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Enhancing Students Performance in English 7 through Technology Aided Instruction

Carien Morales, Cathlene Tapic, Merabil Santa Ana, Alexis Joshua D.Honrejas*

Student's, Candelaria Institute of Technology of Cabadbaran, Inc. (CITCI), Cabadbaran City, Agusan del Norte, Philippines
***CPR, MAEd**Faculty, Candelaria Institute of Technology of Cabadbaran, Inc. (CITCI), Cabadbaran City, Agusan del Norte, Philippines*

A B S T R A C T

This action research aimed to determine the effectiveness of Technology-Aided Instruction (TAI) in enhancing the academic performance of Grade 7 learners in English at Antonio C. Dagani Integrated School, Cabadbaran City, Philippines. The study employed a quantitative approach using a one-group pretest-posttest design involving 20 Grade 7 learners from the Mendel section, selected through purposive sampling. The intervention incorporated multimedia presentations, educational videos, and technology-supported learning activities to facilitate students' understanding of English competencies and encourage active classroom participation. Data were gathered using teacher-made pretest and posttest assessments, supplemented by classroom observations and anecdotal records. Mean scores, percentages, standard deviations, and a paired-samples t-test were utilized to analyze the learners' academic performance before and after the intervention. Findings revealed that the learners' mean score increased from 10.85 (43.40%), interpreted as Low, in the pretest to 21.50 (86.00%), interpreted as Very High, in the posttest, representing a mean gain of 10.65 points. Furthermore, the paired-samples t-test indicated a statistically significant difference between the pretest and posttest scores, $t(19) = 19.40$, $p < .001$, leading to the rejection of the null hypothesis at the 0.05 level of significance. The findings demonstrated a substantial improvement in learners' English performance following the implementation of Technology-Aided Instruction. Although the absence of a control group limits causal conclusions, the results suggest that integrating multimedia resources and technology-supported learning activities may contribute to improved academic achievement. The study recommends the continued integration of appropriate educational technologies in English instruction, supported by adequate instructional resources and teacher capacity development, to promote meaningful and engaging learning experiences.

Keywords: Technology-Aided Instruction, English 7, Academic Performance, Multimedia Learning, Action Research, Educational Technology

1. Introduction

English is one of the key disciplines in the Philippines basic education curriculum. English improves the ability of the learners to communicate, read, write, and think critically, which is vital in achieving academic excellence and lifelong learning. Despite the importance of English, many Filipino learners continue to face challenges when it comes to reading comprehension and language competency (Lim & Arcilla, 2021).

Based on the Programme for International Student Assessment (PISA) 2022 results, only 24% of Filipino learners met or exceeded the minimum level of reading proficiency, compared with the OECD's average of 74% (OECD, 2023). Compared with other Asian countries and economies, the Philippines also underperformed in terms of reading proficiency. For instance, Singapore attained the highest reading proficiency among all the participating countries and economies, with 89% of students achieving at least the minimum proficiency level, whereas only 24% of Filipino students and 8% of Cambodian learners met the same benchmark (OECD, 2023). Such disparities in reading proficiency levels prompt concerns about the relative differences in educational quality among Asian countries and economies. Particularly, the PISA 2025 Assessment and Analytical Framework highlighted the growing emphasis on cultivating higher-order competencies and digital literacy, given the increasing reliance on technology in contemporary education (OECD, 2026). Thus, it is of paramount importance to identify effective instructional strategies that can promote learners' engagement, reading proficiency, and overall academic achievement in the English language.

The findings from the Second Congressional Commission on Education (EDCOM II) further highlight the learning crisis in the country. As per the report, based on the results of the PISA 2022, only one out of four (EDCOM II, 2026). Filipino learners have achieved the minimum level of reading proficiency. According to the Programme for International Student Assessment (PISA) 2022, only 24% of Filipino students demonstrated at least minimum proficiency in reading literacy against the average of 74% for OECD countries (OECD, 2023). Thus, many learners have difficulties understanding, interpreting, and evaluating written texts. Moreover, the PISA 2025 Assessment and Analytical Framework states that the development of high-order thinking skills and digital literacy is essential for today's education system which is based on the application of technologies in the learning process (OECD, 2026). These national and international findings demonstrate the necessity of using instructional approaches that could motivate learners and improve their performance. According to research, technology integration in English instruction improves the engagement, participation, and success of learners compared with conventional teaching methods (Lim & Arcilla, 2021; Rahmati et al., 2021).

