Assessing the Role of Assistive Technology Tools in Enhancing Learning Outcomes for Students with Disabilities: Basis for Instructional Plan

Billy Ray B. Manuel

Department of Education, Philippines

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ABSTRACT

This study examined the role of assistive technology (AT) tools in enhancing learning outcomes for students with disabilities in selected public secondary schools in Bulacan, Philippines during the 2024–2025 school year. Thirty (30) teachers were purposively selected to assess the extent of AT utilization in five key domains: user engagement, effectiveness, accessibility and availability, student satisfaction and comfort, and teacher and staff training. Also, the study utilized the level of performance of students with disabilities before and after the utilization of assistive technology tools as revealed by their pretest and posttest scores. Findings revealed that tools such as interactive whiteboards, FM systems, audiobooks, and speech-to-text software were among the most frequently used. Assistive tools are consistently utilized to improve learning outcomes for students with disabilities in terms of user engagement, effectiveness, accessibility and availability, student satisfaction and comfort, and teacher and staff training. Also, the performance of students with disabilities significantly improves before and after the implementation of assistive technology. In addition, a notable association exists between the extent of utilization of assistive technology tools and the level of performance of students with disabilities, as indicated by posttest results. The study highlights the importance of teacher training and consistent integration of AT tools in inclusive classrooms and proposes recommendations for improving instructional planning and policy implementation.

Keywords: Assistive technology tools, enhancing learning outcomes, students with disabilities, user engagement, effectiveness, accessibility and availability

INTRODUCTION

The integration of assistive technology (AT) in education has become increasingly vital in promoting inclusivity and academic equity. Assistive technologies are tools, devices, or software designed to aid individuals with disabilities in performing functions that might otherwise be difficult or impossible (Al-Azawei & Serenelli, 2022). These tools enable personalized learning experiences, improve access to content, and support the development of communication, motor, and cognitive skills (Smith & Davies, 2023). As global attention shifts toward inclusive education, the role of assistive technology in bridging academic gaps becomes more prominent. Assistive technology is predicated on the principle that all students, irrespective of their capabilities or disabilities, possess the right to get the right of entry to first-class training and opportunities for non-public and tutorial development. These technologies enhance freedom and enable students to interact with extra comprehensively in their learning approaches via providing custom-made options that tackle varied studying demands.

In the Philippine context, Republic Act No. 7277 (Magna Carta for Disabled Persons) mandates accessible and inclusive education. However, practical implementation often lags behind policy. While national frameworks promote AT use, actual classroom integration varies significantly, particularly in less urbanized regions like Bulacan, Philippines (Pineda & Cruz, 2022). International studies such as those by Lee and Park (2021) and Ahmad et al. (2022) confirm that AT can improve learning outcomes for students with disabilities, especially when fit to individual needs. However, local research on AT use in Philippine public schools, especially at the secondary level, remains limited.

Numerous studies have emphasized the significant impact of assistive technology on the academic performance and engagement levels of students with impairments. Johnson and Wang (2023) found that the utilization of assistive technology equipment markedly enhanced learning results for college students with impairments by increasing their motivation and facilitating personalized learning experiences. A study by Taylor and Martinez (2020) demonstrated that students' utilization of assistive technology devices enhanced engagement in classroom activities and improved communication abilities. Assistive technology (AT) has become a critical resource for supporting students with disabilities in educational settings. This study examines the effectiveness of AT tools in improving learning outcomes, focusing on how these technologies can be integrated into instructional practices to bolster student performance. This meta-analysis investigates the effect of various assistive technology tools on learning outcomes for students with disabilities. By synthesizing data from multiple studies, this research aims to provide insights into the effectiveness of these tools in facilitating academic achievement and engagement. A systematic analysis was performed on selected studies that met inclusion criteria, assessing the impact of AT on academic performance, engagement, and overall learning experiences. The findings indicated that assistive technology significantly enhances learning outcomes for students with disabilities. Specifically, tools such as speech-to-text software and graphic organizers were associated with improved writing skills and increased participation in classroom activities. The study concludes that integrating assistive technology into educational settings is essential for fostering inclusive learning environments. It recommends that educators receive adequate training on AT tools and that schools allocate resources to ensure accessibility and effective implementation (Smith & Jones, 2022).

