SAJAAS

Southeast Asian Journal of Agriculture and Allied Sciences

Volume 4 Issue 1

Improving Grade 5 Learners' Reading Comprehension Skills through TechPlay Fusion Strategy

Ligpitan, Noemi Marrieth V.[1]
Pasilan, Marianne M.[2]
Tolentino, Anna Marie T.[3]
Hipolito, Yosef Eric C.[4]

Corresponding Author: *yosefhipolito19@gmail.com*

[1-3]Institute of Education, Bulacan Agricultural State College, Pinaod, San Ildefonso, Bulacan, Philippines
[4]Institute of Arts and Sciences, Bulacan Agricultural State College, Pinaod, San Ildefonso, Bulacan, Philippines

pp. 1-11

SAJAAS | Southeast Asian Journal of Agriculture and Allied Sciences
www.sajaas.basc.edu.ph
sajaasjournal@basc.edu.ph

Improving Grade 5 Learners' Reading Comprehension Skills through TechPlay Fusion Strategy

Article History:
Received: *Jul. 26, 2024*
Accepted: *Sept. 16, 2024*
Published: *Feb. 05, 2025*

https://doi.org/10.63943/sajaas.vol4iss1art33pp1-12

Ligpitan, Noemi Marrieth V.[1]
Pasilan, Marianne M.[2]
Tolentino, Anna Marie T.[3]
Hipolito, Yosef Eric C.[4]

Corresponding Author: *yosefhipolito19@gmail.com*

[1-3]*Institute of Education, Bulacan Agricultural State College, Pinaod, San Ildefonso, Bulacan, Philippines*
[4]*Institute of Arts and Sciences, Bulacan Agricultural State College, Pinaod, San Ildefonso, Bulacan, Philippines*

Abstract

The Grade 5 Philippine Informal Reading Inventory Assessment conducted in 2023 revealed that out of a population of 204 learners, 61 were categorized as experiencing frustration, as they showed withdrawal from reading situations by refusing to read. These results clearly demonstrate the extent to which learners in the Philippines struggle with reading comprehension. Through this, the researchers conducted this research to be part of the solution regarding reading comprehension of Grade 5 learners. The present study employed quasi-experimental quantitative research design to improve the reading comprehension skills of Grade 5 learners in an elementary school through the TechPlay Fusion strategy - a dynamic teaching approach that blends technology and interactive games to make reading more engaging, and help students improve comprehension, vocabulary, and retention. The respondents were two regular sections of the Grade 5 learners who agreed to attend the face-to-face classes during the third quarter of the school year 2023-2024. Based on the findings, Grade 5 learners attained satisfactory pre-test scores with a difference mean of 1.83, while the post test score went one step higher, from "Satisfactory" to "Very Satisfactory" ratings with a mean difference of 2.41. Based on the significant findings of the study, the strategy is an effective, useful and relevant strategy in improving the Grade 5 learners' reading comprehension. The TechPlay Fusion Strategy assists not only the learners' comprehension but also the learners' vocabulary and retention.

Keywords: *Grade 5 Learners, Phil-IRI Assessment, Quasi-Experimental Research, Reading Comprehension, TechPlay Fusion Strategy*

Introduction

Reading comprehension is the ability to understand and make sense of what you read. It involves going beyond just reading the words rather it involves understanding the meaning, connecting ideas, and analyzing the text. In addition, reading comprehension plays a vital role in academic success, closely tied to overall performance. It enables learners to grasp concepts, enhance their vocabulary, and foster critical thinking skills (Suson et. al., 2020). Thus, it forms the foundation for future learning across the curriculum, and without it, learners may struggle academically in various subjects, including English studies, Sciences, Mathematics, and even Social Studies (Requiso-Jimenez & Bascos-Ocampo, 2022).

The recent 2023 Programme for International Student Assessment (PISA) results found that in the Philippines, only 24% of learners achieved Level 2 or higher proficiency in reading. At this level, learners can identify main ideas, look at data based on factual evidence, and reflect on the given text as presented. This result may be significantly lower than the OECD average of 74%. In the Philippines, notably no recorded learner scored higher than level 5 in reading based on the OECD result average of 7%, indicating a lack of proficiency in comprehending lengthy texts, dealing with abstract concepts, and distinguishing between proper ideas and opinionated assumptions.

