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Research Paper

PROJECT PARA: Pictures, Audio, Relay, and Action Strategy on Learners' Reading Comprehension Skills in English

Kayl Maika B. Marquez[1*], Regine J. Ibayon[2], Daniel F. Ribo[3], Jan S. del Rosario[4]
[1-4] Bulacan Agricultural State College, Philippines

*Corresponding Author: [4]jan_delrosario@basc.edu.ph, 0009-0000-0163-5946
[1]kaylmaikamarquez@gmail.com
[2]reginejavieribayon@gmail.com
[3]danielfajardoribo.basc@gmail.com

Abstract

Reading comprehension is a fundamental skill necessary for academic success, yet many learners struggle, particularly in English. This study examines the effectiveness of PROJECT PARA: Pictures, Audio, Relay, and Action Strategy in enhancing learners' reading comprehension skills. A quasi-experimental research design was employed, involving an experimental group and a control group. Participants were selected based on their low reading comprehension levels in the Early Grade Reading Assessment. The intervention integrated visual, auditory, kinesthetic, and interactive techniques to accommodate diverse learning styles. Findings revealed a notable improvement in the reading comprehension of learners exposed to PROJECT PARA compared to those taught through traditional methods. Statistical analysis confirmed the strategy's effectiveness, highlighting its potential to support struggling readers. This study reinforces the value of multisensory approaches in literacy development. Educators are encouraged to adopt innovative strategies like PROJECT PARA to create more engaging and effective reading instruction, ultimately fostering better comprehension and academic success among learners.

Keywords *reading comprehension, multisensory learning, instructional strategy*

INTRODUCTION

Reading comprehension is a fundamental skill essential for academic success, enabling learners to extract, interpret, and apply meaning from texts. Despite its importance, many learners struggle with understanding and analyzing written materials, particularly in English. The Programme for International Student Assessment (PISA) conducted by the Organisation for Economic Cooperation and Development (OECD) highlights this issue, with the Philippines ranking among the lowest-performing countries in reading comprehension in 2022. At the local level, assessments such as the Early Grade Reading Assessment (EGRA) further confirm the prevalence of low reading comprehension skills among learners.

Traditional teaching approaches often fail to address the diverse learning styles of students, leading to persistent reading difficulties. Methods such as phonics instruction, direct instruction, and comprehension drills have shown effectiveness but remain limited in catering to learners with different sensory preferences. Fleming and Baume's (2006) VARK model of learning suggests that students process information through various sensory modalities—Visual, Auditory,

Reading/Writing, and Kinesthetic. However, most conventional reading interventions focus primarily on visual and reading-based strategies, neglecting the potential benefits of auditory and kinesthetic learning activities.

Recent studies emphasize the effectiveness of multisensory learning approaches in enhancing reading comprehension. Parra (2021) demonstrated that engaging multiple senses strengthens cognitive connections, improving retention and comprehension among struggling readers. Similarly, Olavarria (2023) found that integrating visual, auditory, and kinesthetic elements into reading instruction significantly enhances literacy outcomes. While these approaches show promise, existing studies often focus on isolated sensory strategies rather than a comprehensive, structured intervention.

To bridge this gap, this study introduces PROJECT PARA: Pictures, Audio, Relay, and Action Strategy—a multimodal approach designed to accommodate diverse learning preferences. By incorporating visual, auditory, and kinesthetic components, PROJECT PARA provides an engaging and interactive framework for improving reading comprehension. Unlike traditional methods, this intervention systematically integrates sensory-based activities, offering a novel solution to address low literacy rates.

This study aimed to assess the effectiveness of PROJECT PARA in enhancing the reading comprehension skills of Grade 3 learners. Specifically, it seeks to: 1.) Describe the pre-test reading comprehension levels of the control and experimental groups before the intervention. 2.) Evaluate the post-test reading comprehension levels of both groups after implementing the intervention. 3.) Determine whether there is a significant difference between the pre-test and post-test results of the control and experimental groups.

LITERATURE REVIEW

Reading comprehension has been widely studied as a critical skill for academic and lifelong success. Butterfuss et al. (2020) describe comprehension as the process of constructing meaning from text through interaction with prior knowledge and contextual cues. Decena (2019) further emphasizes that comprehension is not merely about recognizing words but about integrating and applying information effectively. Despite its importance, many learners continue to struggle with reading comprehension, particularly in second-language contexts.

