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Technological integration in inclusive classrooms: Enhancing access for learners with Special Educational Needs (SEN)

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ABSTRACT

This study determined the extent of technological integration in inclusive classrooms and its relationship with teachers' acceptance and utilization of technology for learners with Special Educational Needs (SEN) at Moalboal National High School, Moalboal, Cebu during the School Year 2025–2026. Utilizing a descriptive-correlational research design, data were gathered from 46 teacher-respondents selected through purposive sampling. The adapted UTAUT-based questionnaire measured teachers' profile, acceptance and utilization of technology, accessibility and instructional support for SEN learners. Findings revealed that teachers demonstrated high levels of performance expectancy, effort expectancy, behavioral intentions, and social influence while facilitating conditions and use behavior were significantly lower. Accessibility and instructional support for SEN learners was high. However, utilization of specialized assistive technologies lagged behind general instructional technology use. Significant positive relationships were found between teachers' acceptance and accessibility outcomes ($r=0.371$ to 0.748, $p<0.05$), and between accessibility and extent of utilization ($r=0.463$, $p=0.001$). The study concluded that while teachers strongly accept technology, inadequate facilitating conditions create an intention-behavior gap. An evidence-based action plan was proposed to strengthen infrastructure, budget allocation, professional development, and specialized assistive technology utilization to enhance inclusive education for learners with SEN.

Keywords: Special education, technological integration, inclusive classrooms, Special Educational Needs (SEN), assistive technology, UTAUT, descriptive-correlational, action plan.

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INTRODUCTION

The integration of technology in inclusive education has emerged as an essential strategy for responding to the diverse learning needs of students with special educational needs (SEN). Digital and assistive technologies can provide adaptive content, personalized learning features, and specialized tools that reduce barriers to participation and improve access to instruction (Simos & Katsiampoura, 2025; Layachi & Pitchford, 2024). Their educational

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value, however, depends not merely on their availability but also on the conditions under which teachers adopt and use them. Persistent concerns involving inconsistent implementation, inadequate teacher preparation, and unequal access to technological resources continue to constrain their effectiveness in inclusive settings (Damyanov, 2024). Educators therefore occupy a central role in determining whether technological resources translate into meaningful learning opportunities because their perceptions, competencies, and capacity to select and implement appropriate tools influence the quality of technology integrated instruction for diverse learners (Walia & Guha, 2025). Teacher acceptance and actual utilization consequently represent critical dimensions of successful technological integration in inclusive education (Karagianni & Drigas, 2023).

These concerns are particularly relevant in the Philippine educational context, where a strong policy commitment to inclusive education coexists with continuing disparities in actual implementation. Although national initiatives support the inclusion of learners with disabilities and the expanded use of educational technologies, gaps in infrastructure and resources continue to impede the translation of these commitments into classroom practice (Celeste & Osias, 2024). Filipino teachers frequently contend with resource limitations and structural barriers, including inadequate training and insufficient institutional support for implementing technology effectively (Vistar et al., 2024). Such difficulties are intensified by the digital divide, particularly in rural communities where access to appropriate hardware, software, and reliable internet connectivity remains limited despite generally positive teacher perceptions regarding the educational potential of technology (Co, 2025; Villarino, 2024). Inadequate professional preparation and limited exposure to evidence based instructional strategies in public schools further restrict teachers' capacity to transform available technologies into effective instructional and accessibility supports for learners with SEN (Blando, 2025; Kunjiapu et al., 2025).

The existing literature therefore reveals a tension between the recognized potential of technology for inclusive education and the conditions necessary for its meaningful implementation. While studies increasingly acknowledge the value of technological resources for improving access and participation, several important gaps remain in the Philippine setting. Existing investigations have generally examined technology adoption and inclusive education practices as separate concerns, leaving limited evidence on teacher acceptance of technology specifically for SEN learners through a validated theoretical framework such as the Unified Theory of Acceptance and Use of Technology (UTAUT). Research has also tended to emphasize the frequency of technology use rather than examining its quality, purpose, and instructional relevance. Consequently, limited attention has been given to the distinction between general instructional technologies used across classrooms and specialized assistive technologies intended to address particular accessibility and learning needs. These gaps are especially evident in rural and coastal communities such as Moalboal, Cebu, where no known research has specifically examined technological integration for SEN learners within the municipality.

