



Contextualized Multimedia Glossary for Vocabulary Skills Enhancement of Grade VI Pupils

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Abstract:

The present action research aimed to determine the effectiveness of an intervention known as Contextualized Multimedia Glossary. Forty (40) Grade six Anthurium pupils were selected using purposive sampling. The action research used 40-item researcher made test. Mean, Standard Deviation and T-Test were used to analyze the data. Based from the results of the action research, it was revealed that the pre-test results shows that the pupils garnered the mean score of 17.30 and SD of 6.215 and with verbal interpretation of average level in terms of their vocabulary skills. On the otherhand after the conduct of the intervention, the results shows on post test that the level of the pupils garnered the mean of 23.75 with an SD of 6.295 with the verbal interpretation of High Level in terms of their vocabulary skills in English. It was found out as well that there is a significant difference on the pre and post test results of the pupils in Grade six with a p-value of .000 at 0.05 alpha significance level. Therefore it was concluded that Contextualized Multimedia Glossary is effective to enhance pupils' vocabulary skills.

Keywords: *Contextualized, Enhancement, Vocabulary Skills*

Introduction:

Multimedia learning takes advantage of the brain's ability to make connections between verbal and visual representations of content, leading to a deeper understanding, which in turn supports the transfer of learning to other situations. All of this is important in today's 21st century classrooms, as we are preparing students for a future where higher-level thinking, problem solving and collaborative skills are required (Aamodth, 2017). It is common that in every school has a large number of students in a classroom yet crowded. Through multimedia glossary, students deeply understand the lesson and this will help them build their vocabulary skills (Damon, 2018).

With the availability of a variety of multimedia materials that improve different facets of language acquisition, the incorporation of audio books and video books into English Language Teaching (ELT) has fundamentally changed the way that traditional language learning approaches are taught. This study examines the changing function of various multimedia tools in ELT, including their advantages, difficulties, and educational ramifications. This study investigates how audio books and video books improve listening comprehension and skills, help with vocabulary acquisition, offer cultural immersion and contextual understanding, encourage motivation and engagement, accommodate a variety of learning styles, and provide authentic language exposure through a thorough analysis of pertinent literature.

It has been demonstrated that computer-mediated glosses, depending on the teaching level, text genre, and assessment tasks, have different impacts on incidental vocabulary learning and a medium influence on second language reading comprehension (Abraham, 2008). While Mohsen and Balakumar (2011) emphasized the beneficial effects of multimedia glosses on L2 vocabulary learning in reading and listening comprehension tasks, Ahmad (2019) discovered that multimedia glosses significantly improve vocabulary acquisition and retention among EFL students.

It has been discovered that multimedia input greatly improves vocabulary acquisition and retention in EFL students, especially when definitions, word information, and videos are combined (Teng, 2022). Similarly, Abraham (2007) showed that when compared to control groups, second language learners' vocabulary learning and comprehension are improved by multimedia aids like verbal and graphical glosses. The necessity of tailored learning applications in multimedia vocabulary learning systems was highlighted by Vargo et al. (2023), who pointed out that these systems can help certain foreign language learners retain more information.

In addition, visual contextual assistance is essential for vocabulary development. When compared to a word glossary and control groups, Nasrollahi and Daneshfar (2018) discovered that visual contextual support dramatically enhances vocabulary acquisition for male pre-university EFL students. Furthermore, Poole (2012) found that learners who are intermediate to advanced in language and who wish to acquire useful knowledge of academic lexical items had a more positive attitude toward concordance-based textual glosses.

This study emphasizes the potential of audio books and video books to offer immersive language learning



experiences that bridge the gap between classroom instruction and real-world language use by integrating theoretical ideas with practical examples. When these multimedia materials are successfully incorporated into ELT courses, language proficiency and overall learning outcomes of the students can be greatly enhanced.

In the context of Yee On Elementary School, the situations occur when the students do not master the vocabulary well. It is reflected in the SMEA Report and Phil-IRI assessment of teachers that their pupils are not able to comprehend the content of the text if they have less vocabulary. They also cannot speak fluently if their vocabulary level is low (DMEA, 2020). According to the DepEd Discussion Paper (2018) lack of adequate vocabulary knowledge is already an obvious and serious obstacle for many students.