The Grade 5 Philippine Informal Reading Inventory (Phil-IRI) Assessment conducted at Pinaod Central School in 2023 revealed significant insights into the reading capabilities of its 204 learners. Specifically, 61 students were identified as experiencing frustration, as evidenced by their withdrawal from reading activities and refusal to engage in reading tasks. Conversely, 89% of the learners were classified at the instructional level, suggesting that they could benefit from targeted instructional support. Only 54 students were categorized as independent readers, capable of reading without assistance. These assessment findings underscore the challenges faced by learners in the Philippines regarding reading comprehension.

Reading comprehension challenges have persisted despite various teaching methods and strategies being employed. Recent studies reveal that, even with government initiatives aimed at improving literacy in the Philippines, Filipino learners continue to face difficulties in reading comprehension (Idulog et al., 2023). Evidence suggests that learners' reading comprehension skills are indeed low and require significant improvement, which is a serious concern. Compe (2018) noted that while many learners struggle with English reading comprehension, their overall academic performance is improving. This highlights a strong correlation between reading comprehension abilities and success in other academic areas. A deficiency in reading comprehension adversely affects academic achievement in English and other subjects. Additionally, Nanda (2020) pointed out that low reading comprehension skills can lead to negative consequences, such as diminished learning outcomes, impaired problem-solving abilities, and limitations in future educational and career opportunities.

The TechPlay Fusion Strategy is a unique strategy that combines Technology-Based Learning and Game-Based Learning as it utilizes the power of technology and the engaging nature of games simultaneously in aiming to enhance the reading comprehension abilities of Grade 5 learners. With "Tech" representing Technology-Based Learning and "play" representing Game-Based Learning, this fusion strategy aims to create a dynamic and effective learning experience for the learners. According to the study of Iyake, James, and Amonde (2018), they found that indeed there are positive effects of technology-based strategy for addressing reading comprehension. Meanwhile, Villacres and Rodriguez (2023) also discovered in their study that Game-based learning is advantageous for learners in enhancing their reading comprehension skills.

The researchers selected the TechPlay Fusion Strategy because it addresses a gap in conventional reading approaches by integrating technology and interactive games to enhance the learning experience. Many existing methods fail to fully engage students, particularly those who face challenges with reading. Evidence suggests that combining technology with gaming can increase student participation and improve performance. This study is distinctive in its innovative fusion of these elements specifically tailored for Grade 5 students at Pinaod Central School. Unlike other techniques that utilize either technology or games independently, TechPlay Fusion merges both to create a more captivating and effective means of enhancing reading comprehension.

Through this initiative, the researchers aimed to contribute to the improvement of reading comprehension among Grade 5 English learners. Consequently, the study concentrated on the TechPlay

Fusion Strategy as a classroom approach to bolster the reading comprehension abilities of these students at Pinaod Central School. The research sought to evaluate whether this proposed strategy would enhance the reading comprehension skills of Grade 5 learners. It specifically aimed to describe the reading comprehension abilities of these learners prior to the implementation of the strategy, assess their skills following the strategy's implementation, and determine if there was a significant difference between the pre-test and post-test scores of both the control and experimental groups.

Materials and Methods

In this study, the researchers employed a quasi-experimental design to investigate the efficacy of a specific instructional strategy aimed at enhancing reading comprehension among Grade 5 learners. Unlike true experimental designs, which involve random assignment of participants to different groups (Harris et al., 2006), quasi-experimental designs compare outcomes between pre-existing or non-randomly assigned groups. This approach seeks to identify potential causal effects of the intervention.

The participants were divided into two groups: one group received the TechPlay Fusion strategy, which integrates technology and game-based learning, while the other group did not receive this intervention. The primary objective was to ascertain whether this innovative strategy would significantly influence learners' reading comprehension abilities. However, the researchers did not specify the activities or instructional methods employed by the control group, which is critical for understanding the comparative effectiveness of the TechPlay Fusion strategy. A detailed account of the control group's experiences would provide a clearer context for interpreting the impact of the intervention and allow for more precise conclusions.

During the implementation of the TechPlay Fusion strategy, the learners were observed for any improvements in engagement and participation. The researchers aimed to assess the extent of these improvements, indicating that the collected information was essential for measuring the quantitative outcomes of the intervention. The results of the quantitative data were presented in tabular format, accompanied by descriptive statistics and annotations to facilitate comprehension and interpretation of the findings.

