



INVESTIGATION OF MIDDLE-SCHOOL STUDENTS' VOCABULARY MASTERY BY USING SPIDER WORD WEBBING

Amiruddin¹, Yusuf Razaq², Satriani³, Nurul Natasya⁴

^{1,2,3,4}. Tadris Bahasa Inggris, Institut Agama Islam As'adiyah Sengkang

ABSTRAK

The goal of this study was to determine whether or not using the Spider Word Webbing approach could increase students' vocabulary proficiency in terms of form, meaning, and use. The researcher used a pre-experimental design. The sample for this study was 25 students in their second year of Middle School (MTs Muhajirin As'adiyah Kampiri in the academic year 2019/2020) drawn from a population of 95 students using purposive sampling. A vocabulary test was provided before and after treatment to determine the pupils' language mastery. This study found that using the Spider Word Webbing approach increased students' vocabulary mastery at MTs Muhajirin As'adiyah Kampiri. The t-test (9.050) has a higher value than the t-table (2.064), and the degree of freedom (df) is 24. The null hypothesis (H0) is rejected, while the alternative hypothesis (H1) is accepted. The Spider Word Webbing approach is found to be successful in improving students' vocabulary mastery in terms of form, meaning, and use.

Keywords : Vocabulary Mastery, Spider Word Webbing, Middle-School Students

INTRODUCTION

The total quantity of words in a vocabulary is an integral aspect of any language acquisition process, it is really crucial. The importance of vocabulary is that in teaching foreign language abilities such as speaking, writing, reading, and listening (Stæhr, 2008; Milton, 2013), it is difficult to use such skills without vocabulary because vocabularies are extremely crucial in developing those skills. One of the fundamental issues that arise in the English component, which is an important part of a language made up of those four skills, is vocabulary because pupils nearly often fail to recall what is taught in class. As a result, they perform poorly in their English achievement.

Vocabulary is an important part of English because it appears in every skill (Khan et al., 2018; Dakhi & Fitria, 2019). Learning the English language is not yet complete. To master vocabulary, one must learn new terms in order to expand one's vocabulary (Zhonggen, 2018; Chen & Chan, 2019; Hao et al., 2019). The learning encompasses the terms' pronunciation, meaning, spelling, usage, and part of speech. She also says that learning words are a cyclic process that begins with encountering new words and initial learning and ends with meeting those words, again and again, each time expanding understanding of what the words mean and how they are used in the foreign language. This means that every time learners encounter those familiar terms, their knowledge of the words improves.

On the other hand, vocabulary mastery addresses one of the most important aspects of

fluent communication. The wider the vocabulary size one has, the better one's performance in all parts of English language work will be (Read, 2013)." In other words, children in school should grasp English vocabulary and grammar norms in order to communicate effectively with others. It can generally achieve the English teaching objectives.

According to observations, there was an issue in the learning process that impacted MTs Muhajirin As'adiyah Kampiri in their second year. The researcher interviewed one English teacher and administered a written test to the pupils. The test is divided into three sections: grammar, vocabulary, and reading, with each portion including ten items. According to the test results, the researcher discovered that the vocabulary exam had the lowest score.

To address the aforementioned issue, there are numerous ways and techniques that might assist the teacher in improving the students' vocabulary mastery. One method is to employ the Spider Word Webbing Strategy (Khoza, 2015; Putri & Jufri, 2018). As a result, the researcher selects one approach, Spider Word Webbing, that can be used to make vocabulary education more enjoyable (Mabogunje et al., 2009). SWW is a phrase used to describe how keywords or targets are related to one another using graphic representations. SWW technique is a method of assisting pupils in thinking more creatively in order to more easily correlate ideas or words. It is the brainstorming of words produced by the web and links. Every web contains links to other webs. These ties connect the webs and maintain the idea's connection. As a result, it can assist students in expanding their vocabulary.

LITERATURE REVIEW

1. The Concept of Vocabulary

Vocabulary is the foundation of language ability and serves as the foundation for how well learners talk, listen, read, and write (Lucas et al., 2008; Brown, 2014). One of the linguistic components that can influence macro abilities is vocabulary (Jun Zhang & Bin Anual, 2008; Brooks et al., 2021). Some professionals have provided word definitions. Vocabulary is a list of target language terms. Furthermore, vocabulary is a collection of lexemes that includes single words, compound words, and idioms.

The complete quantity of words in a language; all the words known to a person or used in a specific book, subject, etc; a list of words with their meanings. Those definitions demonstrate that, in addition to the other English components and skills, vocabulary is the first factor that English learners should study in order to master English.(Bai, 2014; Elaish et al., 2019; Ali & Anwar, 2021; Ng, 2021).