From the above-described scenarios, it becomes apparent to the researcher of this study to test the effect of contextualized multimedia glossary to the vocabulary skills development of the learners.

Objectives of the Study

This study aimed to know the effect of contextualized multimedia glossary in raising or enhancing the vocabulary skills of the Grade VI Pupils of Yee On Elementary School in District III, Division of Cadiz City for School Year 2022-2023. What is the level of vocabulary skills of Grade VI pupils of Yee On Elementary School before the intervention? What is the level of vocabulary skills of Grade VI pupils of Yee On Elementary School after the intervention? Is there a significant difference between the level of vocabulary skills of Grade VI pupils of Yee On Elementary School before and after the intervention is applied? What plan of action may be proposed when results are achieved?

Literature Review:

When compared to a standard study pattern, a multidomain strategy that incorporates retrieval practice, spacing, and related adjustments greatly enhances vocabulary learning and retention for second languages (Karatas et al, 2021). Sixth-grade pupils from linguistically diverse backgrounds benefit from academic vocabulary education in terms of language and literacy abilities; the results are more pronounced for kids whose first language is not English and for those with limited vocabulary (Lesaux et al, 2014).

When used in English language instruction, cognitive skill-based tactics like contextual reading hints greatly increase students' vocabulary competency (Miolo et al, 2024). The improvement in the learners' pretest to posttest scores demonstrated the effectiveness of the vocabulary word mapping approach, according to the statistics. English has been a primary tool in communication (Thaosiri & Chano, 2022).

In order to tackle these issues, Thaosiri and Chano (2022) created an educational model that consists of six elements: aims, principles, syntax, principles of reaction, and support system. The model is based on Social Cognitive Theory. Students' English speaking and listening abilities significantly improved when this approach was put into practice, and their learning outcomes were statistically greater after the intervention than they were before.

For young learners, reading competency poses serious problems as well, especially when they start school. The usefulness of a mixed-methods reading literacy program that included group reading instruction, independent tiered reading, and computer-assisted reading was investigated by Nurmahanani (2023). 350 primary school pupils and 150 instructors from eight different schools participated in the study. Results showed that among early grade pupils, the curriculum dramatically increased reading comprehension, vocabulary knowledge, and reading fluency. The effect was more noticeable in younger pupils, though, which emphasizes the need of early intervention in reading instruction.

Novel methods of improving vocabulary have also been investigated, such as emoji usage in cloze exams. According to Ruiz and Estoque (2023), the use of emojis into vocabulary learning enhances its effectiveness and engagement by allowing students to broaden their word knowledge through an enjoyable and participatory approach. This method is different from conventional cloze examinations, in which pupils complete words that are missing from a word pool.

Gaining knowledge of vocabulary is essential to learning the four main English language abilities. Miolo et al. (2023) created a vocabulary card learning resource based on the Multiple Intelligences Approach and stressed the use of vocabulary in supporting the delivery of content. It has been confirmed that this medium is interesting and productive, offering a crucial resource for improving pupils' vocabulary in English.

All of these studies highlight how important it is to teach English using creative, multifaceted methods. Teachers may greatly improve their students' English language competency in hearing, speaking, reading, and vocabulary acquisition by using social cognitive theories, mixed methods literacy programs, and interactive vocabulary tool



Action Research Methods

The data were collected using a 40-item vocabulary assessment that was utilized during the conduct of pre-test and post-test. In this study, 40 Grade 6 Anthurium pupils took the pre-test which was conducted on a face to face basis once a day per cluster within four days in the e-classroom. Contextualized was administered with in a period of eight (8) weeks. Post test was administered to determine the effectiveness of the intervention. The focus was on the efficacy of contextualized multimedia glossary on Yee On Elementary School for the school year 2022-2023.

Participants of the Study

The participants of the study was all the forty (40) Grade VI pupils of Yee-On Elementary School for the school year 2022-2023. The forty (40) pupils were learners came from grade six- Anthurium. They were purposively selected as participants of the study and they were subjected to the intervention.