The Grade 5 learners of Pinaod Central School, Division of Bulacan, served as the subjects of the study. In Grade 5, there are six sections: Special Science Class, and four regular sections. In conducting this study, the researchers identified the sections that required improvement in reading comprehension skills in English, and based on the observation and evidence (academic performance from their class advisers' class records), it implied that the sections that showed a low level of reading comprehension served as participants in this study are the learners among the two regular heterogeneous sections of Grade 5, which are 5-Mariano Llanera (the experimental group) and 5-Diego Silang (the control group). A total of 72 learners participated in the study.

The legal basis of this matter is pursuant to DepEd Order No. 16 s. 2017 and Republic Act No. 10173 that brought springboards to the ethical considerations of this study to exhibit fairness and confidentiality. The right to privacy of communication is being considered by virtue of ensuring the spread of information is hereby exercised, as the researchers sought parental permission to the guardians of the learners involved in this study. Moreover, researchers also provided a request form to be given to the school used in conducting their action research.

The researchers chose these two groups based on the outcomes of the Philippine Informal Reading Inventory (Phil-IRI) Assessment 2023. In order to avoid any bias in this study, the researchers decided to collect data from all five regular sections. The researchers found that the Mariano Llanera section had the lowest percentage with 58% or below and categorized as "Frustration" in reading

comprehension. Out of 36 learners in this section, 25 were classified as frustrated. The Diego Silang section had a similar pattern, with 21 out of 36 learners falling into the frustration category. On the other hand, the Pio Del Pilar section had the highest percentage, with only one out of 38 learners classified as having frustration in reading comprehension in English.

It was evident that the selected groups were facing challenges in comprehending certain questions related to English. The Grade 5 Mariano Llanera chosen as the experimental group was based on the observation that this particular section demonstrated a slightly lower average score compared to Grade 5 Diego Silang, which was consequently assigned as the control group.

This selection was made with the intention of investigating and implementing strategy to the experimental group, aiming to address the identified challenges or lower reading comprehension in English compared to the control group. The experimental group served as the focus for implementing the strategy, while the control group provided a baseline for comparison, allowing researchers to assess the effectiveness of the strategy employed.

The sampling method involved in the study is a type of non-probability sampling, which is the Purposive Sampling Method. This involves intentionally selecting informants based on their specific qualities. It is a nonrandom method that does not require any underlying theories or a predetermined number of informants. In essence, the researcher identified what information was needed and actively sought out individuals who possessed the knowledge or experience to provide that information (Klimova & Zamborova, 2020). Therefore, in this study, the researcher selected a sample from the population based on the Philippine Informal Reading Inventory (Phil-IRI) Assessment 2023 of Grade 5 in Pinaod Central School. The first two sections that had higher numbers of learners categorized as "Frustration" and scored 58% below in terms of their reading comprehension skills were the criteria applied in selecting respondents.

The TechPlay Fusion Strategy is an integrated approach inspired by two key innovators: Sweller's Cognitive Load Theory, which emphasizes the effective use of educational technology, and the principles of Game-Based Learning proposed by Piaget and Vygotsky. This strategy is grounded in the understanding that both technology-based and game-based learning can significantly enhance learners' reading comprehension skills. To implement this strategy, the researchers developed innovative and interactive games known as the “TechPlay Fusion Games.” These games resemble a unique twist on a wheel of fortune, incorporating engaging elements designed to captivate learners. Features such as prizes, a TikTok dance, and customizable designs tailored to learners' interests were included to foster excitement, physical engagement, and personalization, ultimately aiming to improve reading comprehension skills in English (Hashemi, 2021).

The game commenced with the implementer spinning a small spinner to select a student for participation. The chosen student performed a brief TikTok dance before spinning the "TechPlay Wheel." This wheel featured a variety of superhero characters and celebrities. When the wheel came to a stop, a cartoon or celebrity was displayed on the screen along with its corresponding word. The learner had to articulate the word associated with the character they landed on and would then receive a prize. Afterward, the implementer prompted the rest of the class to repeat the word in a specific sequence. Finally, the spinner took another turn, spinning the TechPlay Wheel to determine who would participate next.

Additionally, pre-tests and post-tests were administered to the learners before and after the strategy was implemented. The following outlines the details of the strategy's implementation over one month during the third quarter of the academic year 2023-2024 at Pinaod Central School in San Ildefonso,

Bulacan. Initially, the researchers intended to test the TechPlay Fusion strategy over both the third and fourth quarters of the school year. However, due to various factors, the focus was narrowed to the third quarter, covering just one month. During this period, the experimental group engaged with the TechPlay Fusion strategy—a combination of technology and game-based learning—aimed at enhancing their reading comprehension skills. In contrast, the control group adhered to traditional instructional methods throughout the same timeframe.