Language's vocabulary is always changing and expanding (Paris, 2012; Peters, 2019; Alfadil, 2020). People invent or borrow new terms to describe man's actions as life becomes more complex. Nobody knows how many terms are in the English lexicon

today. We can conclude from the interpretation above that vocabulary is the core component of language proficiency that consists of a set of lexemes, including single words, compound words, and idioms; which provides much of the foundation for how well learners speak, read, listen, and write; and has similarities with the terms "lexis" and "lexicon"

2. The Concept of Strategy

A strategy is a recurring pattern of teaching conduct that is applicable to multiple subject areas, is shared by more than one teacher, and is relevant to learning (Gay, 2002; Webster-Stratton, 2008; Peters, 2019; Hancock et al., 2021). This definition encourages the instructor to become more conscious of what they are doing and what they might do in terms of teaching strategies. The strategy should make the learning and teaching process more engaging and effective (Senthamarai, 2018; Lapitan et al., 2021).

Tseng & Schmitt (2008); Yazdi & Kafipour, 2014 recommend the following tactics for learning vocabulary: (1) guessing from context, (2) word components and mnemonic techniques to recall words, and (3) vocabulary cards to remember foreign language-first language word pairs. There are three ways for learning vocabulary. The first technique is to guess the meaning from context; she claims that a context has enough evidence to guess the word's meaning. The second option is mnemonic devices, of which she suggests the keyword technique. The learner is reminded of the keyword when he or she sees or hears the target term. The third technique is vocabulary notebooks; she advocates using vocabulary notebooks as a memory aid in solo learning.

3. The Concept of Sword Webbing

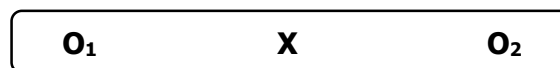
Spider Word Webbing is a term used to describe how essential words or targets are related to one another using graphic representations (Mabogunje et al., 2009). This method encourages pupils to think more creatively in order to associate ideas or words more easily. It is the brainstorming of words produced by the web and links.

Spider Word Webbing is a tactic that helps learners become cognizant of the relationships between words in a text and to increase learning by forming associative networks of words (Mabogunje et al., 2009). Spider word webbing provides templates or frames for students or teachers to locate significant facts, arrange information, and record relationships between facts and ideas inside a keyword presented. When content is represented with diagrams, pupils can retain the information for a longer amount of time. It aids students in memorizing words. The purpose of spider word webbing is to promote and improve learning outcomes for a wide spectrum of learners (Mabogunje et al., 2009).

The approach of spider word webbing is used to discover word relationships. Students brainstorm all of the terms that they can think of that are related to the theme or keyword (Mabogunje, 2009; Khoza, 2015; Putri & Jufri, 2018). It is a successful approach for increasing kids' vocabulary since pupils can understand the relationship between words and can quickly recall what they already know. A word web is a collection of words, word phrases, or word sentences that connect graphically to spread out from a central theme. The spider word webbing approach connects words and concepts into webs. Every web contains links to other webs. These ties connect the webs and maintain the idea's connection. As a result, it can assist students in expanding their vocabulary.

RESEARCH METHOD

This study used a pre-experimental design with a single group pre-test and post-test (Sugiyono, 2013; Moleong, 2014; Creswell, 2017). In this study, samples were given pre-test (O1) and post-test (X) treatments (O2). The following diagram depicts the research design:



Where:

- O₁ : Pretest
- X : Experiment
- O₂ : Posttest

The researcher used two tools to collect data: a vocabulary exam and an oral test. The vocabulary test (pretest and posttest) consists of word meaning and word use tests. The total number of exam items is 15. It consisted of 5 meaning tests, namely translation, 5 word class tests, and 5 word use tests, namely sentence creation.

The oral exam covered spelling and pronunciation. It consisted of ten numbers of oral spelling tests and ten numbers of oral pronunciation tests. The test was given in two parts: pre-test and post-test. The pre-test administered prior to treatment. The pre-test was designed to assess prior students' abilities, whereas the post-test was administered following treatment. The purpose of the post-test was to determine the efficacy of employing Spider Word Webbing as an approach for teaching vocabulary mastery.

RESULTS AND DISCUSSION

The purpose of this study was to determine whether or not using the Spider Word Webbing approach could increase students' vocabulary proficiency in terms of form, meaning, and use. The frequency and percentage of students' pretest and post-test scores are in Table 1.

Table 1. The frequency and percentage of students' pretest and post-test scores

Classification	Range	Pre-Test		Post-Test	
		Frequency	Percentage (%)	Frequency	Percentage (%)
Very Good	86-100	3	12%	16	64%
Good	71-85	7	28%	4	16%
Fair	56-70	7	28%	3	12%
Poor	40-55	4	16%	2	8%
Very Poor	≤40	4	16%	0	0%
Total		25	100	25	100

According to the Table 1 above, before therapy, 3 (12%) students received a very good score, 7 (28%) students received a good score, 7 (28%) students received a fair score, 4 (16%) students received a poor score, and 4 (16%) students received a very poor score. Following treatment, 16 (64%) children received a very good score, 4 (16%) students received a good score, 3 (12%) students received a fair score, 2 (8%) students had a poor score, and no students received a very poor score. This result indicates that there is a considerable improvement after utilizing the Spider Word Webbing approach to teach vocabulary.