Furthermore, to determine the forty (40) Grade six pupils as actual respondents of the study, the researcher utilized purposive sampling that included all Grade VI Pupils of Yee On Elementary School District III, Division of Cadiz City for S.Y. 2022-2023.

Data Collection

The method of data collection was based on the result of pre-test and post test. The implementation of contextualized multimedia glossary was an intervention done on scheduled basis one hour per session and two days per week. The participants was clustered in a group of ten, during their schedule these ten pupils was admitted to the school's e -classroom.

Data Analysis Plan

The study utilized a mixed method of analyzing data. Results of the validity of the materials was subjected to qualitative analysis. This study analyses the result of the pre-test and post test and get the mean of the 40 grade 6 pupils after conducting the post test. The t-test for independent samples was used to determine the significance in the level of vocabulary skills of the learners before and after the implementation of the intervention.

Results and Discussion:

Variable	M	SD	Interpretation
Pre-Test	17.30	6.215	AVERAGE

Table 1. The level of vocabulary skills of Grade VI pupils of Yee On Elementary School before the intervention

Table 1 depicts the level of vocabulary skills of Grade VI pupils of Yee On Elementary School before the intervention. Based on the table, it can be gleaned that the pretest mean is average ($M=17.30$, $SD=6.215$). This implied that there is a need to conduct an intervention that could improve the pupils' vocabulary skills. This result supports the study of Afzal (2019), who claimed that learning a foreign or second language at various levels of proficiency calls for a large number of words, which students make an effort to memorize. The implication of this result is significant for educational practice and curriculum development. It highlights the necessity for targeted vocabulary interventions to enhance language proficiency among elementary school pupils. Implementing such interventions can address the gaps in vocabulary knowledge and usage, thus facilitating better academic performance and communication skills. Furthermore, this finding underscores the importance of providing resources and training for educators to effectively deliver vocabulary instruction. By integrating multimedia tools and interactive learning strategies, educators can create a more engaging and effective learning environment that supports vocabulary acquisition. This proactive approach can lead to substantial improvements in students' language skills, preparing them for more advanced levels of language learning and usage. This study further elaborates the learners' issues in acquiring the language and proposes some practical learning and teaching solutions to solve these problems. Yet, it emphasizes long-term vocabulary strategies more so than short-term ones. For such reasons, he recommends one of the practical techniques to boost the students' vocabulary knowledge. He believes that teachers should introduce new vocabulary items in settings, which are rich enough and allow the learners cues to determine the meanings. Sixth-grade pupils from linguistically diverse backgrounds benefit from academic vocabulary education in terms of language and literacy abilities; the results are more pronounced for kids whose first language is not English



and for those with limited vocabulary (Lesaux et al, 2014). The improvement in the learners' pretest to posttest scores demonstrated the effectiveness of the vocabulary word mapping approach, according to the statistics. English has been a primary tool in communication (Thaosiri & Chano, 2022). Gaining knowledge of vocabulary is essential to learning the four main English language abilities. Miolo et al. (2023) created a vocabulary card learning resource based on the Multiple Intelligences Approach and stressed the use of vocabulary in supporting the delivery of content. It has been confirmed that this medium is interesting and productive, offering a crucial resource for improving pupils' vocabulary in English.

Variable	M	SD	Interpretation
Post Test	23.75	6.295	HIGH

Table 2. The level of vocabulary skills of Grade VI pupils of Yee On Elementary School after

Table 2 depicts the level of vocabulary skills of Grade VI pupils of Yee On Elementary School after the intervention. Based on the table, it can be seen that the post test mean is High (M=23.75, SD=6.295). This implied that after utilizing the contextualized multimedia glossary for Grade VI pupils, their post-test mean scores reveal a High level. This only shows that the Grade VI pupils' level of vocabulary skills had improved over time.

This result supported the study of Hollinger (2019) where he states that the advantage of a multimedia glossary is that it makes use of the brain's capacity for creating links between verbal and visual representations of knowledge, resulting in a better comprehension that promotes the application of what has been learned in various contexts.

Domains	Mean	SD	Df	t-ratio	p	I
Pretest	17.30	6.215	39	-4.342	.000	Significant
Post-test	23.75	6.295				

Table 3. The significant difference to the level of vocabulary skills of Grade VI pupils of Yee On Elementary School before and after the intervention.