While the initial plan was broader, focusing on just one grading period provided a snapshot of the strategy's impact. This approach helped with resource and time management, but it also limited the understanding of the strategy's long-term effects and how it measured up against the control group's approach.

This study used a validated 3rd Quarter periodical Assessment Test in English 5 SY. 2022-2023 that is adopted from the official website of DepEd teacher Club to gather data from the learners. This consisted of 50 items. The test is used to determine the level of reading comprehension of grade 5 learners in English in the cooperating school at Pinaod Central School. The result of the pre-test and post-test is graded using grading scale.

At Pinaod Central School, the researchers obtained the necessary permission and consent to conduct their study. Before commencing the discussion, they administered a pre-test that assessed students' prior knowledge of the topic. The proposed strategy was implemented over one month and consisted of four weekly lessons incorporating the TechPlay Fusion strategy:

- **Week 1:** "Distinguish among Various Types Based on Elements"
- **Week 2:** "Summarize Various Text Types Based on Elements"
- **Week 3:** "Make a Stand"
- **Week 4:** "Provide Evidence to Support Opinion/Fact"

Following each lesson, the teacher conducted a weekly assessment to determine improvements in the students' reading comprehension skills.

After the implementation of the proposed strategy, a post-test was administered. The researchers collected data throughout the four weeks, recording the participants' scores based on their pre-test and post-test results.

To ensure fairness and adhere to ethical considerations, the researchers followed the Department of Education (DepEd) Order No. 16, s. 2017, which outlines the Research Management Guidelines (RMG) for basic education research. These guidelines support the management of research initiatives and enhance mechanisms such as funding and partnerships.

Once all data were collected, appropriate analysis techniques were employed for interpretation and presentation. The data from the pre-test and post-test were subjected to a paired t-test, a parametric statistical tool used to determine whether there is a statistically significant difference between the two sets of data. This test effectively compares the differences between the pre-test and post-test scores, measuring the efficacy of the strategy. Each Grade 5 section's pre-test and post-test scores were compared individually. The researchers selected Grade 5 for its relevance to the study and the availability of the students during the research period. To ensure the effectiveness of the tools used, a small pilot run was conducted, followed by expert reviews to confirm that the instruments accurately measured the intended outcomes.

For data analysis, Microsoft Excel was utilized as the statistical software for analyzing the quantitative data. A line graph was created to visually represent whether the learners gained knowledge and improved their reading comprehension skills in English after implementing the strategy. The pre-test assessed the learners' prior knowledge and understanding of the lesson, while the post-test items indicated how the integration of the TechPlay Fusion strategy enhanced Grade 5 learners' reading comprehension skills and interest in the subject. All collected data were analyzed and securely maintained for the study.

Additionally, the study employed the following scoring system based on DepEd Guidelines:

- A score from 0 to 15 was categorized as "Did Not Meet Expectations."
- A score from 16 to 25 was labeled "Satisfactory."
- A score from 26 to 35 was considered "Very Satisfactory."
- A score from 36 to 50 was classified as "Outstanding."

Results and Discussion

Pre-test Results of the Control Group and Experimental Group

Table 1 presents the pre-test results for both the control and experimental groups, providing a snapshot of their reading comprehension levels before the intervention began. This comparison helps establish a baseline for evaluating the impact of the TechPlay Fusion strategy on the experimental group.

Table 1

Pre-test Results of the Control Group and Experimental Group

	Control Group		Experimental Group	
Range	**Frequency**	**Percentage**	**Frequency**	**Percentage**
36-50	4	11.12%	4	11.12%
26-35	9	25%	6	16.67%
16-25	14	38.89%	14	38.89%
0-15	9	25%	12	33.33%
Mean	18.72		16.89	
Verbal Interpretation	Satisfactory		Satisfactory	

Legend: Outstanding (36-50); Very Satisfactory (26-35); Satisfactory (16-25); Did Not Meet Expectation (0-15)

As exhibited in Table 1, the pre-test of the control group's results has a mean of 18.72 with a verbal interpretation of "Satisfactory" while the mean for the Experimental is 16.89 with a verbal interpretation of "Satisfactory". Moreover, based on the result, it went constant, from "Satisfactory" ratings with a mean difference of 1.83.