Table 1 shows that, prior to receiving treatment utilizing the Spider Word Webbing approach, the students' vocabulary mastery is classified as very good, good, fair, poor, and very poor. Following therapy with the Spider Word Webbing approach, the students' vocabulary knowledge is classified as very good, good, and fair. In other words, the posttest rate percentage is larger than the pretest rate percentage. It is possible to conclude that students improved in the posttest. It implied that the Spider Word Webbing approach could help pupils enhance their vocabulary mastery.

Table 2. Inferential Statistic

Paired Samples Statistics					
		Mean	N	Std. Deviation	Std. Error Mean
Pair 1	posttest	87.60	25	16.401	3.280
	pretest	64.00	25	20.207	4.041

Inferential statistics demonstrate that the mean score of pretests (64.00) with standard deviation 20.207 is lower than the mean score of posttests (87.60) with standard deviation 16.401, as shown in the table above.

For the paired sample test, the researcher utilized the t-test (test of significance). The goal of the text was to determine the significant difference between the students' mean pretest and posttest scores. Assuming a level of significance (α) of 0.05 and a degree of

freedom of (24). Furthermore, to determine whether the pretest and posttest scores differed significantly, the researcher conducted a t-test with SPSS 22 analysis. If the t-test result is more than the t-table value, the null hypothesis is rejected; if the t-test result is less than the t-table value, the null hypothesis is accepted; and the t-test result is shown in Table 3.

Table 3. T-test result
Paired Samples Test

	Paired Differences					t	df	Sig. (2-tailed)
	Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference				
				Lower	Upper			
Pair 1 posttest -pretest	23.600	22.891	4.578	14.151	33.049	5.155	24	.000

Inferential statistics show that the t-test result (5.155) is bigger than the t-table value in Table 3. (2.064). Furthermore, the significant difference is less than 0.05, which is 0.000. That is, the null hypothesis (Ho) was rejected, whereas the alternative hypothesis (H1) was accepted. In other words, there is a considerable difference in the results of students' pretest and posttest word use tests.

The drawbacks of utilizing this technique in which students only put down what they wanted and knew. They did not copy the words from the web. Another issue is that they don't know how to construct a simple phrase with a subject and a verb. The results of the study support and are relevant to previous research, namely Mabogunje et al. (2009); Ariana (2015); Putri & Jufri, (2018).

CONCLUSION

According to the research's findings, the second-year MTs Muhajirin As'adiyah Kampiri's knowledge of vocabulary in terms of form, meaning, and use improved in the academic years 2019–2020 after being taught utilizing the Spider Word Webbing approach. The t-test value ($9.050 > 2.064$) and the difference between the mean scores of the students' posttest (88.16) and pretest (88.16) both demonstrate this (70.64). The outcome of the pretest and posttest revealed a considerable enhancement. In addition, the study's goal of showing that students could better grasp language in terms of form/focus, meaning, and use was accomplished. The research has also improved students' vocabulary mastery, as was mentioned in the discussion section. It means that it is effective to teach vocabulary by employing the Spider Word Webbing approach.