In the classroom observation made by the researchers at Antonio C. Dagani Integrated School, the Grade 7 English teacher made use of technology aided instructions that was used in class. Even with the aid of this presentation, many of the learners remained reluctant to respond to questions asked, did not understand the lesson presented, and were not actively involved in classroom activities. Previous research shows that technology-assisted teaching enhances active learning through increased involvement, interaction, and access to learning resources. Similarly, (Lim & Arcilla, 2021). noted that technology integration into English teaching enhances the motivation and participation of learners, thus improving their learning results. Given this classroom observation and the challenges observed in English learning currently, there is a need for technology-aided instruction among Grade 7 learners in Antonio C. Dagani Integrated School. It is the intention of this research to ascertain if technology-mediated instruction could enhance the academic performance of Grade 7 students in English. More so, the results of this action research may be considered as the starting point for improving teaching methods and techniques which would help enhance the performance of students in English.

2. Methodology

This action research employed a quantitative approach using a one-group pretest-posttest research design to determine the improvement in the academic performance of Grade 7 learners in English following the implementation of Technology-Aided Instruction (TAI). The study was conducted at Antonio C. Dagani Integrated School in Cabadbaran City, Philippines, involving 20 Grade 7 learners from the Mendel section who were selected through purposive sampling based on their identified learning needs in English. The researchers utilized a teacher-made 25-item assessment administered as a pretest and posttest to measure the learners' performance before and after the intervention. An observation checklist and anecdotal records were also used to document learners' participation, engagement, and responsiveness during classroom activities. The intervention was implemented over five days and incorporated multimedia presentations, educational videos, and technology-supported learning activities designed to strengthen learners' understanding of the targeted English competencies. Before the intervention, a pretest was administered to establish the participants' baseline academic performance. Subsequently, Technology-Aided Instruction was implemented through interactive and multimedia-supported lessons, followed by a posttest to determine changes in learners' performance. The collected data were analyzed using mean scores, percentages, standard deviations, and a paired-samples t-test to determine the level of academic performance and the statistical significance of the difference between pretest and posttest scores at the 0.05 level of significance. The study also observed ethical research procedures, including securing institutional permission, obtaining the necessary consent, and maintaining the confidentiality of learners' information. This methodology provided a systematic basis for assessing changes in English 7 performance following the implementation of Technology-Aided Instruction.

3. Results and Discussion

This section presents, analyzes, and interprets the findings of the study on enhancing students' performance in English 7 through Technology-Aided Instruction (TAI).

Problem 1. What is the level of students' performance in English 7 before and after the implementation of technology-aided instruction?

Table 1 presents the level of academic performance of the 20 Grade 7 learners in English before and after the implementation of Technology-Aided Instruction.

Table 1

Level of Students' Performance in English 7 Before and After the Implementation of Technology-Aided Instruction

	N	**Mean Score**	**SD**	**Percentage Score**	**Interpretation**
Pretest	20	10.85	2.66	43.40%	Low
Posttest	20	21.50	1.57	86.00%	Very High

The results of the study revealed an improvement in the students' performance in English 7 after the implementation of Technology-Assisted Instruction. Specifically, the participants got a mean score of 10.85 or 43.40% in the pretest which was interpreted as Low. After the intervention, the mean score increased significantly to 21.50 or 86.00% in the posttest which was interpreted as Very High. This suggests that the students performed better after the intervention was implemented. The findings support the study of Rahmati et al. (2021) which revealed that the use of educational technology in teaching English can facilitate the engagement and learning outcomes of the participants. This is evident because multimedia and other technology-assisted activities were used to provide the participants with different ways of understanding the lesson.

It can also be inferred from the results that the use of educational technology in teaching English could have created a positive learning environment for the participants. Using multimedia presentations and other technology-assisted activities, the participants could have been actively engaged throughout the learning process. However, the improvement in the participants' performance must be viewed with caution since there are other factors that might have contributed to the students' learning outcomes.

As researchers, we noticed the students have improved after using the Technology-Aided Instruction. The progress they have displayed in the class helped us understand that technology when applied appropriately can help the students understand English lessons better and even participate actively in class

discussions. From the experiment, we were able to discover the relevance of embracing suitable instructional materials for effective learning and better presentation of the lesson. On the other hand, the experiment also helped us discover that the performance of students might have improved due to other unaccounted factors.

Problem 2. Is there a significant difference in the students' performance in English 7 before and after the implementation of technology-aided instruction?

Table 2 presents the significant difference in the academic performance of Grade 7 learners before and after the implementation of Technology-Aided Instruction.