Research suggests that multisensory approaches can enhance reading comprehension by engaging multiple learning modalities. Fleming and Baume's (2006) VARK model provides a theoretical foundation for understanding how learners process information differently. Parra (2021) found that integrating visual, auditory, and kinesthetic elements into reading instruction significantly improves comprehension among struggling readers. Similarly, Olavarria (2023) demonstrated that students exposed to multisensory learning strategies exhibit higher retention and engagement compared to those taught using traditional methods. The integration of multisensory techniques offers a way to address the diverse learning needs of students, making literacy instruction more inclusive and effective.

The use of pictures in reading instruction has been shown to support comprehension by providing contextual clues and reinforcing textual information. Carantes and Delos Reyes (2021) argue that visual representations help learners identify key ideas, understand relationships between concepts, and sustain engagement. Kilapong et al. (2022) further highlight that picture-based interventions lead to higher post-test comprehension scores, demonstrating the effectiveness of integrating visual aids in literacy instruction. Similarly, the role of auditory input in reading comprehension has also been explored extensively. Kirchhoff (2022) found that learners who engage in audio-assisted reading show improved fluency and comprehension compared to those relying solely on text. Bundy (2023) supports this finding, emphasizing that high-quality

audio enhances speech clarity, focus, and engagement, making reading materials more accessible to learners with varied literacy skills.

Interactive reading strategies, such as relay reading and role-playing, have been recognized for their impact on comprehension and engagement. Dibelius (2020) found that relay reading encourages oral fluency, listening skills, and comprehension through peer-supported reading activities. Hartono (2023) further demonstrated that role-playing allows learners to engage deeply with texts, fostering a more immersive and meaningful reading experience. These strategies offer active learning experiences that go beyond passive reading, making comprehension activities more dynamic and learner-centered.

While previous studies confirm the effectiveness of visual, auditory, and kinesthetic strategies in improving reading comprehension, existing interventions often focus on isolated sensory modalities. Few studies have systematically integrated these elements into a structured, multisensory intervention. This study addresses this gap by introducing PROJECT PARA, a comprehensive approach that combines pictures, audio, relay reading, and action-based strategies to enhance reading comprehension holistically. By synthesizing insights from existing research, this study contributes to the growing body of literature on multisensory learning and reading comprehension. It provides empirical evidence on the effectiveness of an integrated approach, offering practical implications for educators seeking innovative strategies to improve literacy outcomes.

RESEARCH METHOD

This study employed a quasi-experimental design to evaluate the effectiveness of PROJECT PARA in enhancing reading comprehension among Grade 3 learners. A pre-test and post-test control group design was implemented, where the experimental group received instruction using PROJECT PARA, while the control group followed traditional reading instruction methods. Quasi-experimental designs allow for comparisons between groups without random assignment, making them suitable for educational research in natural classroom settings (Thomas, 2020).

Participants were Grade 3 learners from San Miguel North Central School, selected based on their Early Grade Reading Assessment results. Purposive sampling was used to identify two sections with the highest percentage of struggling readers. The experimental group consisted of learners from Grade 3 Dandelion, while Grade 3 Lilac served as the control group. Each group comprised 32 learners, totaling 64 participants. Inclusion criteria required that learners had documented reading comprehension difficulties and parental consent to participate.

PROJECT PARA integrated pictures, audio, relay reading, and role-playing as multisensory strategies. Picture books featured customized illustrations to support comprehension, while audio-assisted reading provided recorded narrations with background music and sound effects. Relay reading involved learners taking turns reading aloud, and role-playing required them to act out key story elements to enhance engagement. The intervention was delivered over six weeks, aligned with the English curriculum, and validated by Master Teachers before implementation.

A teacher-made pre-test and post-test, adapted from the Philippine Informal Reading Inventory (Phil-IRI), assessed comprehension. Each test included 20 multiple-choice questions covering literal, inferential, and evaluative comprehension. Performance was categorized using a standardized 5-point Likert scale. Data analysis involved descriptive statistics to determine mean and standard deviation, a paired samples t-test to assess within-group differences, and an independent samples t-test to compare post-test results between groups. The significance level was set at $p < 0.05$. Ethical clearance was secured following DepEd Order No. 16, s. 2017, with informed consent from parents and confidentiality measures in place.

FINDINGS AND DISCUSSION

This section presents the findings of the study, which aimed to assess the effectiveness of PROJECT PARA: Pictures, Audio, Relay, and Action Strategy in improving the reading comprehension skills of Grade 3 learners. The results are analyzed based on the learners' pre-test and post-test performance, followed by statistical comparisons to determine significant differences between the experimental and control groups. A discussion of these findings is provided in relation to existing literature on reading comprehension interventions.