In the same manner, autism spectrum disorder presents unique challenges in educational contexts, necessitating tailored approaches to learning. This study explores how digital assistive tools can provide support for students with ASD, enhancing their learning experiences and outcomes over time. This longitudinal study evaluates the efficacy of digital assistive tools in enhancing the learning outcomes of students with autism spectrum disorder (ASD). The research focuses on the long-term effects of using technology in the classroom setting and its implications for student engagement and skill acquisition. A cohort of 60 students with ASD was monitored over two academic years, utilizing digital tools such as interactive apps and communication devices. Data was collected through standardized assessments, teacher observations, and student feedback to gauge improvements in social, communicative, and academic skills. Results demonstrated that the use of digital assistive tools led to significant improvements in social interactions, communication abilities, and academic performance among students with ASD. The tools facilitated more meaningful engagement and participation in classroom activities. The conclusion emphasizes the positive impact of digital assistive technology on students with ASD, advocating for its wider adoption in classrooms. The study recommends ongoing professional development for educators concerning these tools to maximize their potential benefits (Garcia & Thompson, 2023).

Also, learning disabilities can hinder academic success, requiring innovative solutions to promote effective learning. This study investigates how smart devices, including tablets and smartphones, serve as crucial tools in supporting students with learning disabilities in various educational contexts. This case study explores the role of smart devices as assistive technology tools to support students with learning disabilities. The research highlights specific applications that enhance learning experience and improve educational outcomes for these students. The case study involved four middle schools employing smart devices for students with learning disabilities. Data was collected through interviews with educators, surveys from students, and analysis of academic performance metrics over one academic year. Findings revealed that the implementation of smart devices significantly improved academic performance and student engagement. Students reported greater motivation and independence in learning tasks, attributing their success to features such as interactive content and personalized learning experiences. The study concludes that smart devices are effective assistive technology tools that can positively impact students with learning disabilities. Recommendations include broader integration of technology in curricula and ongoing support for teachers to effectively utilize these tools in their classrooms (Wilson & Patel, 2023)

The study by Edwards & Thompson (2023) investigated the role of assistive technology (AT) in promoting academic success among students with disabilities in classroom settings. It aims to identify which specific AT tools are most effective in facilitating learning and achieving educational goals. Assistive technology provides essential support for students with disabilities, allowing them to overcome barriers to learning. This paper

examines the specific AT tools used in classrooms and their effectiveness in improving educational outcomes for these students. A mixed-methods approach was utilized, combining quantitative surveys of teachers' perceptions regarding AT use with qualitative interviews of students and educators. Data was collected from various schools across different districts focusing on their AT programs. Results indicated that text-to-speech software, graphic organizers, and adaptive devices were among the most beneficial AT tools. Teachers reported significant improvements in student engagement and comprehension, while students expressed greater confidence in their abilities to complete assignments. The findings affirm that AT can significantly enhance academic success for students with disabilities. The study recommends developing individualized AT plans for students, providing training for educators on available tools, and fostering collaboration between teachers and technology specialists.

On the other hand, the research by Garcia & Miller (2023) explores the correlation between the use of assistive technology and learning outcomes for students diagnosed with learning disabilities. It aims to determine how AT impacts key academic skills and overall student performance. The integration of assistive technology in education has been posited as a means to enhance learning outcomes for students with learning disabilities. This study seeks to uncover the extent to which AT tools contribute to improvements in academic achievement. The researchers conducted a longitudinal study involving a cohort of students with learning disabilities over one academic year. Data collection included pre- and post-intervention assessments of academic performance, alongside surveys about AT usage among students and teachers. The analysis revealed a positive correlation between the use of AT and enhanced learning outcomes, particularly in reading and writing. Students who regularly used AT tools displayed marked improvements in their grades and engagement levels in classroom activities. The study concludes that integrating assistive technology into educational strategies is vital for supporting students with learning disabilities. It recommends ongoing assessment of AT's effectiveness, investment in additional resources, and professional development opportunities for educators in implementing these technologies.

