) The researcher presents the subject to the class, (2) The teacher asks students to open the link of the crossword game by themselves (individually), (3) The students look for the meaning, the synonym, and also the part of speech of the word, (4) The teacher requested the pupils to come up with the matching responses (5) The teacher ended the class and encouraged the pupils to do their best in their studies.

Post-test II was done in this cycle. The students' scores improved on this test. The class condition was very conducive so far. After doing Crossword Game, all students became active. Thus, the atmosphere of the classroom encouraged the students to pay attention to the material given by the teacher. Students' achievements are in the diagram below.

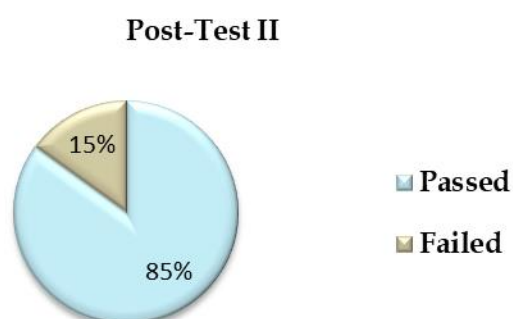


Figure 5. Percentage Student's Score on Post-Test II in Pie-Diagram

The second post-test outcomes indicated the highest percentage, from 75% to 85%. Twenty-four students had passed the minimum standard of mastery. In the first cycle, the group learning strategy did not go well. This could be seen from indicators 4 and 5 with the dominance of the answer 'sometimes.' This caused the learning process in the first cycle to be slightly disrupted because students were less focused and noisy. Therefore the researcher decided to conduct the second learning cycle by prioritizing individual learning. In the second cycle, there were three indicators: finding meaning, combining words with the correct synonyms, and presenting the results.

The three indicators were dominated by the answer 'yes,' which indicated students enjoyed the learning process using the crossword game. In the second cycle, students became more active and dominant in learning. The students also could compare and recognize types of nouns, adjectives, verbs, and adverbs. Students could swiftly detect and identify the synonym while using dictionaries less frequently.

The second post-test used to assess the pupils' vocabulary mastery revealed an improvement in their results. It was observed that 85% of pupils got scores higher than the 80 required for the Minimum Criterion of Mastery Learning. The researcher did not have to proceed to the following cycle in light of the test results.

Based on the given analysis, the researcher claims that The class score increased after the treatment was applied to the subject, which is the acquired score. Subtracting the post-test score from the pre-test score results in the accumulated score. Below is further information about student's percentage scores:

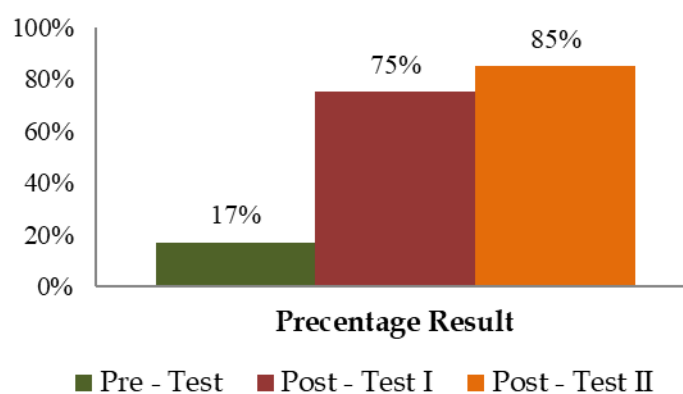


Figure 6. Vocabulary Scores Improvement

The researcher saw an enhancement in the pupils' vocabulary mastery, as shown by the information above. The test's score percentage (pre-test, pot-test I, and post-test II) shows an improvement. Using crossword puzzles as a learning tool, pupils might increase their vocabulary competence.

The final action that the researcher did was to give a questionnaire to students to find out their opinion after learning vocabulary using crossword games. Students responded well to using the crossword game in their vocabulary learning activity and got a better score after playing this game. There were 92%, or 26 students gave their opinion that Crossword Games made the studying process more interesting; students also said that crossword games helped them memorize new vocabulary, motivated them to study English, and students would give a recommendation to their teacher for use crossword games while learning about speech in each meeting.

Discussion

(Putri & Syafitri, 2022) stated, "Crossword puzzles can sharpen students' brains to remember new words". That statement was justified by the findings showing that students became more engaged when crossword games were used. Their activities dominated throughout the learning process, from Q&A and discussion to the presentation of discussion outcomes. The findings from the second cycle of observations were as follows: by using crossword games in the learning process, students could swiftly detect and identify the

synonym while using dictionaries less frequently. Also, students could locate the part of speech of each word that student had.