Table 3 shows that according to the t-test, there was a significant difference in the level of vocabulary skills of Grade VI pupils before and after the multimedia glossary intervention ($p=0.00$) at a 0.05 alpha significance level. Therefore, the null hypothesis, which states that "there is no significant difference in the vocabulary skills of Grade VI pupils of Yee On Elementary School before and after the intervention," is rejected. This implies that the utilization of the Contextualized Multimedia Glossary was effective in enhancing and improving the vocabulary skills of Grade VI pupils. The implication of this result is significant for both educational practice and future research. The rejection of the null hypothesis confirms that the multimedia glossary intervention had a meaningful impact on vocabulary acquisition, highlighting the effectiveness of integrating technological tools into educational strategies. This outcome underscores the potential of multimedia resources to provide a more dynamic and interactive learning experience, which can lead to substantial improvements in students' language skills. For educators, this result suggests that incorporating multimedia glossaries into the curriculum can be a valuable approach to addressing vocabulary deficiencies and enhancing language proficiency. It encourages the adoption of innovative teaching tools that can cater to various learning styles and improve student engagement. Additionally, the positive impact observed from this intervention supports the need for continued investment in and development of multimedia educational resources. Policymakers and educational administrators can use these findings to advocate for the inclusion of multimedia tools in standard educational practices. This can lead to more widespread implementation of effective instructional technologies, potentially improving learning outcomes across diverse educational settings. Future research should further explore the long-term effects of multimedia glossary interventions on vocabulary retention and overall language development, as well as their applicability to different age groups and educational contexts. Overall, the significant improvement in vocabulary skills demonstrated by this study validates the effectiveness of the contextualized multimedia glossary and provides a strong foundation for future educational innovations. These results were supported by the study of Bader (2019) where he states that using images, video and animations alongside a text stimulates the learners' brain thus, their attention and retention increase. Under these circumstances, using the multimedia glossary, learners can understand more easily compared to the scenario where teaching is made possible only by textbooks. Additionally, Henley and



Elden (2012) contend that the integration of multimedia with short tales might improve students' motivation, language comprehension, and knowledge of vocabulary, idioms, and cultural settings.

Findings

The study examined the vocabulary skills of Grade 6 pupils before and after the implementation of a contextualized multimedia glossary intervention, revealing significant insights into the effectiveness of this approach in enhancing students' vocabulary acquisition. Initially, the vocabulary skills of the pupils were assessed to establish a baseline for comparison, resulting in an overall mean score of 17.30 with a standard deviation (SD) of 6.215, interpreted as average. This baseline measurement indicated that many pupils encountered considerable challenges in utilizing English vocabulary effectively in their daily experiences, suggesting that a significant portion struggled with consistent vocabulary usage. Following the intervention, the vocabulary skills of the students were reassessed, showing a notable improvement with an overall mean score of 23.75 and an SD of 6.295, interpreted as high. The increase in the mean score by 6.45 points underscores the efficacy of the intervention, reflecting that the multimedia glossary provided a more engaging and effective means of vocabulary acquisition. The statistical analysis comparing pre- and post-intervention scores yielded a p-value of 0.000, indicating a statistically significant difference in the vocabulary skills of Grade 6 pupils before and after the intervention. This significant p-value confirms that the observed improvements were directly attributable to the intervention, validating the effectiveness of the contextualized multimedia glossary in enhancing students' vocabulary knowledge and usage.

The findings suggest that multimedia glossaries can significantly improve vocabulary skills, providing valuable implications for educational practice and future research. Educators should consider integrating contextualized multimedia glossaries into their teaching strategies to enhance vocabulary learning and overall language proficiency. This approach not only caters to diverse learning styles but also makes vocabulary learning more engaging and contextually relevant. Furthermore, training programs for teachers should include modules on the effective use of multimedia tools in language instruction. Policymakers should consider revising curriculum standards to incorporate multimedia resources as essential components of language education. Additionally, future research should explore the long-term effects of multimedia interventions on vocabulary retention and language proficiency across different age groups and educational settings. These implications highlight the potential for multimedia glossaries to bridge the gap between classroom instruction and real-world language use, ultimately fostering a more dynamic and effective language learning environment.