Smith & Thompson (2023) investigated the impact of various assistive technology tools on the academic achievements of students with intellectual disabilities. It emphasizes the potential of these technologies to facilitate personalized learning experiences and improve educational outcomes. Assistive technology has gained recognition as a critical component in supporting students with disabilities in achieving their academic goals. This research explores how different assistive tools can help learners with intellectual disabilities navigate their educational challenges more effectively. A mixed-methods approach was adopted, including quantitative analysis of academic performance data from 150 students who utilized various assistive technologies, complemented by qualitative interviews with educators and parents about their experiences and observations. The findings revealed that students using assistive technology tools, such as speech-to-text applications and interactive learning software, showed significant improvements in both academic performance and engagement levels compared to those who did not use such tools. Teachers noted increased motivation and participation among students. The study concludes that incorporating assistive technology in the classroom is vital for enhancing the learning outcomes of students with intellectual disabilities. It recommends further training for educators to effectively implement these technologies and greater investment in assistive tools within schools.

Moreover, teachers play a central role in the success of AT implementation. Training, support, and access to tools directly influence how effectively these technologies are employed (Gonzales & Yu, 2023). Although a Department of Education (DepEd) survey reported that only 30% of Bulacan educators have received formal AT training, expectations to implement inclusive practices remain high. Consequently, it is essential to investigate how AT tools are currently used, their perceived effectiveness, and how they correlate with student performance. This study seeks to evaluate the role of assistive technology tools in enhancing academic outcomes for college students with disabilities at a public basic college in Bulacan, considering the legal framework, existing literature, and the local educational context. Notwithstanding these results, a deficiency in research persists, particularly on the utility and efficacy of these tools within the context of public elementary schools in Bulacan, Philippines, hence revealing a significant gap in the literature.

This study aims to assess the role of assistive technology tools in enhancing learning outcomes for students with disabilities in selected public secondary schools in Bulacan. It focuses on five core areas: user

engagement, effectiveness, accessibility and availability, student satisfaction and comfort, and teacher/staff training. The study also examines performance data before and after AT integration to establish its measurable impact. Addressing this research gap not only contributes to literature but also provides evidence-based recommendations for instructional planning in inclusive settings.

METHODOLOGY

This descriptive quantitative study assessed the role of assistive technology tools in enhancing learning outcomes for students with disabilities. The research was conducted in selected public secondary schools in Bulacan during the 2024–2025 school year. Descriptive design was chosen to allow systematic analysis of both AT usage and its correlation with student performance (Zhao et al., 2023).

A purposive sampling technique was employed to select 30 teachers with experience in using AT tools. Although the sample size may appear limited, it aligns with precedents in qualitative-oriented descriptive research, which prioritizes respondent relevance over volume (Garcia & Mendoza, 2021). These teachers were selected based on their direct involvement in teaching students with disabilities and their exposure to AT tools. The respondents assessed the utilization of assistive technology tools in terms of user engagement, effectiveness, accessibility and availability, student satisfaction and comfort, and teacher and staff training. They also provided data on the performance of students with disabilities, as indicated by pretest and posttest scores.

The research instrument, a structured questionnaire, was divided into three parts: (1) types of assistive technology tools used, (2) student performance before and after AT utilization, and (3) extent of AT use across five domains. It employed a four-point Likert scale ranging from 1 (Not at all) to 4 (Always Utilized). Content validity was ensured through expert validation from educators affiliated with the University of Perpetual Help System Dalta and local public schools.

Data were collected after receiving formal approval from the Schools Division Office and school heads. Participation was voluntary and confidentiality was guaranteed. Descriptive statistics, including frequency, percentages, and weighted means, were used to analyze tool usage. A paired t-test determined the significance of performance differences between pretest and posttest results, while Pearson’s r was used to assess the relationship between AT usage and student outcomes.

