The Effects of Using Visual and Podcast Technology Materials in Teaching English

Lou A. Picardal[1], Virgilio P. Rapada Jr. Phd[2]

[1]PhD Student, Graduate School, Eastern Samar State University Main Campus, Borongan City, Eastern Samar, Philippines

[2]Professor 1, Graduate School, Eastern Samar State University Main Campus, Borongan City, Eastern Samar, Philippines

DOI: https://doi.org/10.51244/IJRSI.2026.1305000054

Received: 27 April 2026; Accepted: 04 May 2026; Published: 27 May 2026

ABSTRACT

This study examined the effects of using visual and podcast technology materials on the academic performance of Grade 4 learners in English at Alugan Elementary School during the School Year 2023–2024. A quasi-experimental pretest–posttest control group design was employed involving 46 learners selected through purposive sampling. Data were analyzed using mean, standard deviation, and t-test.

Findings revealed that both control and experimental groups significantly improved from pretest to posttest, with performance levels increasing from "Satisfactory" to "Outstanding." While a statistically significant difference was observed within groups, only a minimal difference was found between the posttest scores of the control and experimental groups. Moreover, no significant difference in learning gain scores was identified ($p = 0.228$), indicating comparable effectiveness of both instructional approaches.

The study concludes that visual and podcast technology materials enhance learner engagement and support academic performance, but do not produce significantly greater gains compared to traditional methods. It is recommended that future studies employ larger, randomized samples and further validate instructional tools.

Keywords: Visual Technology, Podcast Instruction, Academic Performance, Quasi-Experimental Design, English Education

INTRODUCTION

The integration of technology in education has transformed teaching and learning processes, particularly in language instruction. Visual and podcast technology materials have become valuable tools in enhancing learner engagement, motivation, and comprehension. These technologies provide multimodal learning experiences that cater to diverse learning styles, making English instruction more interactive and meaningful.

In the Philippine educational context, the Department of Education continues to promote the use of digital instructional materials through programs such as the DepEd Computerization Program. However, despite these efforts, learners' performance in English remains below the expected mastery level in many schools, including San Policarpo District.

Given this concern, this study investigates whether integrating visual and podcast technology materials can improve the academic performance of Grade 4 learners. Specifically, it examines differences in pretest and posttest scores, as well as learning gains between experimental and control groups.

METHODOLOGY

Research Design

This study employed a quasi-experimental pretest, posttest control group design. Two intact groups were assigned as experimental and control groups without randomization.

ISSN No. 2321-2705 | DOI: 10.51244/IJRSI |Volume XIII Issue V May 2026

Locale of the Study

This study was conducted at Alugan Elementary School, San Policarpo District, Eastern Samar Division. The school serves as a microcosm of the educational landscape in the Eastern Samar Division, providing insights into the challenges, strategies, and innovations in the local education system. This school offers a valuable and insightful research locale for investigating various aspects of the local education system, aiming to contribute to the improvement of educational practices and policies in the broader context of the Philippines. The aforementioned school acknowledged the heterogeneous sectioning.

Respondents of the Study

A total of 46 Grade 4 learners were selected using purposive sampling. Each group consisted of 23 learners

Sampling Procedure

This study employed purposive sampling, which differs from random sampling as it focuses on selecting subjects who possess specific characteristics relevant to the research project's significance and complexity. Purposive sampling is deemed necessary for quasi-experimental educational research when cooperation between researchers and schools is required, as stated by Fraenkel, Wallen, and Hyun (2006). In such cases, groups of experimental units may need to be non-randomly assigned to treatment based on pre-organized, logistically viable criteria. In this study, purposive sampling with criterion-based selection were used to choose the subjects. The researcher also ensured that all participants were homogeneously grouped based on their ability in English 4 academic performance. The mean percentage scores (MPS) in English 4 from the first grading period were used for grouping, with scores arranged from highest to lowest. Subsequently, the scores were paired into two groups, assigned to the experimental group and the control group. To determine which pupils belonged to the experimental and control groups, random sampling was employed using the fishbowl method. The names of all subjects, along with their corresponding grades, were written on pieces of paper, placed in a box, and randomly drawn until both the experimental and control groups comprised 23 participants each. The experimental group consisted of 23 participants (10 boys and 13 girls), while the control group also comprised 23 participants (12 boys and 11 girls). In the experimental group, pupils were taught using activities that integrated podcast, while in the control group, pupils were taught using the modular approach (self-learning material). The use of purposive sampling limits the generalizability of findings beyond the study context.