A systematic examination of teacher acceptance is necessary because technology adoption is shaped by interconnected individual, social, and organizational factors. The UTAUT model provides a theoretical foundation for examining these relationships through the constructs of performance expectancy, effort expectancy, social influence, and facilitating conditions (Khasawneh, 2024). Performance expectancy concerns teachers' perceptions of whether technology can improve their instructional performance and support learner outcomes, while effort expectancy addresses the perceived ease associated with learning and using technological tools. Social influence captures the extent to which teachers' decisions are affected by colleagues and other significant actors within their professional environment, whereas facilitating conditions encompass the organizational and technical resources that

support actual technology use. Together, these constructs provide a relevant framework for understanding how perceptions of technological usefulness, ease of use, peer influence, and institutional support shape teachers' behavioral intentions and actual technology use in inclusive classrooms (Kheng & Rusli, 2025). The inclusion of behavioral intention and use behavior further permits an examination of the relationship between teachers' acceptance of technology and its perceived benefits for learners with SEN (Alegre, 2023).

The explanatory value of UTAUT is particularly significant when technology integration is viewed as a pedagogical rather than exclusively technical process. Effective integration requires teachers not only to accept technological tools but also to possess the competencies necessary to align them with curriculum content, instructional methods, and learner needs. The framework therefore complements the consideration of teacher competencies associated with Technological Pedagogical Content Knowledge, which emphasizes the interaction among technological proficiency, pedagogical understanding, and content knowledge in instructional decision making (Alarba, 2023). Examining these dimensions together provides a more nuanced account of how teachers' beliefs, technological capabilities, pedagogical practices, and professional knowledge can facilitate or constrain meaningful technology use for learners with SEN. Such an integrated perspective strengthens the analysis of teacher acceptance and utilization in inclusive educational environments and can inform strategies for improving implementation (Alhwaiti, 2024). It also responds to a critical gap in earlier research that has focused more extensively on learners than on teachers' experiences in implementing technological interventions (Catoto & Mantawil, 2023).

Teacher acceptance and competency must likewise be understood within the wider social and institutional environments in which technological practices develop. While UTAUT explains many of the individual and organizational determinants associated with teachers' decisions to adopt technology, the Diffusion of Innovations Theory developed by Everett Rogers in 1962 provides an additional perspective on how new technologies spread and become accepted within a social system. Applied to Moalboal National High School, the theory helps explain how educational innovations may be disseminated and adopted through processes influenced by leadership support, institutional practices, policy clarity, and interactions among members of the school community (Fteiha et al., 2025). Contextual factors such as peer influence and organizational support are particularly important because individual willingness to use technology may not result in sustained implementation when institutional conditions are unfavorable (Dalyanci et al., 2025; Setiawan & Kusumadewi, 2023). The complementary use of UTAUT and Diffusion of Innovations Theory thus permits technology integration to be examined simultaneously as an individual acceptance process and as an organizational process through which innovations are communicated, supported, adopted, and sustained.

This combined theoretical perspective is consistent with international priorities promoting equitable educational opportunities for all learners, including students with SEN (Salvaña & Protacio, 2025; Savior et al., 2025). Global discussions on inclusive education increasingly emphasize technological innovation as a means of overcoming barriers that restrict SEN learners' access, participation, and engagement in educational experiences (Zawawi & Hashim, 2024). Nevertheless, technological innovation cannot independently resolve educational inequities. Its effectiveness depends on teachers' readiness, institutional capacity, appropriate pedagogical practices, and broader systems of support. A holistic theoretical approach is therefore necessary for identifying the multiple facilitators and inhibitors that influence technology integration and for translating empirical findings into evidence-based interventions and policy recommendations (Khotimah et al., 2025; Mekheimer, 2025; Wohlfart & Wagner, 2024). This need is reinforced by research indicating that ICT integration models

for inclusive education often provide insufficient descriptions of actual pedagogical practices and may overlook systemic inequities that determine whether technological opportunities are accessible to all learners (Machkour et al., 2023; Niu & Niranjan, 2025).

The theoretical foundations of the study are reinforced by Philippine legal and policy frameworks that establish inclusive education, technological accessibility, and teacher preparation as institutional responsibilities. Republic Act No. 11650, known as the Inclusive Education Act of 2022, mandates the establishment of Inclusive Learning Resource Centers in all school districts to facilitate the inclusion of SEN learners in general education. The law requires the Department of Education to formulate appropriate learning delivery policies, including provisions for distance education and the preparation of teachers responsible for learners with SEN. It also supports the development of educator capabilities for appropriate interventions using technology, thereby establishing a legal foundation that corresponds closely with performance expectancy and facilitating conditions within the UTAUT framework (Republic of the Philippines, 2022). The law consequently positions technological and professional support not as optional enhancements but as important components of an educational system intended to provide equitable opportunities for learners with disabilities.