Learners' Reading Comprehension Skills Prior to the Implementation of the Strategy

To establish a baseline understanding of the learners' reading comprehension skills before the intervention, a pre-test was administered to both groups. The results, as shown in Table 1, summarize the distribution of scores for both the experimental and control groups, along with their corresponding performance levels.

Table 1. Write Pre-test Results of Control and Experimental Group

Range	Frequency (Control)	Percentage (%)	Frequency (Experimental)	Percentage (%)
13-16	4	12.5	2	6.25
9-12	7	21.87	7	21.87
5-8	15	46.88	17	53.13
0-4	6	18.75	6	18.75
Total	32	100	32	100
Mean	7.59		7.41	
Verbal Interpretation	Fairly Satisfactory		Fairly Satisfactory	

Legend: 0-4 - Did Not Meet Expectation, 5-8 - Fairly Satisfactory, 9-12 – Satisfactory, 13-16 – Very Satisfactory, 17-20 Outstanding

The pre-test results indicate that a significant proportion of learners in both the control and experimental groups exhibited low reading comprehension skills. As shown in Table 3, 18.75% of learners in each group fell under "Did Not Meet Expectations", while the majority were classified as "Fairly Satisfactory" (46.88% in the control group and 53.12% in the experimental group). A smaller percentage of learners achieved "Satisfactory" and "Very Satisfactory" scores, and no students attained the "Outstanding" category. The mean scores of 7.59 (control group) and 7.41 (experimental group) suggest that both groups started at a comparable level, with minimal disparity in their reading comprehension abilities.

These findings align with previous studies on reading proficiency among Filipino learners. Vasay et al. (2020) reported that 61% of students were classified at the frustration level, struggling to comprehend reading materials independently. Their study emphasized the need for targeted interventions to improve reading skills, reinforcing the relevance of PROJECT PARA as a strategic approach to address these persistent comprehension difficulties.

Learners' Reading Comprehension Skills After the Implementation of the Strategy.

After six weeks of instruction, a post-test was administered to both groups to assess any changes in their reading comprehension skills. The results, presented in Table 2, summarize the learners' performance levels and indicate differences between the control and experimental groups following the intervention.

Table 2. Post-test Results of Control and Experimental Group

Range	Frequency (Control)	Percentage (%)	Frequency (Experimental)	Percentage (%)

17-20	2	6.25	4	12.5
13-16	9	28.13	12	37.5
9-12	11	34.37	14	43.75
5-8	8	25	2	6.25
0-4	2	6.25	0	0
Total	32	100	32	100
Mean	10.31		12.66	
Verbal Interpretation	Satisfactory		Very Satisfactory	

Legend: *0-4 - Did Not Meet Expectation, 5-8 - Fairly Satisfactory, 9-12 – Satisfactory, 13-16 – Very Satisfactory, 17-20 Outstanding*

These The post-test results indicate a noticeable improvement in the reading comprehension skills of both groups, with the experimental group showing greater gains. In the control group, 6.25% of learners remained in the "Did Not Meet Expectations" category, while 25% were classified as "Fairly Satisfactory" and 34.37% as "Satisfactory". A smaller proportion of learners achieved "Very Satisfactory" (28.13%) and "Outstanding" (6.25%). In contrast, the experimental group demonstrated a more substantial shift, with 43.75% of learners reaching "Satisfactory", 37.5% attaining "Very Satisfactory", and 12.5% achieving "Outstanding". Notably, no learners in the experimental group scored in the lowest category, further suggesting the positive impact of PROJECT PARA on reading comprehension. The mean score of the experimental group (12.66) was higher than that of the control group (10.31), reinforcing the intervention's effectiveness.

These findings align with Olavarria (2023), who emphasized that multisensory learning approaches enhance literacy outcomes by engaging visual, auditory, kinesthetic, and tactile learning pathways. The structured integration of these modalities in PROJECT PARA appears to have strengthened comprehension skills beyond traditional instruction. The results suggest that incorporating multisensory strategies in reading instruction can provide a more inclusive and effective learning experience, warranting further exploration of PROJECT PARA for broader educational applications.

Pre-test and Post-test Results Comparison of Experimental Group

To determine whether there was a significant improvement in the reading comprehension skills of learners who underwent PROJECT PARA, a paired sample t-test was conducted on their pre-test and post-test scores.