Research Instrument

The study utilized adopted DepEd multimedia instructional materials and a researcher-administered test.

To ensure rigor: The instrument underwent content validation by experts. Reliability was tested using Cronbach’s alpha. However, further validation is recommended for broader application.

Data Gathering Procedure

Before commencing the study, the researcher obtained formal permission from the school principal of Alugan Elementary School, approved by the school division superintendent's office. The selection of participants for the two groups followed the appropriate protocol for sampling. A week before the study's commencement, the researcher met with the pupil participants to inform them about the experiment's nature and sole purpose. Pre-test inventories were conducted the day after the orientation. Following approval, the researcher closely monitored the study's conduct and observed the adherence to the framework, to ensure that any arising queries were promptly addressed. Every participant received respectful treatment during the study and was given the assurance that the data they submitted would be kept private and used only for research. Overall, the study followed a systematic approach, adhering to established protocols, and ensuring proper communication with participants, thereby establishing a clear and rigorous framework for conducting the research.

Analysis of Data

To analyze the pretest and posttest for the control and experimental group were summarized and presented using descriptive statistics such as arithmetic mean and standard deviation. Mean and standard deviation (descriptive).

ISSN No. 2321-2705 | DOI: 10.51244/IJRSI |Volume XIII Issue V May 2026

Paired t-test (within-group comparison). Independent t-test (between-group comparison). Significance level: 0.05.

Research Ethical Considerations

For the part of the study, all participants consented to participation using a consent form (see Appendix A). All personal and identifying information were removed at the time of utilization. This study is completely voluntary, and anyone wishing not to participate were have the option of removing themselves from the research study at any time. The study was submitted to the ESSU Ethics Review Committee for clearance and then to the school division superintendent for final approval. When the approval is granted, an informed consent letter was provided for both the parents and the pupils who would be participating in the research study to sign. This letter explained the research that would be conducted and asked for consent for their pupil to participate in the study and for the researcher to obtain and use the data they produce for the research study. The data privacy act of 2012 was also strictly adhered to regarding the handling, treatment, use, and storage of research data collected from participants.

RESULTS

This section presents the results of the study based on the data gathered which were analyzed and interpreted using the appropriate statistical tools.

Pretest, and mean percentage scores of Grade 4 pupils before teaching English using visual and podcast technology materials instruction in both control and experimental groups.

Table 1 shows the results of the pre-test given to all respondents of the two groups. In the pretest, the control group has a mean score of 16.1, which falls in the "Satisfactory" range. The standard deviation of 4.87 indicates the degree of variability or dispersion in the scores around the mean. Meanwhile, the experimental group pretest obtained a mean score of 16.6 interpreted as "Satisfactory" achievement. The result suggests that both groups have relatively close standard deviation values, indicating that the scores within each group are somewhat dispersed. However, the visual and podcast technology materials instruction group has a slightly lower standard deviation (4.22) compared to the self-learning material group (4.87), suggesting that there may be somewhat less variability in scores among participants in the visual and podcast technology materials instruction group. This implied, that based on the provided information, it seems that the visual and podcast technology materials instruction group performed slightly better on average, and the scores in this group were somewhat more consistent. This finding is supported with the study of Febriani and Hafifah (2019), have positive attitude toward the development of visual and podcast technology materials for language learning. The integration of technology in instruction has been associated with improved student engagement and outcomes. Likewise, Gaurino, & Estrellado, 2023), that developed multimedia-based instructional module and visual and podcast technology materials tools can provide a uniform learning experience for all participants. Both groups performed at a "Satisfactory" level, indicating comparable baseline ability.

Table 1. Pretest Scores of Both Control and Experimental Groups

Groups	Frequency	Mean	SD	Minimum Score	Maximum Score
Control Group	23	16.1	4.87	7	23
Experimental Group	23	16.6	4.22	8	24

Posttest, and mean percentages of Grade 4 after teaching English using visual and podcast technology materials instruction in both controlled and experimental groups.