Recent scholarship nevertheless demonstrates that strong legislative foundations do not automatically ensure effective implementation. Analysis of Republic Act No. 11650 emphasizes its potential to narrow policy and implementation gaps through stronger teacher preparation, including provisions associated with special needs education licensure examinations and Centers of Excellence in Metro Cebu. At the same time, effective technological integration continues to depend on adequate funding, institutional capacity, and teacher readiness if improvements in accessibility for SEN learners are to be realized in practice (Gomez et al., 2025). This observation parallels broader Philippine findings concerning inadequate resources and professional development and reinforces the importance of examining the facilitating conditions surrounding teachers rather than treating adoption as a matter of individual willingness alone.

The expanding role of emerging technologies in Philippine education is further reflected in DepEd Order No. 13, series of 2025, which supports the responsible and strategic integration of artificial intelligence into basic and secondary education. The policy recognizes applications of artificial intelligence in decision making, resource planning, and educational service delivery and includes opportunities to expand special education resources through Inclusive Learning Resource Centers and virtual platforms that can support personalized learning. It also promotes applications such as artificial intelligence assisted early disability screening and instructional support, thereby strengthening facilitating conditions that may influence teachers' effort expectancy, behavioral intentions, and actual use behavior (Department of Education, 2025). Related initiatives, including DepEd's SABAY Project and the Education Center for AI Research, illustrate efforts to automate assessment processes and strengthen teacher preparation through artificial intelligence-based approaches to SEN inclusion. These initiatives suggest that scalable and accessible technological solutions can strengthen teachers' behavioral intentions when tools are responsive to the diversity of learners encountered in inclusive classrooms (Angara, 2025).

Philippine policy has also recognized the importance of flexible technological modalities for learners with disabilities during disruptions to conventional instruction. DepEd Memorandum No. 203, series of 2020, provides guidance for curriculum implementation for learners with disabilities during crises and permits flexible digital modalities based on Individualized Education Plans. Through online resources, modular instruction, unpacked competencies, and adaptive strategies, the policy supports instructional responses that account for individual learner needs and consequently reinforces dimensions associated with performance expectancy and social influence in technology utilization. These provisions were

subsequently expanded through policies intended to sustain accessibility within digital learning environments (Department of Education, 2020). Taken together, Republic Act No. 11650, DepEd Order No. 13, series of 2025, and DepEd Memorandum No. 203, series of 2020, demonstrate that technological integration for SEN learners is supported by a developing national policy environment, even as implementation remains dependent on local resources, teacher preparation, leadership, and institutional capacity.

The convergence of theoretical, empirical, and policy perspectives consequently establishes technology integration as a multidimensional process shaped by teacher perceptions, competencies, organizational environments, innovation diffusion, and national mandates. UTAUT explains how performance expectancy, effort expectancy, social influence, facilitating conditions, behavioral intention, and use behavior influence teachers' acceptance and utilization of technology. Diffusion of Innovations Theory extends this analysis by explaining how technological practices spread within the school's social and organizational environment. Philippine inclusive education and technology policies provide the institutional mandate within which these individual and organizational processes operate. Synthesizing these perspectives creates a comprehensive theoretical and policy linkage through which teachers' technological integration practices for SEN learners at Moalboal National High School can be systematically examined.

This integrated approach is particularly important because the presence of supportive policies and technological resources does not necessarily indicate that teachers are prepared to use technology effectively or that SEN learners receive meaningful accessibility and instructional benefits. Evidence that many teachers encounter inadequate training, infrastructure limitations, and restricted access to appropriate technologies highlights the need to move beyond measuring whether technology is merely present or frequently used. The more consequential questions concern why teachers adopt particular technologies, what factors facilitate or inhibit their use, whether technologies are general instructional tools or specialized assistive resources, and how their utilization contributes to accessibility and instructional support for learners with SEN. Addressing these questions can clarify the mechanisms through which policy commitments and technological opportunities are translated into actual inclusive classroom practices.