Clarification of key terms was provided within the instrument. For instance, "effectiveness" was defined as the ability of the AT tool to help students achieve learning goals, while "user engagement" referred to student interaction and motivation. Ethical standards were strictly observed, and data collection limitations such as short observation windows and reliance on teacher-reported data were acknowledged.

RESULTS AND DISCUSSION

Table I Common Assistive Technology Tools Utilized By Teachers In Enhancing Learning Outcomes for Students with Disabilities

Common assistive technology strategies utilized by teachers	Frequency	Percentage
Text-to-Speech (TTS) Software	25	83.33
Speech-to-Text (Dictation) Software	26	86.67
Audiobooks and Book Reading Applications	28	93.33
Screen Readers and magnifiers	24	80.00
Interactive whiteboard and visual learning tools	30	100.00
FM systems and personal amplifiers	30	100.00
Communication devices and Apps	25	83.33
Graphic Organizers and Mind Mapping Software	24	80.00
Note-Taking and Organization Apps	21	70.00

In Table 1, the teachers were asked the most common assistive technology tools that they utilize in enhancing learning outcomes for students with disabilities. It can be seen from the table that the most common assistive technology tools utilized by teachers in enhancing learning outcomes for students with disabilities are interactive whiteboard and visual learning tools, FM systems and personal amplifiers, audiobooks and book reading applications, and speech-to-text (dictation) software. Assistive technology tools have become integral in creating inclusive classroom environments by supporting students with disabilities. These tools enable personalized learning experiences, accommodating diverse needs such as visual, auditory, motor, or cognitive impairments. According to Al-Azawei and Serenelli (2022), assistive technologies significantly increase accessibility and participation for students with disabilities by offering flexible, adaptive learning supports. Similarly, Smith and Davies (2023) found that the use of tools like interactive whiteboards and speech-to-text software contributed to improved academic engagement and content retention among secondary students with learning difficulties.

Table Ii Level of Performance of Students with Disabilities Before and After the Utilization of Assistive Technology Tools

Lessons	**Test**	**N**	**Mean**	**Std. Deviation**
Lesson 1	Pretest	30	4.13	1.35362
	Posttest	30	8.88	0.90533
Lesson 2	Pretest	30	3.38	1.20521
	Posttest	30	9.10	0.80505
Lesson 3	Pretest	30	3.18	1.09977
	Posttest	30	9.25	0.58461

In Table 2, the researcher looked for the level of performance of students with disabilities before and after the utilization of assistive technology tools as revealed by their pretest and posttest scores. The significant increase in performance levels of students with disabilities before and after the utilization of assistive technologies highlights the role these instructional techniques play in inclusive classrooms. When teachers implement assistive technology, they provide targeted support that helps students bridge gaps and gradually build independence in learning tasks. The measurable improvement reflected in the students' pretest and posttest scores shows the effectiveness of assistive technology as an intervention that addresses individual learning needs within a diverse classroom setting. Wang and Lee (2022) found that the integration of assistive technologies significantly improved academic achievement and task completion rates among students with disabilities in inclusive learning environments, reinforcing the value of such tools in promoting equitable outcomes.

TABLE III Level of Performance of Students with Disabilities Before and After the Utilization of Assistive Technology

Lessons	**Test**	**Paired Differences**					**t**	**df**	**Sig. (2-tailed)**	**Decision**	**Interpretation**
		Mean	**Std. Deviation**	**Std. Error Mean**	**95% Confidence Interval of the Difference**						
					Lower	**Upper**					
Lesson 1	Pretest Posttest	-4.75000	1.86575	.20860	-5.16520	-4.33480	-22.771	29	.000	R	S

Lesson 2	Pretest Posttest	-5.72500	1.69866	.18992	-6.10302	-5.34698	-30.145	29	.000	R	S
Lesson 3	Pretest Posttest	-6.07500	1.26065	.14095	-6.35554	-5.79446	-43.102	29	.000	R	S