Table 2 shows the results of the post-test given to all respondents of the two groups. The visual and podcast technology materials instruction group, with a higher mean score (M=26.8), suggests that, on average, this group performed slightly better than the self-learning material group (M=25.7), which is interpreted as "Outstanding"

ISSN No. 2321-2705 | DOI: 10.51244/IJRSI |Volume XIII Issue V May 2026

achievement. Likewise, the standard deviation values indicate the spread or variability of scores within each group. The lower SD in the self-learning material group (SD=3.0) implies that the scores in this group are more tightly clustered around the mean compared to the visual and podcast technology materials instruction group (SD=3.42). Meanwhile, the individual differences in learning preferences and styles may play a role in the observed outcomes. It implies, that some learners may benefit more from self-directed learning with materials, while others may thrive in a more structured visual and podcast technology materials instruction setting. This finding is consistent with the research conducted by Ali and Miraz (2018), which suggests that incorporating technology into the classroom fosters active student engagement, addresses individual needs and interests, enhances participation in language learning, and facilitates collaborative learning opportunities. In support, Sun, and Bradley, (2021) highlight the importance of considering the effectiveness of different instructional methods in specific educational contexts. Hence, the successful integration of visual and podcast technology materials is a fundamental requirement, and educators need to approach it with careful consideration to guide learners in acquiring the mentioned skills, as outlined by Musico (2018). Both groups improved to an "Outstanding" level, showing effectiveness of instruction in both approaches.

Table 2. Posttest Scores of Both Control and Experimental Groups

Groups	Frequency	Mean	SD	Minimum Score	Maximum Score
Control Group	23	25.7	3.0	18	30
Experimental Group	23	26.8	3.42	19	30

Difference between the pretest and posttest mean percentage scores of Grades 4 learners in English between the control and experimental groups.

As indicated in Table 3, the academic performance of learners in the experimental and control groups demonstrates a similar trend. The pre-test scores for both groups, with performance level as a covariate, yielded a p-value of 0.001, which is below the threshold of ≤0.05. Similarly, the post-test scores, considering values education performance level as a covariate, also yielded a p-value of 0.001, indicating statistical significance. This suggests that visual and podcast technology materials instruction significantly influence the posttest mean scores for both the experimental and control groups. Moreover, Table 3 illustrates that the two lines depicting the visual and podcast technology materials instruction performance level of the experimental and control groups run parallel, signifying that both groups exhibit a comparable moderate level of academic performance. Similarly, for post-test scores, it suggests that the effect of visual and podcast technology materials instruction remains significant even when accounting for differences in self-learning material performance level. This leads to the rejects of the null hypothesis that there is a difference between the pretest and posttest score of the control and experimental group. The findings align with Hafifah (2020), who reported a positive impact of visual and podcast technology materials on student achievement scores in language instruction. Likewise, Kieu et al. (2021) demonstrated that the use of visual and podcast technology materials in teaching and learning elevated students' achievement in English lessons. Additionally, Tomaro (2018) concluded that visual and podcast technology materials had a beneficial influence on students' achievement scores. Similarly, Usman et al. (2020) observed superior performance among students taught through visual and podcast technology materials compared to those instructed using conventional methods. There was a significant improvement in both groups ($p < 0.05$), indicating learning occurred.

Table 3. Difference between the pre-test and post-test mean scores of both groups of Grade 4 learners?

Group	Pre-test Mean	Post-test Mean	t-value	p-value	Interpretation
Control Group	16.1	25.7	-11.3	.001	Significant
Experimental Group	16.6	26.8	-12.3	.001	Significant

α=.05

ISSN No. 2321-2705 | DOI: 10.51244/IJRSI |Volume XIII Issue V May 2026

Difference that exists between the posttest mean score of Grade 4 learners in English of both experimental and control groups.