The outcome showed the pupils' vocabulary improved due to the crossword game. The discussion is based on how crossword games can improve students' vocabulary achievement in SMAN 1 KRIAN. The study's findings demonstrated that crossword puzzles could enhance pupils' vocabulary achievement. It also proved the statement from (Hasibuan et al., 2018) a fun method for learning, practicing, and spelling vocabulary is the crossword puzzle. (Wijaksono S & Siddik, 2022) A crossword puzzle is a game that can be used to help students improve their vocabulary. It was seen from the increase in the student's scores. 75% was the first cycle's percentage. At a second-cycle rate of 85%, it was obvious that second-cycle scores were higher than first-cycle scores. Students who achieved a point score of 80 or who fulfilled the minimal requirements for mastery learning (KKM) automatically gained. Five students (17%) out of the total pre-test pupils scored 80 or higher. On post-test 1, 21 students (75%) received 80 or more points. This indicates a 58% improvement overall. Students that passed KKM 80 on Post-Test 2 were 24 (85%). (Nasrullah et al., 2021) Claimed, "the use of crosswords game improved students' vocabulary levels and student engagement in teaching and learning English."

Students responded well to using the crossword game in their vocabulary learning activity and got a better score after playing this game. (Hidayat, 2016) said, "Crossword games can inspire pupils and pique their interest in vocabulary learning while facilitating vocabulary learning. It was seen in the observation sheet. 92% or 26 students gave their opinion that Crossword Games made the studying process more enjoyable, students also said that crossword games helped them memorize new vocabulary, motivated them to study English, and students would give a recommendation to their teacher for using crossword games while learning about speech in each meeting. Most students were more engaged and enthusiastic during the teaching and learning process. It was suggested that playing crossword puzzles could assist pupils in learning more words and aid their English teachers in teaching activities.

D. Conclusion

According to the research findings, the Crossword Game helped the eleven grade pupils of SMAN 1 KRIAN increase their vocabulary. Based on the observation, the test, and questionnaire were explained. First, related to student's behavior during the learning process by using Crossword Games, observation findings showed that students became more engaged when crossword games were used. Their activities dominated throughout the learning process, from Q&A and discussion to the presentation of discussion outcomes. The result of a questionnaire that was stated Crossword Games made the studying process more interesting; students also said that crossword games helped them memorize new vocabulary, motivated them to study English, and students would give a recommendation to their teacher for using crossword games while learning about speech in each meeting.

Second, based on the student's achievement. It could be seen in the improvement of the student's score. The percentage of the first cycle was 75%. The rate of the second cycle was 85%; it was indicated that the scores in the second cycle were better than in the first cycle. Five students (17%) among the total pupils who passed the pre-test scored 80. On post-test 1, 21 students (75%) scored 80. This indicates a 58% improvement overall. Students that did pass KKM 80 on Post-Test 2 were 24 (85%).

Finally, from all findings above, they could answer the action hypothesis that using a Crossword Game during the learning process could improve students' vocabulary achievement in senior high school.

References

- Alda, J. N., & Wati, S. (2021). Enhancing Learners' Vocabulary Acquisition by Crossword Puzzle Game. *JL3T (Journal of Linguistics, Literature And Language Teaching)*, 7(1), 25-40. <https://doi.org/10.32505/jl3t.v7i1.2820>
- Amri, Z. (2013). Classroom Action Research and Lesson Study: How Do They Work for Lecturers and High School English Teachers. *Proceedings of ISELT FBS Universitas Negeri Padang*, 1, 260-266.
- Anwar, Y. T., & Efransyah, E. (2018). Teaching English Vocabulary Using Crossword Puzzle Game at the Seventh Grade Students. *PROJECT (Professional Journal of English Education)*, 1(3), 235-240. <https://doi.org/10.22460/project.v1i3.p235-240>
- Astriyanti, D., & Anwar, K. (2016). Improving Students' Ability in Vocabulary Mastery through Index Card Match. *Edukasi: Jurnal Pendidikan*, 14(1), 40-52. <https://doi.org/10.31571/edukasi.v14i1.284>
- Culala, H. J. D. (2022). The "New Normal" in Education and the Future of Schooling. *KnE Social Sciences*, 40-47. <https://doi.org/10.18502/kss.v7i6.10607>
- Fitriana, N. A. (2018). The Implementation of Make a Match Technique to Increase Students' Vocabulary Mastery (A Classroom Action Research at Fourth Grade of SDN 4 Troso in Academic Year 2017/2018). *Edulingua: Jurnal Linguistik Terapan dan Pendidikan Bahasa Inggris*, 5(2), 41-48. <https://doi.org/10.34001/edulingua.v5i2.1087>
- Harahap, H. R. S., Rangkuty, A. R., & Nasution, L. E. (2022). The Effect of Inquiry Teaching Method on Students' Vocabulary Achievement. *Edunesia: Jurnal Ilmiah Pendidikan*, 4(1), 80-93. <https://doi.org/10.51276/edu.v4i1.292>
- Hasibuan, T. R., Harida, E. S., & Siregar, F. R. (2018). Improving Students' Vocabulary Mastery through Crossword Puzzle Technique at SD Muhammadiyah 1 Padangsidimpuan. *TAZKIR: Jurnal Penelitian Ilmu-Ilmu Sosial dan Keislaman*, 4(1), 91-108. <https://doi.org/10.24952/tazkir.v4i1.1067>