In Table 3, the researcher looked for the significant difference in the level of performance of students with disabilities before and after the utilization of assistive technology tools as revealed by their pretest and posttest scores. There is a significant difference in the level of performance of students with disabilities before and after the utilization of assistive technology tools as revealed by their pretest and posttest scores, since the p-value is less than .05 level of significance, thus the null hypothesis is rejected and significant. The significant difference in students with disabilities' performance before and after the utilization of assistive technology tools underscores the vital role these tools play in enhancing learning outcomes. The statistical evidence indicating a p-value less than .05 confirms that assistive technologies are effective intervention strategies. Cheng, Bao, and Wang (2023) support this finding, reporting that structured implementation of assistive technology in secondary classrooms significantly increased academic performance among students with learning disabilities.

Table Iv Assessment on The Extent of Utilization of Assistive Technology Tools In Terms Of User Engagement

Indicators	**Mean**	**VI**
I believe that assistive technology tools significantly increase student engagement in learning activities for students with disabilities.	3.93	AU
I feel that the use of assistive technology tools motivates students with disabilities to engage more deeply with the curriculum.	3.85	AU
Assistive technology tools facilitate better communication and interaction among students with disabilities during learning activities.	3.90	AU
The integration of assistive technology tools has led to a noticeable increase in collaboration among students with disabilities.	3.90	AU
I believe that assistive technology tools provide personalized learning experiences that enhance engagement for students with disabilities.	3.90	AU
Composite Mean	3.89	AU

***Legend: 3.26-4.00-Always Utilized; 2.51-3.25-Often Utilized; 1.76-2.50-Seldom utilized; 1.00-1.75 – Not at All

In Table 4, the researcher asked the respondents the extent of utilization of assistive technology tools in terms of user engagement. The mean score of 3.89 indicates that assistive technology tools are greatly utilized for students with disabilities and has significant implications for educational practices. When these tools are widely employed, they can foster greater user engagement by making the learning process more accessible and tailored to individual needs. According to Torres and Santiago (2023), the use of assistive technology significantly boosts user engagement by increasing students' ability to interact meaningfully with content, peers, and teachers in inclusive classroom settings.

Table V Assessment on The Extent of Utilization of Assistive Technology Tools in Terms of Effectiveness

Indicators	**Mean**	**VI**
Assistive technology tools effectively address the individual learning needs of students with disabilities.	3.92	AU
The use of assistive technology tools enhances the quality of	3.86	AU

instruction for students with disabilities.		
I find that students with disabilities demonstrate greater retention of knowledge when they utilize assistive technology tools.	3.91	AU
Assistive technology tools help students with disabilities achieve their learning goals more effectively than traditional methods.	3.90	AU
Assistive technology tools provide measurable improvements in the skill development of students with disabilities.	3.91	AU
Composite Mean	3. 90	AU

In Table 5, the researcher asked the respondents about the extent of utilization of assistive technology tools in terms of effectiveness. The mean score of 3.90 shows that assistive technology tools are always utilized in supporting students with disabilities, has important implications for educational effectiveness. When these tools are extensively used, they can significantly improve students' access to instruction. Effective utilization of assistive technologies fosters an inclusive environment where students with disabilities can overcome barriers related to communication, mobility, or cognition.

Table Vi Assessment on The Extent of Utilization of Assistive Technology Tools in Terms of Accessibility and Availability

Indicators	**Mean**	**VI**
Assistive technology tools are readily accessible to all students with disabilities in my classroom.	3.93	AU
The availability of assistive technology resources positively influences my ability to support students with disabilities.	3.85	AU
The accessibility of assistive technology tools enhances the learning experiences of students with disabilities in my classroom.	3.90	AU
Assistive technology tools are consistently available when needed for students with disabilities in my school.	3.90	AU
There is a clear process in place for requesting additional assistive technology tools when needed for instructional purposes.	3.90	AU
Composite Mean	3.89	AU

In Table 6, the researcher inquired about the extent of utilization of assistive technology tools in terms of accessibility and availability. The extent of utilization of assistive technology tools, with a mean score of 3.89, underscores the critical role in enhancing learning outcomes for students with disabilities through improved accessibility and availability. When these tools are readily accessible and widely used, they can significantly reduce barriers to learning by accommodating diverse needs such as communication difficulties, mobility challenges, or cognitive impairments. Tan and Villanueva (2021) found that the accessibility of assistive technologies in Philippine classrooms was strongly linked to improved student participation and reduced exclusion, particularly when tools were matched to individual learning profiles.