The researcher presented the related descriptive statistics before explaining the results of independent samples t-test on the posttest; the results of which are set forth in Table 4. It includes the mean scores and mean difference for the experimental group (M=26.8), and control group (M=25.7). The results of independent samples t-test that was performed comparing the English performance scores of the experimental and control groups on the posttest are laid out in the following table. According to the results of independent samples test shown in Table 4 below, the significance level of .001 associated with Levene's value is higher than the selected significance level of the study (.05) revealing that the data met the assumption of equality of variance. Moreover, a substantial difference (t=1.455, df=22, p-value= 0.001) in performance emerged between learners exposed to both teaching models. This suggests a significant positive impact of visual and podcast technology materials instruction on learners compared to those exposed to self-learning materials. Despite a slight difference in mean scores, favoring visual and podcast technology materials instruction (M=26.8) over the control group (M=25.7), this discrepancy is noteworthy, indicating a marginally greater impact of visual and podcast technology materials instruction on English performance (Mean difference= 1.1). Consequently, the result was deemed significant, leading to the rejection of the hypothesis asserting no significant difference in posttest mean scores between the experimental and control groups. Furthermore, this outcome underscores the favorable advantages of teaching pedagogy rooted in visual and podcast technology materials instruction, particularly in the context of the new normal. Such approaches not only yield positive learning outcomes but also offer benefits for both educators and learners. The results are consistent with the findings of Gaurino, and Estrellado, (2023) who found that by using visual and podcast technology materials, students' retention scores were better when contrasted with those who were instructed via conventional methods. The students of experimental group retained better than those of control group. Thus, this research affirms the results of the research that claim that learners learn and retain better when they are taught through visual and podcast technology materials. Likewise, Belgar, and Maligaya, (2022) found that there was significant relationship between visual and podcast technology materials and students' academic performance. Although the experimental group obtained a slightly higher mean score (M = 26.8 vs. 25.7), the difference was minimal. This indicates only a slight advantage, not a strong effect.

Table 4. Test on significant difference between average post-test scores

Test Compared	Mean Score (Control)	Mean Score (Experimental)	Mean Difference	t-value	df	p-value	Interpretation
Posttest	25.7	26.8	1.1	1.455	22	0.001	Significant

Level of significance is set at 0.05

Difference between the learning gain scores of Grades 4 learners in the English of both experimental and control groups.

To validate if there is a significant difference on the main learning gains on the use of visual and podcast technology materials and modular instruction, t-test for independent samples was computed at 0.05 level of significance. As reflected in Table 5, result of the analysis made according to the learning gain scores, the average learning gain for control group was calculated as 9.60, and the experimental group was 10.2 for a standard error of 0.128 and a confidence interval of 95%. When statistical significance was examined, it was found that p = 0.228, since it is higher than 0.05 revealed the insignificant differences between the two groups. Hence, the hypotheses which states that there is no significant difference between the learning gain scores of Grade 4 learners in teaching English of both experimental and control groups were failed to reject. In addition, the fact that the mean learning gain for experimental group was higher performance shows that the effect of the prior knowledge was in favor in using the visual and podcast technology materials instruction. The results show that the overall learning gains of the two groups showed no significant difference, therefore the use of visual and podcast technology materials is as effective as the conventional method of teaching. This implies that the visual and podcast technology materials instruction is moderately effective on the attitude towards the lesson compared

ISSN No. 2321-2705 | DOI: 10.51244/IJRSI |Volume XIII Issue V May 2026

with the self-learning materials as traditional teaching method. The results diverge from Akram et al.'s (2021) study, which contradicts the strong correlations identified by Saleem and Zahra (2017) between secure learning environments and students' acquisition of visual and podcast technology materials resources in educational settings. Similarly, Mehmood et al. (2022) demonstrated that experienced language teachers exhibit greater engagement with visual and podcast technology materials compared to novice teachers, leading to the conclusion that there exists a positive and moderately robust connection between visual and podcast technology materials utilization and secondary-level students' academic performance. No significant difference in learning gains was found ($p = 0.228$). Both teaching methods are equally effective

Table 5. Test on significant difference between the learning gain scores

Group	Average Learning Gain Score	Standard Error	p-value	Decision	Interpretation
Control	9.60	0.128	.228	reject H_0	Not significant
Experimental	10.2	0.128	.228	reject H_0	Not significant

DISCUSSION

The findings reveal that both instructional approaches significantly improved students' academic performance. This suggests that structured teaching, whether technology-based or traditional, plays a crucial role in enhancing learning outcomes.

Although the experimental group showed slightly higher posttest scores, the absence of significant learning gain differences indicates that visual and podcast technology materials do not produce substantially greater academic improvement than conventional methods. Instead, their strength lies in increasing learner engagement and motivation.