- Hidayat, N. (2016). Improving Students' Vocabulary Achievement through Word Game. *JEES (Journal of English Educators Society)*, 1(2), 95-104. <https://doi.org/10.21070/jees.v1i2.446>
- Khasinah, S. (2015). Classroom Action Research. *Jurnal Pionir*, 1(1), 33-61. <https://doi.org/10.22373/pjp.v4i1.159>
- Laksono, K., & Siswono, T. Y. E. (2018). *Penelitian Tindakan Kelas*. Bandung: PT Remaja Rosdakarya.
- Liando, N. V. F., & Lumettu, R. (2017). Students' Personal Initiative towards Their Speaking Performance. *International Education Studies*, 10(8), 21-28. <https://doi.org/10.5539/ies.v10n8p21>
- Nasrullah, R., Alfiany, N. R., & Hamdan, M. A. (2021). Students Vocabulary Mastery toward Crossword Puzzle Games. *Jurnal Ilmu Manajemen Sosial Humaniora (JIMSH)*, 3(2), 129-134. <https://doi.org/10.51454/jimsh.v3i2.145>
- Nurhayati, D. A. W. (2015). Improving Students' English Pronunciation Ability through Go Fish Game and Maze Game. *Dinamika ilmu*, 15(2), 215-233.
- Nurkholis, Raharjo, H., & Aji, T. S. (2022). Penggunaan Learningapps sebagai Media Pembelajaran Interaktif di Sekolah Dasar. *Jurnal Cakrawala Pendas*, 8(4), 1508-1515.
- Orawiwatnakul, W. (2013). Crossword Puzzles as a Learning Tool for Vocabulary Development. *Electronic Journal of Research in Education Psychology*, 11(30), 413-428. <https://doi.org/10.14204/ejrep.30.12186>
- Panjaitan, L. M., & Amaniarsih, D. S. (2021). Improving Students' Vocabulary Mastery by using Puzzle Game at the Second Grade of MTS Al-Washliyah Medan. *Journal MELT (Medium for English Language Teaching)*, 5(2), 129-141. <http://dx.doi.org/10.22303/melt.5.2.2020.129-141>
- Pratolo, B., & Hafizhah, R. (2022). The Effectiveness of Using Crossword Puzzle Games to Improve Vocabulary Mastery of the 7th grade students of SMP Muhammadiyah 2 Kalasan. *Teaching English as a Foreign Language Journal*, 1(1), 1-12. <https://doi.org/10.12928/tefl.v1i1.161>
- Putri, R. Q., & Syafitri, D. (2022). Crossword Puzzle Game to Improve Students' Vocabulary Mastery. *U-Jet: Unila Journal of English Language Teaching*, 11(3), 1-4. <https://doi.org/10.23960/ujet.v11.i3.202202>
- Rahayu, E. M., & Bandjarjani, W. (2021). Assessment of Indonesian Higher Education Students' Critical Thinking Based on Merrill's First Principles of Instruction. *JPI (Jurnal Pendidikan Indonesia)*, 10(4), 732-741. <https://doi.org/10.23887/jpi-undiksha.v10i4.30863>

- Rahayu, E. M., & Bandjarjani, W. (2022). Blended Learning Model in TEFL Workshop to Students of English Language Education Department: a Case Study. *KnE Social Sciences*, 57-67. <https://doi.org/10.18502/kss.v7i7.10650>
- Rahayu, E. M., & Bhaskoro, P. (2022). Interactive Media Edpuzzle and Its Implementation in Teaching Vocabulary in New Normal Era. *Jo-ELT (Journal of English Language Teaching) Fakultas Pendidikan Bahasa & Seni Prodi Pendidikan Bahasa Inggris IKIP*, 9(1), 1. <https://doi.org/10.33394/jo-elt.v9i1.4425>
- Sadiyah, W. H., Septiani, W., & Kareviati, E. (2019). Improving English Vocabulary Mastery by using Crossword Puzzle. *PROJECT (Professional Journal of English Education)*, 2(2), 110-114. <https://doi.org/10.22460/project.v2i2.p110-114>
- Sunarko, V., Silalahi, P. N., Haro, N., & Tarigan, S. N. (2019). Effect of Crossword Puzzle Teaching Strategy Towards Students ' Vocabulary Mastery. *Language Literacy: Journal of Linguistics, Literature and Language Teaching*, 3(2), 241-248. <https://doi.org/10.30743/ll.v3i2.1984>
- Susanti, E. R., Suryati, N., & Astuti, U. P. (2021, December). Students' Perception on the Utilization of Learningapps. org for Self-Study Materials. In *International Seminar on Language, Education, and Culture (ISoLEC 2021)*, 86-90. Atlantis Press. <https://doi.org/10.2991/assehr.k.211212.016>
- Tambaritji, V. N., & Atmawidjaja, N. S. (2020). Improving Students' Vocabulary Mastery using Crossword Puzzle. *PROJECT (Professional Journal of English Education)*, 3(5), 588-596.
- Wijaksono S, D. N. H., & Siddik, A. H. R. (2022). The Effectiveness of using Crossword Puzzle Games through Student's Vocabulary Mastery. *JOEY: Journal of English Ibrahimy*, 1(1), 1-10. <https://doi.org/10.35316/joey.2022.v1i1.1-10>