Table Vii Assessment on The Extent of Utilization of Assistive Technology Tools in Terms of Student Satisfaction and Comfort

Indicators	**Mean**	**VI**
Assistive technology tools have significantly improved the overall satisfaction levels of students with disabilities in my classroom.	3.93	AU
Students with disabilities express greater comfort when using assistive	3.85	AU

technology tools during lessons.		
The use of assistive technology contributes positively to the self-esteem of students with disabilities.	3.90	AU
Assistive technological tools help create a more inclusive learning environment for students with disabilities, enhancing their comfort.	3.90	AU
Students with disabilities communicate their needs and preferences more effectively when using assistive technology tools.	3.90	AU
Composite Mean	**3.89**	AU

In Table 7, the researcher looked into the extent of utilization of assistive technology tools in terms of student satisfaction and comfort. The high extent of utilization of assistive technology tools, indicated by a mean score of 3.89, has significant positive implications for student satisfaction and comfort. When these tools are widely used, students with disabilities often experience increased feelings of confidence in their abilities to participate fully in learning activities. Yang and Chen (2023) found that students using assistive technologies reported higher levels of comfort, self-efficacy, and motivation, which positively influenced their engagement and learning outcomes. Such familiar technological support reduces feelings of anxiety and may deliver a more inclusive classroom environment. As a result, students tend to report higher levels of satisfaction with their educational experiences. This may lead to improved motivation, engagement, and overall academic outcomes.

Table Viii Assessment on The Extent of Utilization of Assistive Technology Tools in Terms of Teacher and Staff Training

Indicators	**Mean**	**VI**
The training I received on assistive technology tools has positively impacted my ability to enhance learning outcomes for students with disabilities.	3.93	AU
Ongoing professional development related to assistive technology is crucial for improving the educational experiences of students with disabilities.	3.85	AU
Assistive technology training should be a mandatory part of teacher preparation programs to adequately prepare educators for diverse classrooms.	3.90	AU
I find that collaborative training sessions on assistive technology tools among staff members enhance our collective ability to support students with disabilities.	3.90	AU
My school provides sufficient resources and support for ongoing training in assistive technology relevant to teaching students with disabilities.	3.90	AU
Composite Mean	3.89	AU

In Table 8, the researcher looked into the extent of utilization of assistive technology tools in enhancing learning outcomes for students with disabilities in terms of teacher and staff training. The high extent of utilization of assistive technology tools, with a mean score of 3.89, underscores the critical need for comprehensive teacher and staff training to maximize their effectiveness in supporting students with disabilities. Well-trained educators are better equipped to select, implement, and troubleshoot assistive technologies appropriately, ensuring that these tools are seamlessly integrated into instructional practices. Cheng, Bao, and Wang (2023) emphasized that teacher preparedness significantly influences the success of assistive technology integration in inclusive settings. Gonzales and Yu (2023) also noted that sustained professional development fosters teacher confidence and capability in using AT tools effectively, which in turn improves student outcomes. Effective training also enhances teachers' confidence and competence in adapting their teaching strategies to meet diverse student needs, thereby promoting inclusive learning environments.

When staff are knowledgeable about assistive technologies, they can more readily identify suitable tools for individual students.