This study highlights the importance of distinguishing between statistical significance and practical significance. While statistical improvement was evident, the actual difference between the two instructional approaches remains modest.

Furthermore, the small sample size and purposive sampling limit the generalizability of the findings. Future research should address these limitations to strengthen evidence on the effectiveness of technology integration.

CONCLUSION

As per the outcomes of the study, the researcher reaches the following conclusions:

1. Both instructional methods significantly improved learners' performance.

2. Visual and podcast materials enhanced engagement and slightly improved outcomes.

3. The difference between groups was minimal.

4. No significant difference in learning gains was found.

5. Technology integration supports learning but is not significantly superior to traditional methods.

RECOMMENDATIONS

As per the outcomes of the study, the researcher reaches the following recommendations**:**

ISSN No. 2321-2705 | DOI: 10.51244/IJRSI |Volume XIII Issue V May 2026

1. Use larger and more diverse samples across multiple schools

2. Apply random sampling where possible

3. Strengthen validity and reliability of instruments

4. Clearly distinguish statistical vs practical significance

5. Explore long-term effects of multimedia instruction

ACKNOWLEGDEMENT

The researcher would like to express her sincerest gratitude to the following persons who have pushed her to reach this part of her dream. The researcher would like to express sincere gratitude to the individuals who have played a crucial role in helping her realize her dreams and complete this work. Their guidance, support, and contributions have been invaluable. First and foremost, the researcher extends heartfelt appreciation to Dr. Andres C. Pagatpatan Jr., President of Eastern Samar State University, and the thesis advisory committee chairman for providing the researcher with the opportunity to pursue this research. Their invaluable suggestions, input, and accommodations for thesis-related requests are deeply appreciated. Special thanks go to Dr. Sharon B. Singzon, Dean of the Graduate School and Chairman of the thesis Advisory Committee, for providing guidance and support throughout the entire process. The discussions, ideas, and feedback have been truly invaluable. The researcher would also like to express gratitude to Dr. Rowena P. Capada, the adviser, for the constant support, trust and guidance throughout the journey. The adviser's assistance has been instrumental in making the researcher's dreams a reality, and their shared experiences have provided invaluable insights. Dr. Helen C. Fuentes, the panel member, research coordinator of the graduate school, for proofreading, brilliant suggestions and abruptly answer queries online from the approval of the matrix, schedule of the proposal up to the completion of the study. Dr. Marivic I. Vetorico, a member of the thesis committee, deserves appreciation for her invaluable suggestions and advice provided from the proposal period to the final phase of the research have been greatly contributed to its improvement. Dr. Anbony D. Cuanico, deserves recognition for sharing expertise in the field of statistics, and in editing. The researcher is grateful for their acceptance of the researcher's request within a short period of time, patience in processing the data, prompt responses to queries, and careful guidance. Their suggestions and insights have gratefully contributed to the improvement of the research. Dr. Gorgonio G. Diaz Jr., the Schools Division Superintendent, of Eastern Samar, for allowing the researcher to conduct her study at AES. Mr. Jessie P. Mengullo, the school head of AES, for his unwavering support on the conduct of data gathering and motivation to finish the researcher's study. The researcher would also like to acknowledge the constant encouragement and support received from their AES faculty friends.To the Grade 4 respondents of AES for being cooperative and participative in the conduct of the study. To her husband, Christian, who supported her morally all the way to finish her study.To her children, Chris Lourence, Christine Louise, and Christial Louraine for being her source of strength and inspiration in life.To her parents and siblings for their love and moral support which paved the way in the completion of this study. Lastly, the researcher expresses deepest gratitude to the Almighty Father for providing everything and blessing them with good health to achieve this accomplishment.

Disclosure of Conflict of Interest

The author declares no conflict of interest.

Compliance to Ethical Standards

The author declares that the study was conducted in strict compliance to ethical considerations.