Based on the pre-test findings, it is implied that both groups started at relatively similar proficiency level and any disparities in the pre-test outcomes were attributed to inherent difference of the learners rather than instructional methodologies employed. The pre-test results showed that both groups started with similar reading skills, which means any differences that the researchers see later are more likely due to the individual learners rather than the teaching methods. This initial balance helps the researchers be more confident that any improvements observed are because of the TechPlay Fusion strategy itself, not just differences in the learners. So, if the researchers find significant gains in the experimental group, it would strongly suggest that the new strategy made a real difference (Alqahtani, 2020).

Post-test Results of the Control Group and Experimental Group

Table 2 shows the post-test results for the control and experimental groups, highlighting the changes in reading comprehension scores after the intervention. This table illustrates the effectiveness of the TechPlay Fusion strategy by comparing the final performance levels of both groups.

Table 2

Post-test Results of the Control Group and Experimental Group

	Control Group		Experimental Group	
Range	**Frequency**	**Percentage**	**Frequency**	**Percentage**
36-50	4	11.11%	9	25%
26-35	14	38.89%	12	33.33%
16-25	13	36.11%	15	41.67%
0-15	5	13.89%	0	0%
Mean	24.67		27.08	
Verbal Interpretation	Satisfactory		Very satisfactory	

Legend: Outstanding (36-50); Very Satisfactory (26-35); Satisfactory (16-25); Did Not Meet Expectation (0-15)

As exhibited in Table 2, the post-test results have a mean of 24.67 for the Control Group with a verbal interpretation of "Satisfactory" while the mean for the Experimental Group is 27.08 with a verbal interpretation of "Very Satisfactory." For the pre-test of the control group, the following percentages were generated: 13.89% (0-15), 36.11% (15-25), 38.89% (25-35) and 11.11% (35-50). Meanwhile, the experimental group recorded 41.67% (15-25), 33.33% (25-35), 25% (35-50) and no learners scored in the range of 0-15.

Moreover, based on the result, it went one step higher, from "Satisfactory" to “Very Satisfactory" ratings with a mean difference of 2.41. This implies that the TechPlay Fusion strategy implemented for the experimental group contributed to the improvement of learners’ reading comprehension skills in comparison to the control group. There was a substantial improvement to the experimental group after the implementation of the proposed strategy. The TechPlay Fusion strategy led to a clear improvement in the experimental group's reading skills, moving their ratings from "Satisfactory" to "Very Satisfactory" with a mean difference of 2.41. This significant boost suggests that the strategy effectively enhanced their reading comprehension more than the control group’s experience.

Likewise, Bondaug (2021) affirmed that learners could improve their reading comprehension skills through playing the games. Qualitative data from the student-users further described how the instructional material motivated them to take part in their learning as well as enable them to use different comprehension skills to achieve a high level of understanding in the selections they read.

This matches the findings of Nitiasih and Budiartha (2020), who found that using games based on Balinese local stories as a teaching method greatly improved Grade 5 students' reading skills. Their study also showed that adding games to the learning process helped boost the students' reading performance.

Meanwhile, based on the study of Alqahtani (2020), technology-based strategies have been applicable in improving learners’ reading comprehension. While the study primarily focused on children facing reading challenges, the implications suggest potential benefits for Grade 5 learners in enhancing their reading comprehension abilities.

Significant Difference in Pre-test Results of the Control Group and Experimental Group

Table 3 displays the analysis of significant differences in pre-test results between the control and experimental groups. This table assesses whether there were any initial differences in reading comprehension levels before the intervention started.

Table 3

Significant Difference on Pre-test between 5 – Mariano Llanera (Control group) and 5- Diego Silang (Experimental Group)

	Mean	P-Value	Decision	Verbal Interpretation
Control Group	18.72			There is no significant
Experimental Group	16.89	0.13	Accepted Ho	difference

Legend:<0.05

As shown in Table 3, the test of significant difference on the pre-test between two groups (control and experimental) resulted in a p-value of 0.13, which is greater than the level of significance at 0.05. Therefore, the null hypothesis was not rejected. There is no significant difference between the pre-tests of the control and experimental groups. Since this p-value is greater than the 0.05 significance level, it failed to reject the null hypothesis. This means that, initially, both groups had similar reading comprehension levels before the intervention began.