Conclusion:

The results of this study demonstrate how important contextualized multimedia glossaries are for improving students' vocabulary in Grade 6. Prior to the intervention, the students' vocabulary competency was first evaluated, and the results showed an overall mean score of 17.30 with a standard deviation of 6.215, indicating average proficiency. This suggests that the pupils had a difficult time applying English terminology in a meaningful way to their everyday lives. These challenges highlight the need for creative teaching methods to address vocabulary development, a crucial aspect of language competency. The pupils' vocabulary abilities significantly improved as a result of the intervention using contextualized multimedia glossaries. An elevated mean score of 23.75 with a standard deviation of 6.295 was seen in the post-intervention evaluation, which was considered excessive. This notable improvement in performance highlights how well multimedia technologies help vocabulary acquisition. In addition to making studying more interesting, the contextualized multimedia lexicon gave students a better context in which to comprehend and remember new words. This is consistent with earlier studies showing the beneficial effects of multimedia materials on language acquisition. Furthermore, with a p-value of 0.000, the statistical analysis showed a significant difference in the students' vocabulary skills before and after the intervention. This noteworthy variation attests to the intervention's efficacy and supports the notion that using multimedia resources in language instruction may significantly enhance students' learning results. The results are consistent with the larger body of research on the advantages of multimedia in language acquisition, such as increased engagement, higher vocabulary retention, and enhanced comprehension abilities. A number of educational consequences are highlighted by the contextualized multimedia glossary intervention's success. It first illustrates how crucial it is to use a variety of teaching resources in order to accommodate various learning preferences. Multimedia glossaries may cater to students' diverse preferences and requirements by offering visual, aural, and contextual signals. This approach enhances the effectiveness and inclusivity of learning. (Vargo et al., 2023; Poole, 2012). Second, the favorable results imply that educators ought to be motivated and prepared to use multimedia materials into their lesson plans. In addition to improving vocabulary acquisition, this would inspire students and provide a more dynamic, participatory learning environment. The results also highlight how contextualized multimedia glossaries can help close the gap between classroom learning and everyday language use. Through contextual vocabulary presentation, these tools enhance students' comprehension of word usage in many contexts, leading to an improvement in their pragmatic language abilities and cultural awareness. This method is in line with the fundamentals of successful language instruction, which place a strong emphasis on the value of exposure to real-world context and language usage.

Conclusively, the noteworthy enhancement in the vocabulary proficiency of Grade 6 students subsequent to the implementation of contextualized multimedia glossaries underscores the transformational capacity of multimedia resources in language learning. This study offers compelling evidence that these kinds of materials can improve students' language competency in general and vocabulary acquisition in particular. The results



encourage the wider use of multimedia glossaries and related resources in language instruction, fostering a more dynamic, productive, and contextually rich learning environment. Subsequent studies have to persist in examining the enduring effects of multimedia interventions on language acquisition and scrutinize their efficacy in varying age cohorts and academic environments.

Recommendations:

Curriculum Developers must consider the integration of teachers' education into the present wave of change, particularly in the area of information technology. The use of multimedia glossaries can help teachers improve their students' vocabulary proficiency. The accomplishment of learning outcomes depends on the proper and regular usage of multimedia glossaries during the teaching process.

School Administrators may be coordinated by English teachers in the production of learning materials for enhancing vocabulary. Provide a welcoming atmosphere for proposals based on actual teaching scenarios. While the LRM Coordinator and Members may inculcate a shared awareness of the review purpose and validation of learning materials. Some could maintain that the evaluation process's goal is to increase instructors' efforts and initiatives.

A multimedia glossary might be used to augment a teacher's regular lesson plan. It may also be used to start significant class debates. As is evident, multimedia glossaries may be utilized for education and can improve vocabulary abilities with their many different formats.

Multimedia resource integration into language courses ought to be given top priority in educational institutions. It is essential to include these tools into routine teaching methods because of their proven ability to enhance vocabulary acquisition and general language skills. It should be the goal of training and professional development programs for educators to provide them with the skills and knowledge needed to use multimedia glossaries in an efficient manner. This includes continuing assistance to make sure instructors can modify these resources to meet the unique needs of their classrooms, as well as conferences and seminars centered on the creation and application of multimedia tools.