REFERENCES

1. Technologies in Computing, 2(2), 37-45.

2. Akram, H., Yingxiu, Y., Al-Adwan, A. S., & Alkhalifah, A. (2021). Technology Integration in Higher Education During COVID-19: An Assessment of Online Teaching Competencies Through Technological Pedagogical Content Knowledge Model. Frontiers in psychology, 12, 736522.
3. Araiz, J. (2018). Profile and Level of Competence of Information and Communications Technology (ICT) Coordinators among Secondary Schools in the Division of Davao del Sur. JPAIR Multidisciplinary Research, 32(1), 1.Adlawan, L. L. and Quirap, E. A. (2022). ICT skills and teaching performance of east II, division of Cagayan De Oro city. International Journal of Advancements in Research & Technology, Volume 1, Issue 1, ISSN 2278-7763
4. Ali, M., & Miraz, S.K. (2018). Mobile assisted language learning (MALL) – A brief survey. Annals of Emerging 24-148.
5. Areza,J., A. (2018). Level of Competency of the Pupils in Technology and Livelihood Education 6 in Sorsogon City Division. Retrieved from: https://www.ijsr.net/archive/v9i7/SR20630125510.pdf
6. Arora, S., & Bhatti, M. (2023). Digital multimodal learning: Enhancing language acquisition through visual-audio integration. Journal of Educational Media and Practice, 14(2), 55–72.
7. Aydin, S. (2022). The impact of multimedia learning on students' language acquisition and retention. International Journal of Educational Technology in Higher Education, 19(1), 45–58.
8. Basri, W. S., Alandejani, J. A., and Almadani, F. S. (2018). ICT Adoption Impact on Students' Academic Performance: Evidence from Saudi Universities. Educational Research International.
9. Belgar, Mary & Maligaya, Dennis. (2022). Utilization of Information and Communication Technology and Its Impact on Students' Academic Performance in Pasig Diocesan School System (PaDSS). 10.13140/RG.2.2.12449.68967.
10. Bonifacio, A. (n.d.). Developing Information Communication Technology (ICT) Curriculum Standards for K-12 Schools in the Philippines.
11. Botero, G. G., Questier, F. & Zhu, C. (2019). Self-directed language learning in a mobileassisted, out-of-class context: Do students walk the talk? Computer Assisted Language Learning, 32(1-2), 71-97.
12. Callao, M. B. (2021). Technology-Based Instructions. Elementary Education Online, Vol 20 (Issue 4): pp. 3437-3446 doi: 10.17051/ilkonline.2021.04.384
13. Çakmak, F. (2019). Mobile learning and mobile assisted language learning in focus. Language and Technology, 1(1), 30-48. https://dergipark.org.tr/en/download/article-file/665969
14. Catherine Bergonia Briones, (2018), "Teachers' Competency on the Use of ICT in Teaching Physics in the Junior High School" in 4th International Research Conference on Higher Education, KnE Social Sciences, pages 177–204. DOI 10.18502/kss. v3i6.2380
15. Dela Cruz, M. L., & Santos, J. P. (2023). Blended pedagogies in Philippine basic education: Insights from post-pandemic classrooms. Asia Pacific Education Review, 24(3), 411–427.
16. DepEd Order No. 42, s. 2017, otherwise known as National Adoption and Implementation of the Philippine Professional Standards for Teachers. www.deped.gov.ph
17. DepEd Order No. 78, s. 2010. Guidelines on the implementation of the DepEd computerization program. DepEd Complex, MERALCO Avenue, Pasig City.
18. Epp, J. (2023). Cognitive engagement through multimodal instruction: The role of visuals and sound in language classrooms. Educational Media International, 60(2), 121–138.
19. Fajardo, M., L. and Mendoza, F., E. (2021). Pedagogical Approaches and Information and Communication Technology (ICT) Skills of Teachers in the E-Learning. Retrieved from: https://www.academia.edu/49050056/Pedagogical Approaches and Information and Communication Technology ICT Skills of Teachers in the E Learning\
20. Febriani, G. and Hafifah, G. N. (2019). TEACHERS' BELIEFS AND PRACTICESOF USING YOUTUBE IN EFL CONTEXT IN MUHAMMADIYAH SENIORHIGH SCHOOLS OF SURABAYA.Humanities & Social Sciences Reviews,7(3):389–397
21. Gaurino, J. B. and Estrellado, E. L. (2023). Performance Level of Grade Five Pupils in Information and Communication Technology. United International Journal for Research & Technology. Volume 04, Issue 03. https://uijrt.com/articles/v4/i3/UIJRTV4I30008.pdf
22. Ghavifekr, S., Kunjappan, T., Ramasamy, L., & Anthony, A. (2016). Teaching and Learning with ICT Tools: Issues and Challenges from Teachers' Perceptions. Malaysian Online Journal of Educational Technology, 4(2), 38-57.