The implication of this finding is that any changes observed later in the study can be more confidently attributed to the interventions applied rather than pre-existing differences between the groups. This helps us ensure that the improvements seen in the experimental group are likely due to the TechPlay Fusion strategy, rather than differences in skill levels that were present from the start.

Significant Difference on Post-test Results of the Control Group and Experimental Group

Table 4 presents the analysis of significant differences in post-test results between the control and experimental groups, evaluating the impact of the intervention on reading comprehension scores. This comparison helps determine the effectiveness of the TechPlay Fusion strategy.

Table 4

Test of Significant Difference on Post-test between 5- Mariano Llanera (Control group) and 5- Diego Silang (Experimental Group)

	Mean	P-Value	Decision	Verbal Interpretation
Control Group	26.67			There is significant
Experimental Group	27.08	0.042	Rejected Ho	difference

Legend:<0.05

Table 4 reveals that the test has a significant difference on post-test between the control and experimental groups. Since the computed p-value was 0.042, which is less than the level of significance of 0.05, the null hypothesis was rejected. There is a significant difference between the post-test scores of the control group and experimental group. The significant difference in post-test scores (p-value=0.042) reveals that the TechPlay Fusion Strategy led to substantial improvements in the experimental group compared to the control group.

This baseline equivalence ensures that any significant improvements in the post test scores of the experimental group can be attributed to the TechPlay Fusion Strategy rather than pre-existing proficiency differences. In simpler terms, this result suggests that the TechPlay Fusion Strategy made a

meaningful impact, as the experimental group's reading comprehension scores improved more significantly compared to the control group. This significant difference highlights that the strategy effectively enhanced learning outcomes for the experimental group.

Diallo (2023) emphasized the significant role of technology in influencing learners' reading experiences. The widespread acceptance of technologies by learners, teachers, and parents highlights their potential as beneficial tools for educators and parents in supporting learners with their reading skills. Moreover, according to the study of Capodieci, Cornoldi, Doerr, Bertolo, and Carretti (2020), they provide evidence that supporting the effectiveness of game-based and technology-based learning helps enhance reading comprehension.

Conclusion

Based on the significant findings of the study, the researchers concluded that using the TechPlay Fusion Strategy—combining technology and games—greatly improved reading comprehension for Grade 5 learners. Initially, both groups were on the same level, but after the intervention, the experimental group scored significantly higher. This suggests that modern, interactive teaching methods can make a big difference in student learning and boost educational quality.

Recommendations

In light of the findings and conclusions of the study and to boost reading skills and support Sustainable Development Goals 4 (Quality Education), schools should start using engaging methods like the TechPlay Fusion Strategy. Schools Division Offices should back these efforts with training and resources. On a larger scale, national policies and funding should focus on supporting interactive learning tools and ensuring all schools have access to them, making quality education more effective and inclusive. Future researchers may conduct similar study with more conclusive number of samples involved or be conducted with more than one school.

References

Alqahtani, S. S. (2020). Technology-based interventions for children with reading difficulties: A literature review from 2010 to 2020. Educational Technology Research and Development, 68(6), 3495-3525. https://doi.org/10.1007/s11423-020-09859-1

Ardhian, T., Ummah, I., Anafiah, S., & Rachmadtullah, R. (2020). Reading and critical thinking techniques on understanding reading skills for early grade students in elementary school. International journal of instruction, 13(2), 107–118. https://eric.ed.gov/?id=EJ1249121

Bautista, E. A. (2018). The use of technological tools to strengthen the English reading comprehension process in nine graders in Harold Eder High School in Palmira. Universidadicesi. https://repository.icesi.edu.co/biblioteca_digital/bitstream/10906/85960/1/bautista technological_tools_2020.pdf

bin Noordan, M. and Md. Yunus, M. (2022) The Integration of ICT in Improving Reading Comprehension Skills: A Systematic Literature Review. Creative Education, 13, 2051-2069. doi: 10.4236/ce.2022.136127.