Table 3. Difference Between Pre-Test and Post-Test Results of the Experimental Group

Assessment	N	Mean	SD	T Stat	P<0.05	Decision	Verbal Interpretation
Pre-test **Post-test**	32	7.41 12.66	2.90 2.99	-7.99	<.001	Reject Ho	There is a significant difference

The results show a notable increase in the mean score of the experimental group, rising from 7.41 (pre-test) to 12.66 (post-test), with a corresponding increase in standard deviation. The computed t-value of -7.99 exceeds the critical value, and the p-value (<.001) is below the significance threshold of 0.05, indicating a statistically significant difference between the pre-test and post-test scores. This suggests that the intervention had a substantial impact on improving learners' reading comprehension. The slight increase in standard deviation from 2.90 to 2.99 implies some variability in individual performance, but the overall trend reflects consistent gains

across participants.

These findings align with the study of Bevans (2020), which emphasized that a significant t-value in paired tests confirms meaningful differences in learning outcomes before and after an intervention. Similarly, Korkmaz & Karatepe (2020) highlighted that multisensory teaching strategies enhance comprehension by engaging multiple cognitive pathways, reinforcing the positive impact observed in this study. The results further support Syahputri's (2019) argument that a combination of visual, auditory, and kinesthetic techniques can significantly improve students' ability to process and retain textual information.

The rejection of the null hypothesis confirms that learners exposed to PROJECT PARA demonstrated significant improvement in their reading comprehension compared to their initial performance. These results align with Syahputri (2019), who emphasized that multisensory learning, incorporating visual, auditory, kinesthetic, and tactile engagement, enhances reading comprehension by reinforcing neural connections between text and meaning. The increase in post-test scores suggests that integrating interactive and experiential learning methods allows learners to engage with reading materials in multiple ways, potentially strengthening their ability to process and retain information.

Post-test Results Comparison of thr Control and Experimental Group

To assess whether the reading comprehension skills of the experimental group improved significantly more than those of the control group, an independent sample t-test was conducted on their post-test scores. The results, summarized in Table 4, compare the performance of learners who received PROJECT PARA instruction against those who underwent traditional reading instruction.

Table 4. Difference Between Post-Test Results of the Control, and the Experimental Group

Group	N	Mean	SD	T Stat	P<0.05	Decision	Verbal Interpretation
Control		10.31	2.90				There is a significant difference
Experimental	32	12.66	2.99	-2.766	0.007	Reject Ho	

The results indicate that the experimental group achieved a higher mean score (12.66) compared to the control group (10.31), with a slightly greater standard deviation (2.99 vs. 2.90). The computed t-value of -2.766 exceeded the critical threshold, and the p-value (0.007) was below the 0.05 significance level, leading to the rejection of the null hypothesis. This confirms that the difference in post-test scores between the two groups was statistically significant, suggesting that learners who participated in PROJECT PARA outperformed those who received traditional instruction. These findings highlight the potential of multisensory strategies in improving reading comprehension.

The observed improvement in the experimental group aligns with prior research on multisensory learning approaches. Parra (2021) emphasized that incorporating visual, auditory, and kinesthetic elements helps learners engage with reading materials more effectively, reinforcing their ability to process and retain information. Similarly, Bundy (2023) found that high-quality audio enhances speech clarity, focus, and engagement, while relay reading and role-playing promote better oral reading fluency and comprehension. The integration of these techniques in PROJECT PARA likely contributed to the significant gains observed in the experimental group.

While multisensory approaches like PROJECT PARA demonstrate positive effects on reading comprehension, previous research suggests that the incorporation of multiple sensory

inputs may influence cognitive processing in different ways. Rau et al. (2020) found that auditory stimuli, such as background noise or music, can increase cognitive workload and slow reading speed, while tactile stimuli may also contribute to cognitive strain. Additionally, their study observed that combining visual, auditory, and tactile elements could heighten cognitive demands, depending on the learning environment. These insights provide further context for understanding the variability in learners' responses to multisensory strategies, emphasizing the complexity of how different sensory modalities interact in reading comprehension.

CONCLUSIONS

This study aimed to assess the effectiveness of PROJECT PARA: Pictures, Audio, Relay, and Action Strategy in enhancing the reading comprehension skills of Grade 3 learners. The findings revealed a statistically significant improvement in the reading comprehension performance of students who underwent the intervention, as indicated by the increase in their post-test scores. The rejection of the null hypothesis confirms that PROJECT PARA contributed to the enhanced reading abilities of the learners in the experimental group compared to those in the control group.