Table Ix Summary of The Mean of The Respondents' Assessment On The Extent Of Utilization Of Assistive Technology

Indicators	**Mean**	**VI**
User Engagement	3.89	AU
Effectiveness	3.90	AU
Accessibility and Availability	3.89	AU
Student Satisfaction and Comfort	3.89	AU
Teacher and Staff Training	3.89	AU
Composite Mean	**3.89**	AU

For Table 9, the high level of utilization of assistive technology tools, reflected by a mean score of 3.89, indicates that these tools are being effectively integrated into the educational practices for students with disabilities. Such widespread use suggests a recognition among educators of the vital role that assistive technologies play in promoting inclusive learning environments and supporting individual student needs. According to Al-Azawei and Serenelli (2022), effective integration of assistive technologies improves engagement and academic performance when tailored to learners' diverse needs. Similarly, Sullivan and Ramirez (2022) highlight that personalized and consistent use of assistive tools in inclusive settings leads to measurable improvements in both learning outcomes and classroom participation. When these tools are utilized to their full potential, they can significantly enhance learning outcomes by providing personalized, accessible, and engaging instructional experiences.

Table X Relationship Between The Extent Of Utilization Of Assistive Technology Tools And The Level Of Performance Of Students With Disabilities

Indicators		Pearson r	Sig	Ho	VI
Extent of utilization of assistive technology tools	Level of performance of students with disabilities as revealed by the posttest scores	.825	.000	R	S

***Legend: FR-Failed to Reject; R-Rejected; NS-Not Significant; S-Significant

In Table 10, the researcher wanted to look into the relationship between the extent of utilization of assistive technology tools and the level of performance of students with disabilities as revealed by the posttest scores. The significant relationship between the extent of utilization of assistive technology tools and the performance levels of students with disabilities has important educational implications. Since the statistical analysis indicates a p-value below .05, it suggests that increased use of assistive technologies directly correlates with improved student outcomes, as reflected in posttest scores. Lopez and Kim (2022) similarly found a strong predictive relationship between the degree of assistive technology integration and gains in academic performance among students with disabilities, especially when paired with instructional support. This finding emphasizes the need for educational institutions to prioritize the integration and effective utilization of assistive technologies within their curriculum. Schools and educators should consider investing in training programs and resources that enhance teachers' ability to incorporate these tools meaningfully into daily instruction, thereby optimizing student performance and fostering inclusive learning environments. Likewise, the positive correlation coefficient of .425 indicates a moderate relationship between assistive technology use

and student achievement. This suggests that while assistive technologies significantly contribute to better performance, other factors may also influence student outcomes.

CONCLUSIONS AND RECOMMENDATIONS

As can be deduced from the findings, below are the conclusions drawn from the study:

1. The most common assistive tools used by teachers in enhancing learning outcomes for students with disabilities are interactive whiteboard and visual learning tools, FM systems and personal amplifiers, audiobooks and book reading applications, and speech-to-text (dictation) software.

2. The performance of students with disabilities significantly improves before and after the implementation of assistive technology strategies to enhance academic success.

3. A notable disparity exists in the performance levels of students with disabilities prior to and following the use of common assistive tools used by teachers in enhancing learning outcomes for students with disabilities.

4. Assistive tools are consistently utilized to improve learning outcomes for students with disabilities in terms of user engagement, effectiveness, accessibility and availability, student satisfaction and comfort, and teacher and staff training.

5. A notable association exists between the extent of utilization of assistive technology tools and the level of performance of students with disabilities, as indicated by posttest results.

6. Teachers may regularly evaluate individual student needs to select appropriate assistive technologies that support diverse learning styles and challenges.

7. Teachers may offer ongoing professional development focused on integrating assistive devices and software into daily instruction to maximize their benefits.

8. Teachers may use tools like screen readers, speech recognition, or graphic organizers to tailor lessons and support various learners effectively.

9. Students may regularly practice with assistive technologies to build confidence and independence in their learning tasks.

10. School Administrators may ensure sufficient funding and maintenance for up-to-date assistive devices and software to sustain their effective use.

11. School administrators may promote awareness and positive attitudes towards assistive tools among staff and students to encourage widespread adoption.

12. A parallel study may be conducted using different variables.

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