Moreover, legislators and curriculum designers must to think about updating language education requirements such that multimedia glossaries are a fundamental part of vocabulary training. This can entail offering recommendations for the usage of multimedia tools at different educational levels as well as upgrading currently in use educational frameworks. In order to ensure that all students can benefit from multimedia-enhanced learning, schools should also make the required investments in the technology infrastructure to allow the broad use of these tools.

It is important to support research on the long-term impacts of multimedia glossaries on language acquisition. To get a more complete picture of their effectiveness, future research should examine their effects in various age groups, educational environments, and cultural contexts. Furthermore, it is imperative to give top priority to the creation of customized multimedia learning programs, as they may be tailored to meet the unique demands and learning preferences of each student, so augmenting the efficiency of vocabulary teaching.

To construct creative and contextually relevant multimedia glossaries, academics, educators, and technology developers must work together. These collaborations can result in the production of excellent, captivating teaching materials that are cutting edge in terms of technology and pedagogy. Lastly, it's important to motivate students to use multimedia materials outside of the classroom. Giving students access to digital libraries of interactive glossaries, audio books, and video books may expand their learning beyond the confines of the classroom and promote a more continuous and immersive language learning experience.

An important development in language instruction is the use of contextualized multimedia glossaries. Teachers may provide a more dynamic, efficient, and inclusive learning environment that significantly enhances students' vocabulary and overall language ability by adopting these technologies and tackling the related problems.

References:

- Abraham, L. (2007). Second language reading comprehension and vocabulary learning with multimedia. *Hispania*, 90, 98-109.
- Abraham, L. (2008). Computer-mediated glosses in second language reading comprehension and vocabulary learning: A meta-analysis. *Computer Assisted Language Learning*, 21, 199-226. <https://doi.org/10.1080/09588220802090246>.
- Ahmad, S. (2019). Multimedia Glosses for Enhancing EFL Students' Vocabulary Acquisition and Retention. *English Language Teaching*. <https://doi.org/10.5539/elt.v12n12p46>.
- Alfar M. J. (2019). Using words and pictures in foreign language learning. *Alberta Journal of Educational Research*, 17(2), 87-94.



Alone, S.D. (2023). The Role of Audio Books and Video Books in English Language Teaching (ELT). *SMART MOVES JOURNAL IJELLH*.

Alseghayer, L. M. (2018). Higher education governance in Europe: policies, structures, funding and academic staff. Brussels: Eurydice, European Commission, Education and Culture DG.

Bader P. J. (2019). Vocabulary knowledge. In J. T. Guthrie (Ed.). *Comprehension and teaching: Research reviews* (pp. 77–117). Newark, NJ: International Reading Association

Blumenfeld, P. C., (2018). "Motivating Project-Based Learning: Sustaining the Doing, Supporting the Learning," *Educational Psychologist*, Vol. 26, No. 3/4, 2016

Chun, C., & Plass, K. (2019). What factors support or prevent teachers from using ICT in their classrooms? Luxembourg: Publications Office of the European Union

Carret, M. L. (2018). Key data on learning and innovation through ICT at school in Europe.

Damon, J. J. (2017), "Constructivism in Teacher Education: Considerations for those Who Would Link Practice to Theory," *ERIC Digest*, 2017.

Duaquino, L. C. (2019). Multimedia Integration in Teaching Grade 7 English. Unpublished Thesis. University of Saint La Salle Bacolod.

Henley, Y., & Elden, T. (2012). Teaching English at the university level through short stories and multimedia.

Hollinger, R.N. (2019), "Multi-Media Computer Assisted Learning." Kogan Page, London, 1989.

Howley, N. M. (2018), "On Pictures in Prose," *Educational Communications and Technology Journal*, Vol. 26, 1978, pp. 233–234.

Pavio, R. E. (2019). Transforming qualitative information: thematic analysis and code development. Thousand Oaks, CA: Sage.