By integrating multisensory learning approaches, this study adds to the existing body of research supporting alternative instructional strategies for improving literacy. The combination of visual, auditory, and kinesthetic activities provided learners with multiple ways to engage with reading materials, reinforcing their ability to process and retain information. These findings align with previous studies on multisensory teaching, emphasizing its role in strengthening comprehension skills and addressing the diverse learning needs of students.

The results of this study highlight the potential of PROJECT PARA as an effective reading intervention. Its structured use of pictures, audio, relay reading, and action-based learning offers an innovative approach to addressing reading comprehension difficulties among early-grade learners. While the findings demonstrate promising outcomes, further research may explore its long-term impact, applicability in different learning contexts, and potential refinements to enhance its effectiveness in broader educational settings.

LIMITATION & FURTHER RESEARCH

This study was limited to one school with a small sample size, which may affect how widely the findings apply. It also measured only short-term improvements, leaving the long-term effects of PROJECT PARA unknown. Other factors like student motivation and home support were not considered. Future research can address these by studying larger groups, exploring long-term impacts, and adapting the strategy for different learning needs.

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REFERENCES

Aldhanhani, Z. R., & Abu-Ayyash, E. A. S. (2020). Theories and research on oral reading   fluency: What is needed? Theory and Practice in Language Studies
https://doi.org/10.17507/tpls.1004.05

Bevans, R. (2023, June 22). An introduction to T tests | Definitions, formula and examples. Scribbr. https://www.scribbr.com/statistics/t-test/

Boakye, N.A.Y., 2021, 'Using role play and explicit strategy instruction to improve first year students' academic reading proficiency', *Reading & Writing* 12(1),a285. https://doi.org/10.4102/rw.v12i1.285

Bundy, C. (n.d.). *Enhancing reading Comprehension: The power of quality classroom audio.* https://blog.mimio.com/enhancing-reading-comprehension-the-power-of-quality-classroom-audio

Butterfuss, R., Kim, J., & Kendeou, P. (2020c). Reading comprehension. *Oxford Research Encyclopedia of Education.* https://doi.org/10.1093/acrefore/9780190264093.013.865

Cao, P. (2021). *Exploring the effect of pictures on second graders' oral reading behavior and comprehension*. University of Florida ProQuest Dissertations Publishing.

Caraig, R., V. (2022). *Assessing reading comprehension difficulties in core science subjects of senior high school students in a private school in Calamba City, Philippines.*

Carantes, S. J. S. (2021, March 27). *The use of images in reading comprehension. Puissant, 2,121-132. Retrevied fom:* https://ojs.aaresearchindex.com/index.php/AAJMRA/article/view

Chen, M. (2018). The effects of textbook-based approach to reading instruction on elementary graders' reading comprehension and awareness of using reading strategy. *Bulletin of Educational Psychology*, 49(4), 581–609.

Davis, B., & Francis, K. (2021). "Sensory Theory (Sensory Stimulation Theory)" in *Discourses on Learning in Education*. https://learningdiscourses.com.

Efendi, M. (2018). The Implementation of Inclusive Education in Indonesia for Children with Special Needs: Expectation and Reality. *Journal of ICSAR*, 2(2), 142–147. https://doi.org/10.17977/um005v2i22018p142

Fleming, N., and Baume, D. (2006) Learning Styles Again: VARKing up the right tree!, Educational Developments, SEDA Ltd, Issue 7.4, Nov. 2006, p4-7.

Garcia, G. D. V. (2022). Executive Functions and English Reading Comprehension among Filipino Learners. *Reading Psychology*, 44(4), 388–411. https://doi.org/10.1080/02702711.2022.2156950

Holgado, J. (2019). *Problems in reading comprehension in English.* Retrieved from: http://dx.doi.org/10.11594/ijmaber.04.04.14

Hartono, H. (2023). The Effectiveness of Role Playing Method as a Media to Improve *Reading Ability of Primary School Students: An Experimental Research. Pedagogy: Indonesian Journal of Teaching and Learning Research*, 1(1),1-10.

İlçin, N., Tomruk, M., Yeşilyaprak, S. S., Karadibak, D., & Savcı, S. (2018). The relationship between learning styles and academic performance in TURKISH physiotherapy students. *BMC Medical Education*, 18(1). https://doi.org/10.1186/s12909-018-1400-2

Inding, A. L. (2020). Improving Reading Comprehension Skills Of Grade IV Pupils Using Effective Comprehension Strategy Instruction.