Table 2

Significant Difference in Students' Performance in English 7 Before and After Technology-Aided Instruction

	N	Mean	SD	t-value	df	p-value	Decision	Interpretation
Pretest	20	10.85	2.66					
Posttest	20	21.50	1.57	19.40	19	< .001	Reject H_0	Significant

The findings reveal a statistically significant improvement in the English 7 performance of students after the implementation of technology-aided instruction. As presented in Table 2, the students obtained a pretest mean score of 10.85 (SD = 2.66), which increased to 21.50 (SD = 1.57) in the posttest. The mean difference of 10.65 points indicates a substantial improvement in performance following the intervention. Moreover, the paired-samples t-test yielded a value of $t(19) = 19.40$, $p < .001$. Since the probability value is lower than the .05 level of significance, the null hypothesis is rejected, confirming that the difference between the students' pretest and posttest scores is statistically significant.

The considerable increase in posttest performance suggests that technology-aided instruction may have provided a more supportive learning environment for developing the English competencies measured in the assessment. The integration of technology can enrich classroom instruction by presenting content through interactive, visual, auditory, and multimedia formats, potentially allowing students to engage with lessons in ways that extend beyond conventional classroom presentation. The lower standard deviation in the posttest (SD = 1.57) compared with the pretest (SD = 2.66) is also noteworthy, as it indicates that students' performance became more consistent after the intervention. Thus, the improvement was evident not only in the higher average score but also in the reduced variability of students' achievement.

These findings provide empirical support for the potential value of technology-aided instruction in English 7. Nevertheless, statistical significance should not automatically be interpreted as proof that the intervention alone caused the improvement. Other factors, such as students' repeated exposure to the assessment content, maturation, classroom conditions, and teacher support, may also have contributed to the observed change, particularly when the study does not include a control group. Mayer's (2021) Within these limitations, the results demonstrate that students exhibited significantly higher English performance after the implementation of technology-aided instruction, supporting its continued consideration as an instructional approach for enhancing students' learning experiences and academic performance.

As researchers, we discovered that technology-assisted instruction offers multiple ways of experiencing and comprehending English lessons. The tremendous growth of the students' posttest performance made us realize the potential value of visual, auditory, and multimedia resources in teaching lessons. At the same time, we learned to interpret the improvement in the results of the students accurately because there are various other causes of such outcomes. The study helped us understand the need to use multimedia resources wisely and invest in those learning tools and materials designed to meet the expectations and needs of learners.

4. Conclusion

Based on the findings of the study, the following conclusions were drawn:

1. The academic performance of Grade 7 learners in English improved substantially following the implementation of Technology-Aided Instruction. The increase from a Low performance level (43.40%) in the pretest to a Very High performance level (86.00%) in the posttest suggests that integrating multimedia presentations, educational videos, and technology-supported learning activities may enhance learners' understanding of English competencies. The findings highlight the potential of Technology-Aided Instruction as an instructional approach for improving students' academic performance.

2. A statistically significant difference was established between the pretest and posttest performance of Grade 7 learners, $t(19) = 19.40$, $p < .001$, resulting in the rejection of the null hypothesis. This indicates that learners demonstrated significantly higher academic performance following the implementation of Technology-Aided Instruction. The findings support its potential value in improving English learning outcomes; however, the absence of a control group prevents attributing the improvement exclusively to the intervention.

Recommendation

Based from the conclusions, the following recommendations are drawn.

School Administration. The school administration can provide help and support for the implementation of Technology-Aided Instruction by providing the needed technological equipment, multimedia tools, and other necessary materials. The school administration can facilitate activities that can improve teachers' knowledge and skills in using technology-assisted instruction in facilitating classes.

English Teachers. The English teachers are recommended to incorporate technology-aided instructions in their classes by utilizing multimedia tools and materials, educational videos, and activities, and other relevant learning resources. The English teachers can choose which technology-assisted tools and material to use for each competency. Observing and getting learners' feedback will help the English teachers determine whether the use of the multimedia will help the learners further understand the lesson.

Students. Students are advised to take part in technology-enhanced learning activities and use digital learning resources wisely. They can make good use of multimedia and interactive activities to enhance their understanding of English lessons and participation in classroom discussions.

Curriculum Planners. The curriculum planners are recommended to include the use of technology-assisted strategies and multimedia resources when teaching English lessons and activities, particularly in instances where it will benefit the learners.

School Heads and Relevant Teachers. The researchers recommend that the results of the study be shared with the school head and other relevant teachers, particularly the English teachers, through a discussion.

Future Researchers. Future researchers can consider expanding the population of the study, increasing its duration, and/or introducing a control/comparison group in order to produce more reliable results.

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