Karatas, N., Özemir, O., Lovelett, J., Demir, B., Erkol, K., Veríssimo, J., Erçetin, G., & Ullman, M. (2021). Improving second language vocabulary learning and retention by leveraging memory enhancement techniques: A multidomain pedagogical approach. *Language Teaching Research*.
<https://doi.org/10.1177/13621688211053525>.

Krashen, C. L. (2019). Factors influencing teachers' adoption and integration of information and communication technology into teaching: a review of the literature. *International Journal of Education and Development using Information and Communication Technology*, 8(1), 136–155.

Lavarian, A.F. (2017). New technology and education: contemporary issues in educational studies. London: Continuum.

Lesaux, N., Kieffer, M., Kelley, J., & Harris, J. (2014). Effects of Academic Vocabulary Instruction for Linguistically Diverse Adolescents. *American Educational Research Journal*, 51, 1159 – 1194.
<https://doi.org/10.3102/0002831214532165>.

Mayer, L. R. (2020) Multimedia Learning details his extensive research on how to structure multimedia materials effectively to maximize learning. *International Journal of Education and Development using Information and Communication Technology*, 2(1), 1–120.

Miolo, S., Pilongo, J., Sambouw, E., & Luwiti, S. (2023). Enhancing English Vocabulary Acquisition in Reading Instruction Through Multiple Intelligences Approach. *TRANS-KATA: Journal of Language, Literature, Culture and Education*. <https://doi.org/10.54923/jllce.v4i1.67>.

Mohsen, M., & Balakumar, M. (2011). A review of multimedia glosses and their effects on L2 vocabulary acquisition in CALL literature. *ReCALL*, 23, 135–159. <https://doi.org/10.1017/S095834401100005X>.

Nasrollahi, K., & Daneshfar, S. (2018). The Effect of Visual Contextual Support and Glossary of Words on Guessing Meaning of New Vocabulary Items in English by Pre-university Male EFL Students. *Journal of Language Teaching and Research*, 9, 561–572. <https://doi.org/10.17507/JLTR.0903.16>.

Nurmahanani, I. (2023). Effectiveness of a Mixed Methods-Based Literacy Program in Improving Reading Comprehension, Vocabulary Mastery, and Reading Fluency Skills of Early Grade Students. *International Journal of Learning, Teaching and Educational Research*.



- Paculanang, C. D. (2021), "Development and Field Testing of Modules for Cookery 9 in the New Normal) Research Paper. Northern Negros State College of Science and Technology, Sagay City, Negros Occidental.
- Poole, R. (2012). Concordance-Based Glosses for Academic Vocabulary Acquisition. *CALICO Journal*, 29, 679-693. <https://doi.org/10.11139/CJ.29.4.679-693>.
- Ruiz, J.A., & Estoque, M.L. (2023). Use of Emojis for Vocabulary Enhancement. *International Journal of Advanced Research in Science, Communication and Technology*.
- Sandholtz, C. & Ringstaff, G. (2018) "Teaching with Technology: Creating Student-Centered Classroom," Teachers College, Columbia University, New York: 1997.
- Salutin, M. A., & Maguate, G. (2023). Values-Based Exercises for the Development of Reading Readiness Skills for Preschool Children. *International Journal of Scientific Research and Management (IJSRM)*, 11(08), 22-30.
- Teng, M. (2022). The effectiveness of multimedia input on vocabulary learning and retention. *Innovation in Language Learning and Teaching*, 17, 738-754. <https://doi.org/10.1080/17501229.2022.2131791>.
- Thaosiri, S., & Chano, J. (2022). The Development of an Instructional Model Based on Social Cognitive Theory to Enhance English Listening and Speaking Skills for Grade 6 Students in Small Size Schools. *Journal of Educational Issues*.
- Vargo, A., Yamaguchi, K., Iwata, M., & Kise, K. (2023). A Context-Based Multimedia Vocabulary Learning System for Mobile Users. *Informatics*. <https://doi.org/10.3390/informatics11010001>.
- Villaganas, R.D. (2023). Utilizing Vocabulary Word Mapping as a Remediation Strategy in Improving Vocabulary Level among Grade 6 – Newton Students. *AsiaCALL Online Journal*.