Bondaug, K. M. (2021). Game-based learning material for developing reading comprehension. Asia Pacific Journal of Social and Behavioral Sciences, 19, 23-38. DOI:10.57200/apjsbs. v19i0.274

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

Capodieci, A., Cornoldi, C., Doerr, E., Bertolo, L., & Carretti, B. (2020). The use of new technologies for improving reading comprehension. Frontiers in psychology, 11, 751. https://doi.org/10.3389/fpsyg.2020.00751

Leonardou, A., Rigou, M., Panagiotarou, A., & Garofalakis, J. (2022). Effect of OSLM features and gamification motivators on motivation in DGBL: Pupils' viewpoint. Smart learning environments, 9(1), 14. https://doi.org/10.1186/s40561-022-00195-w

Li, C.-T., Hou, H.-T., & Lee, L.-H. (2022). Design of a dual-hierarchy scaffolding board game-based learning activity for EFL reading comprehension. Language teaching research. Advance online publication. https://doi.org/10.1177/13621688221125903

Lim, J., Whitehead, G. E. K., & Choi, Y. (2021). Interactive e-book reading vs. paper-based reading: Comparing the effects of different mediums on middle school students' reading comprehension. System, 97, 102434. https://doi.org/10.1016/j.system.2020.102434

Hashemi, A. (2021). The effects of using games on teaching vocabulary in reading comprehension: A case of gifted students. Journal for the education of gifted young scientists, 9(2), 151–160. https://doi.org/10.17478/jegys.846480

Idulog, M. V., Gadiano, R., Toledo, E., Hermosada, M., Casaldon, H., Mariposa, M., Bautista, R. (2023). Filipino students' reading abilities: A note on the challenges and potential areas for improvement. International journal of education and teaching zone, 2(2), 233–242. https://doi.org/10.57092/ijetz.v2i2.128

Iyare, N. F., James, J. S., & Amonde, T. M. (2018). The effectiveness of integrating interactive technology in reading comprehension: A case study of Jamaica's grade school. Journal of Information Technology Education. Research, 17, 227.

Klimova, B., & Zamborova, K. (2020). Use of mobile applications in developing reading comprehension in second language acquisition—A review study. Education sciences, 10(12), 391. https://doi.org/10.3390/educsci10120391

Maldonado-garcés, V., Araujo, E., Toro, M. C., Mayorga, E., Muñoz, C., Pillajo, A., & Santórum, M. (2023). Design of a serious game for the improvement of reading comprehension through the IPLUS methodology. Intelligent human systems integration: Integrating people and intelligent Systems, 69. https://doi.org/10.54941/ahfe1002873

Markey, K., Graham, M. M., Tuohy, D., McCarthy, J., O'Donnell, C., Hennessy, T., O'Brien, B. (2023). Navigating learning and teaching in expanding culturally diverse higher education settings. Higher education pedagogies, 8(1), 150-167. https://doi.org/10.1080/23752696.2023.2165527

Masigan, J. K. S. (2020). Effectiveness of the modified "Alpabasa": A game-based program in teaching reading among the grades 3 and 4 non-readers. Frontiers in education technology, 3(2), 37. https://doi.org/10.22158/fet.v3n2p37

Nanda, D. W., & Azmy, K. (2020). Poor reading comprehension issue in EFL classroom among Indonesian secondary school students: Scrutinizing the causes, impacts and possible solutions. Englisia: Journal of language, education, and humanities, 8(1), 12-24. https://doi.org/10.22373/ej.v8i1.6771

Requiso-Jimenez, J. D., & Bascos-Ocampo, R. (2022). Improving the Reading Comprehension Skills of Grade 5 Pupils Using Localized Reading Selections. Asian Journal of Language, Literature and Culture Studies, 5(4), 57-66.

Rosales, M. T. (2021). Effectiveness of technology-based interventions and reading skills of Grade 6 pupils. International Journal of advanced multidisciplinary studies, 1(4), 130-138. https://www.ijams-bbp.net/wp-content/uploads/2021/12/IJAMSDecember-25-researches-130-138.pdf

Ruiz Villacrés, G. E., & Paredes Rodríguez, L. A. (2023). Game-based learning for the development of reading comprehension among teenagers. Ciencia Digital, 7(3), 79-98. https://doi.org/10.33262/cienciadigital.v7i3.2588

Suson, R., Baratbate, C., Anoos, W., Ermac, E., Aranas, A. G., Malabago, N., Galamiton, N., & Capuyan, D. (2020). Differentiated instruction for basic reading comprehension in Philippine settings. Universal journal of educational research, 8(9), 3814–3824. https://doi.org/10.13189/ujer.2020.080904

Zhang, W. (2022). The Role of technology-based education and teacher professional development in English as a Foreign Language Classes. Frontiers in Psychology, 13, 910315. doi: 10.3389/fpsyg.2022.910315