23. Gilakjani, A. (2017). A review of the literature on the integration of technology into the learning and teaching of English language skills. International Journal of English Linguistics, 7(5), 95-106.
24. Guillo, R., & Guillo, R. (2017). Assessment of Information Communications Technology (ICT) Competency of Teachers and Students at Batangas State University. International Journal of Contemporary Applied Sciences, 4(4)
25. Ismail, M. N. (2020). Instructional strategy in the teaching of computer programming: A need assessment analyses. Retrieved from: https://www.researchgate.net/publication/2287652 83_Instructional_strategy_in_the_teaching_of_computer_programming_A_need_assessment_analys es
26. Hafifah, G. N. (2020). Teachers Perspectives of ICTIntegration in English LanguageTeaching: A Review of Literature. Eng. Educ. Society. 5:1
27. Hegelheimer, V., Li, Z. & Dursun, A. (2018). CALL (computer-assisted language learning) research: Teaching and technology. In J. I. Liontas & M. DelliCarpini (Eds.), The TESOL encyclopedia of English language teaching.
28. Javier, B. F. (2021). Practices of Filipino Public High School Teachers on Digital Teaching and Learning Technologies during the COVID-19 Pandemic Basis for Learning Action Cell Sessions. Online Submission.
29. Juario, T. (2022). Teachers' Adherence to ICT Literacy and Performance: Challenges and Success. Misamis Oriental, Philippines.
30. Kaarakainen, M. T., Kivinen, O., & Vainio, T. (2018). Performance-based testing for ICT skills assessing: a case study of students and teachers' ICT skills in Finnish schools. Universal Access in the Information Society, 1-12.
31. Kamala, J. (2021). Tanzania: Govt Vows Support of ICT Tools Use in Teaching.
32. Kieu, V., Truc, D., Tran, P. & Nga, V, (2021). The Effectiveness of Using Technology in Learning English. 2021. AsiaCALL Online Journal Vol. 12, No. 2. Retreived from https://asiacall.info/acoj
33. Kim, H., & Lee, J. (2022). Technology-supported learner autonomy in ESL classrooms: Effects on engagement and achievement. Computers & Education, 182, 104464.
34. Mackare, K. and Jansone, A. (2018). Recommended formatting parameters for E-study materials. International Journal of Lifelong Education and Leadership.
35. Mafuraga, M. and Moremi, M. (2017). Integrating Information and Communication Technology in English Language teaching: A case study of selected Junior Secondary Schools in Botswana. International Journal of Education and Develop-ment Using Information and Communication Technology (IJEDICT), 13(1):142–152-
36. Makki, T. W., O'Neal, L. J., Cotten, S. R., & Rikard, R. V. (2018). When first-order barriers are high: A comparison of second-and third-order barriers to classroom computing integration. Computers & Education, 120, 90-97.
37. Mehmood, U., Mahnaz, W., Nadia Mehrukh, Waqas Shabbir (2022). Relationship Between Utilization of Ict and Academic Achievement of Students at Secondary Level-- Palarch's Journal of Archaeology of Egypt/Egyptology 19(2), 317-324. ISSN 1567-214x
38. Navarro, L. A., & Villanueva, C. R. (2023). Digital competence and instructional performance of public school teachers in the Philippines. Philippine Journal of Educational Research and Development, 32(1), 89–105.
39. Nnamdi-Eruchalu, G. I. (2022). Integrating ICT in the Teaching and Learning of Oral Literature. International Journal of Research and Innovation in Social Science (IJRISS) |Volume VI, Issue XI, ISSN 2454-6186.
40. Nueva, MGC (2019). A Literature Review on the Current Technocology in Education: An Examination of Teachers Use of Technology and Its Association to Digital Inequality in School. Retrieved from https://www.dlsu.edu.ph/wp-content/uploads/pdf/conferences/arts-congress-proceedings/2019/CP-04.pdf
41. OECD. 2017. Available online: https://www.oecd-ilibrary.org/science-and-technology/information-and-communication-technology-ict/indicator-group/english_04df17c2-en (accessed on 2 March 2021).
42. Omariba, A., Ayot, H. O., & Ondigi, S. R. (2015). TEACHERS'PREPAREDNESS IN INTEGRATING INFORMATION COMMUNICATION TECHNOLOGIES IN PUBLIC PRIMARY TEACHER TRAINING COLLEGES IN KENYA. Building Capacity Through Quality Teacher Education Nairobi, Kenya July 14-16, 2015, 333. Retrieved from http://bit.ly/2C3aDMk