REFERENCE

- Alfadil, M. (2020). Effectiveness of virtual reality game in foreign language vocabulary acquisition. *Computers & Education, 153*, 103893.
- Ali, B. J., & Anwar, G. (2021). Vocabulary Learning Strategies and Foreign Language Acquisition at Private Schools. *Ali, BJ, & Anwar, G.(2021). Vocabulary Learning Strategies and Foreign Language Acquisition at Private Schools. International Journal of English Literature and Social Sciences, 6(3)*, 163-173.
- Ariana, A. (2015). Webbing Technique to Improve the Students' Writing Recount. *Exposure, 4(2)*, 156-179.
- Bai, Z. (2018). An analysis of English vocabulary learning strategies. *Journal of language Teaching and Research, 9(4)*, 849-855.
- Brooks, G., Clenton, J., & Fraser, S. (2021). Exploring the Importance of vocabulary for English as an additional language learners' reading comprehension. *Studies in Second Language Learning and Teaching, 11(3)*, 351-376.
- Brown, C. S. (2014). Language and literacy development in the early years: Foundational skills that support emergent readers. *Language and Literacy Spectrum, 24*, 35-49.
- Chen, R. W., & Chan, K. K. (2019). Using augmented reality flashcards to learn vocabulary in early childhood education. *Journal of Educational Computing Research, 57(7)*, 1812-1831.
- Creswell, J. W., & Creswell, J. D. (2017). *Research design: Qualitative, quantitative, and mixed methods approaches*. Sage publications.
- Dakhi, S., & Fitria, T. N. (2019). The principles and the teaching of English vocabulary: A review. *Journal of English teaching, 5(1)*.
- Gay, G. (2002). Preparing for culturally responsive teaching. *Journal of teacher education, 53(2)*, 106-116.
- Elaish, M. M., Ghani, N. A., Shuib, L., & Al-Haiqi, A. (2019). Development of a mobile game application to boost students' motivation in learning English vocabulary. *IEEE Access, 7*, 13326-13337.
- Hancock, D. R., Algozzine, B., & Lim, J. H. (2021). Doing case study research: A practical guide for beginning researchers.
- Hao, Y., Lee, K. S., Chen, S. T., & Sim, S. C. (2019). An evaluative study of a mobile application for middle school students struggling with English vocabulary learning. *Computers in Human Behavior, 95*, 208-216.
- Jun Zhang, L., & Bin Anual, S. (2008). The role of vocabulary in reading comprehension: The case of secondary school students learning English in Singapore. *REL C Journal, 39(1)*, 51-76.
- Khan, R. M. I., Radzuan, N. R. M., Shahbaz, M., Ibrahim, A. H., & Mustafa, G. (2018). The role of vocabulary knowledge in speaking development of Saudi EFL learners. *Arab World English Journal (AWEJ) Volume, 9*.
- Khoza, S. B. (2015). Using a curricular spider web to explore a research facilitator's and students' experiences. *South African Journal of Higher Education, 29(2)*, 122-143.
- Lapitan Jr, L. D., Tiangco, C. E., Sumalinog, D. A. G., Sabarillo, N. S., & Diaz, J. M. (2021). An effective blended online teaching and learning strategy during the COVID-19 pandemic. *Education for Chemical Engineers, 35*, 116-131.

- Lucas, T., Villegas, A. M., & Freedson-Gonzalez, M. (2008). Linguistically responsive teacher education: Preparing classroom teachers to teach English language learners. *Journal of teacher education, 59*(4), 361-373.
- Mabogunje, A., Eris, O., Sonalkar, N., Jung, M., & Leifer, L. (2009). Spider webbing: A paradigm for engineering design conversations during concept generation. In *About: Designing* (pp. 49-65). CRC Press.
- Milton, J. (2013). Measuring the contribution of vocabulary knowledge to proficiency in the four skills. *C. Bardel, C. Lindqvist, & B. Laufer (Eds.) L, 2*, 57-78.
- Moleong, L. (2014). Metode Penelitian Kuantitatif Kualitatif. *Bandung: PT. Remaja Rosdakarya*.
- Ng, L. L., Azizie, R. S., & Chew, S. Y. (2021). Factors influencing ESL players' use of vocabulary learning strategies in massively multiplayer online role-playing games (MMORPG). *The Asia-Pacific Education Researcher*, 1-13.
- Paris, D. (2012). Culturally sustaining pedagogy: A needed change in stance, terminology, and practice. *Educational researcher, 41*(3), 93-97.
- Peters, E. (2019). The effect of imagery and on-screen text on foreign language vocabulary learning from audiovisual input. *TESOL quarterly, 53*(4), 1008-1032.
- Putri, M., & Jufri, J. (2018). Using Team Word Webbing to Teach Reading Comprehension on News Item Text for Senior High School Students. *Journal of English Language Teaching, 7*(1), 177-186.
- Read, J. (2013). Validating a test to measure depth of vocabulary knowledge. In *Validation in language assessment* (pp. 55-74). Routledge.
- Senthamarai, S. (2018). Interactive teaching strategies. *Journal of Applied and Advanced Research, 3*(1), S36-S38.
- Stæhr, L. S. (2008). Vocabulary size and the skills of listening, reading and writing. *Language Learning Journal, 36*(2), 139-152.
- Sugiyono, D. (2013). Metode penelitian pendidikan pendekatan kuantitatif, kualitatif dan R&D.
- Tseng, W. T., & Schmitt, N. (2008). Toward a model of motivated vocabulary learning: A structural equation modeling approach. *Language Learning, 58*(2), 357-400.
- Webster-Stratton, C., Jamila Reid, M., & Stoolmiller, M. (2008). Preventing conduct problems and improving school readiness: evaluation of the incredible years teacher and child training programs in high-risk schools. *Journal of child psychology and psychiatry, 49*(5), 471-488.
- Yazdi, M., & Kafipour, R. (2014). Exploring tactics applied by Iranian EFL learners with high and low vocabulary knowledge in learning vocabulary. *European Journal of Social Sciences, 41*(3), 363-374.
- Zhonggen, Y. (2018). Differences in serious game-aided and traditional English vocabulary acquisition. *Computers & Education, 127*, 214-232.