Kilapong, F., Samola, N., & Andries, F. (2022). Using Picture To Improve Students' Reading Comprehension Of Descriptive Texts At 8th Grade Students Of SMP N 1 Siau Timur Selatan. *JoTELL : Journal of Teaching English, Linguistics, andLiterature, 1*(3 SE-), 402–416.

Kirchhoff, C., & Mision, M. (2022). *Audio-assisted Extensive Reading: Learners' Experience and Attitudes. He Reading Matrix: An International Online Journal* Volume 22, Number 2, September 2022, 22.

Lhamo, J. (2023, November 14). *The effectiveness of Audio-Assisted Reading to enhance English reading comprehension skills for Bhutanese students*. https://so05.tci-thaijo.org/index.php/thaitesoljournal/article/view/268986

Lubis, R. (2018). The Progress of Students Reading Comprehension through Wordless Picture Books. *Advances in Language and Literary Studies*, 9(1), 48. https://doi.org/10.7575/aiac.alls.v.9n.1p.48

Luceñara, C. (2023). Effectiveness of contextualized learning materials in improving the reading skills and Comprehension level of the students.

Mayhoub, M. (2022). *Using role-play strategy in reading on developing prep stage learners' flexible thinking*, . BSU Journal of Pedagogy and Curriculum, 2022; 1(1): 36-45

Ocampo, E. N. (n.d.). *Exploring the Relationship between Mathematics Performance and Learning Style among Grade 8 Students.*No. 4, 1165 – 1172

Olavarria, N. (2023). Multisensory Learning Strategies: Teacher preparedness. MULTISENSORY LEARNING STRATEGIES.

Parra, G. (2021b). The Effects Of Multisensory Approach in the Development of the Reading Comprehension Skill. Proceedings of INTCESS 2021- 8th International Conference on Education and Education of Social Sciences. https://doi.org/10.51508/intcess.202145

PISA Publications. (2018). PISA – OECD.

Ratminingsih, N. M., & Budasi, I. G. (2018). Local culture-based picture storybooks for teaching English for young learners. *SHS Web of Conferences*, 42, 00016. https://doi.org/10.1051/shsconf/20184200016

Samsibar, S., & Naro, W. (2018). The Effectiveness of Role Play Method Toward Students' Motivation in English Conversation. *Eternal (English, Teaching, Learning & Research Journal).* https://doi.org/10.24252/eternal.v41.2018.a8

Syahputri, D. (2019). The effect of multisensory teaching method on the students' reading achievement. *Budapest International Research and Critics in Linguistics and Education Journal/Budapest International Research and Critics in Linguistics and Education Journal, 2(1), 124–131.* https://doi.org/10.33258/birle.v2i1.192

Sun, C. (2020). *Using Interactive Picture-Book Read-Alouds with Middle School EFL Students*. https://eric.ed.gov/?id=EJ1259649

Thomas, L. (2023, June 22). Quasi-Experimental Design | Definition, Types & Examples. Scribbr.

Yawiloeng, R. (2022). Using Instructional Scaffolding and Multimodal Texts to Enhance Reading Comprehension: Perceptions and Attitudes of EFL Students. *Journal of Language and Linguistic Studies*, 18(2), 877-894

Utomo, D. S., Onggo, B. S., Eldridge, S., Daud, A. R., & Tejaningsih, S. (2021). Eliciting agents' behaviour and model validation using role playing game in agent-based dairy supply chain model. *Journal of the Operational Research Society*, 73(12), 2670–2693. https://doi.org/10.1080/01605682.2021.2013137

Vasay, M. J. G. (2016b). *Level of reading comprehension of the education students.* Retrieved from: https://ejournals.ph/article

Venegas, E. M., & Guanzon, A. (2023). A planning Tool for improving Interactive Read Alouds: *Why and how. The Reading Teacher*, 77(2), 207–216. https://doi.org/10.1002/trtr.2234

Villanueva, J. M. (2022). Language profile, metacognitive reading strategies, and reading comprehension performance among college students. *Cogent Education*, 9(1). https://doi.org/10.1080/2331186x.2022.2061683

Wagar, C. (2018). The impact of audiobooks on reading comprehension and enjoyment. *ResearchGate*. https://doi.org/10.13140/RG.2.1.1382.0409