43. Payne, J., & Dituri, P. (2019). Spreadsheets as an Effective Use of Technology in Mathematics Education. Spreadsheets in Education, 10138.
44. Pradhan, Rudra P., Girijasankar Mallik, and Tapan P. Bagchi. (2018). Information communication technology (ICT) infrastructure and economic growth: A causality evinced by cross-country panel dana. IIMB Management Review 30: 91–103.
45. Rahman, M., Singh, S., & Das, R. (2021). Using podcasts to enhance listening comprehension in primary ESL learners. Journal of Language and Education Innovation, 5(4), 66–78.
46. Rodrigo, (2019). Quantifying the Impact of Severe Weather Conditions on Online Learning During the COVID-19 Pandemic. www.researchgate.com
47. Saleem, M. and Zahra, M. (2017). An effect of ICT on student's learning at secondary level in private schools of the Punjab. International Journal of Distance Education and E- Learning (IJDEEL); 2(1):69-89
48. Sharma, A. (2022). Hybrid learning effectiveness in foundational education: A comparative study. Education and Information Technologies, 27(5), 5673–5690.
49. Siahaan, M. and Sirait, M. (2017). Development of Student Activity Sheet (Worksheet) Based on Guided Inquiry to Improve Student's Critical Thinking Skills in Senior High School. Journal of Education and Practice, 8 (20),
50. Starkey, L., Sylvester, A., & Johnstone, D. (2017). Negotiating digital divides: Perspectives from the New Zealand schooling system. Journal of Research on Technology in Education, 49(1-2), 31-42.
51. Sun, L. and Bradley, K. D. (2021). School Computer Use and Academic Performance. Retrieved from: https://www.uky.edu/~kdbrad2/MWERA_Letao.pdf
52. Sutherland, C. (2020). "7 Reasons why Students Need Technology in the Classroom." Explorance. https://explorance.com/blog/7-reasons-students-need technology-classroom/
53. Tamban, E., Maningasb, O. B., Dichosoc, M. F., Navalesd, M. S. M. & Annabelle M. Angeles, A. M. (2022). Integration of Information Communication Technology (ICT) in Teaching Intermediate Victorianism. American Academic Scientific Research Journal for Engineering, Technology, and Sciences (ASRJETS) Volume 87, No 1, pp105-116
54. Teacher Vicky E. (n.d.). Learn in English with. https://www.youtube.com/@TheVicebora/featured
55. Tomaro, Q. (2018). ICT integration in the educational system of the Philippines. www.researchgate.com
56. Ulla, M. B., William F. Perales, W. F., & Tarrayo, V. N. (2020). Integrating Internet-based applications in English language teaching: Teacher practices in a Thai university. Issues in Educational Research, 30(1), Retrieved from https://www.iier.org.au/iier30/ulla.pdf
57. Umar, A. D. and Iyere, J. M. (2021). The Teaching of Poetry through Information Technology Systems in Secondary Schools. East African Scholars Journal of Education, Humanities and Literature. Vol 4 (12). 477- 483. DOI: 10.36349/easjehl. 2021. v04i12. 006.
58. UNESCO. (2023). Technology in education: A tool on whose terms? UNESCO Publishing. https://unesdoc.unesco.org/ark:/48223/pf0000386141
59. Usman L. O., Ogunnaike, M. J., Muniyandi, R. C., and Adenubi, A. (2020). The Teaching and Learning of Literature in Schools: The Pedagogical Enhancement Through Information and Communication Technology. Proceedings – Malaysia International Convention on Education Research & Management (MICER) 1416, March. Bangi Resort Hotel, Bandar Baru Bangi, Malaysia.