The significance of the present study therefore lies in its response to the persistent divide between Philippine inclusive education policies and their implementation within local school contexts. It addresses the urgent need for empirical evidence that can guide teacher professional development in assistive technologies, particularly in view of findings indicating that more than half of teachers have never participated in inclusive education training. The study also contributes to Sustainable Development Goal 4 on Quality Education and Sustainable Development Goal 10 on Reduced Inequalities by generating localized evidence concerning the capacity of technology to promote educational access and inclusion for learners with disabilities in underserved Philippine communities. Its emphasis on a rural Cebuano setting is especially relevant because communities outside major urban centers remain comparatively underrepresented in research despite experiencing pronounced technological and infrastructural constraints.

Accordingly, the present study addresses identified theoretical, empirical, contextual, and practical gaps by employing the UTAUT framework to provide theoretical rigor, incorporating Diffusion of Innovations Theory to account for organizational adoption processes, and situating these perspectives within relevant Philippine legal and policy mandates. Its exclusive focus on Moalboal National High School provides localized contextualization in an understudied rural and coastal setting, while its distinction between

general instructional technology and specialized assistive technology allows technology utilization to be examined beyond simple measures of frequency. By linking teacher acceptance constructs with tangible SEN learner outcomes related to accessibility and instructional support, the study seeks to generate evidence that can inform targeted and feasible interventions. Ultimately, findings from this investigation can provide a theoretically grounded and contextually responsive basis for strengthening teacher preparation, institutional support, and technological integration for learners with SEN at Moalboal National High School, while offering insights that may inform similar inclusive education initiatives in schools across the Visayas and other comparable Philippine communities.

Statement of the problem

This study determined the extent of technological integration in inclusive classrooms and its influence on teachers' acceptance and utilization of technology for learners with Special Educational Needs (SEN) at Moalboal National High School, Moalboal, Cebu during the school year 2025–2026 as a basis for an action plan.

Specifically, the study sought to answer the following questions:

1. What is the profile of the teacher respondents in terms of age and sex, position rank, highest educational attainment, years of teaching experience, inclusive or special education trainings attended, level of ICT competence, and access to technological resources?
2. What is the level of teachers' acceptance and utilization of technology in inclusive classrooms in terms of performance expectancy, effort expectancy, social influence, facilitating conditions, behavioral intentions, and use behavior?
3. As perceived by the respondents, what is the level of accessibility and instructional support provided to learners with Special Educational Needs (SEN) through technological integration?
4. What is the extent of utilization of assistive and instructional technologies by teachers in inclusive classrooms in terms of frequency, type, and purpose?
5. Is there a significant relationship between the teachers' acceptance and utilization of technology and the level of accessibility and instructional support for learners with SEN?
6. Is there a significant relationship between the level of accessibility and instructional support for learners with SEN and the extent of utilization of assistive and instructional technologies by teachers in inclusive classrooms?
7. Based on the findings, what action plan may be proposed?

METHODOLOGY

This study utilized a descriptive correlational research design to examine the extent of technological integration in inclusive classrooms and its relationship with instructional support for learners with Special Educational Needs (SEN) at Moalboal National High School, Moalboal, Cebu during the School Year 2025–2026. The descriptive component was employed to systematically describe the profile of teacher respondents, the level of teachers' acceptance and utilization of technology, the level of accessibility and instructional support provided to learners with SEN, and the extent of utilization of assistive and instructional technologies. The correlational component was used to determine the significant relationships between teachers' acceptance and utilization of technology and the level of accessibility and instructional support for learners with SEN, and between the level of accessibility and instructional support for learners with SEN and the extent of utilization of assistive and instructional technologies by

teachers in inclusive classrooms. The descriptive correlational design was appropriate for this study as it allowed the researcher to collect data on multiple variables without manipulating any conditions, providing a realistic snapshot of existing practices and perceptions at Moalboal National High School. This design enabled the identification of patterns, trends, and associations among the variables, which served as the empirical basis for proposing an evidence-based action plan.

This study followed the Input–Process–Output (IPO) model to clearly illustrate the systematic procedure undertaken. The input of this study consisted of the primary data gathered from 46 teacher respondents at Moalboal National High School, Moalboal, Cebu during the School Year 2025–2026. Specifically, the input included the profile of teacher respondents in terms of age and sex, position rank, highest educational attainment, years of teaching experience, inclusive/special education trainings attended, level of ICT competence, and access to technological resources; the level of teachers' acceptance and utilization of technology in inclusive classrooms measured through performance expectancy, effort expectancy, social influence, facilitating conditions, behavioral intentions, and use behavior; the level of accessibility and instructional support provided to learners with SEN through technological integration; the extent of utilization of assistive and instructional technologies by teachers in terms of frequency and purpose; and the significant relationships between teachers' acceptance and utilization of technology and accessibility/instructional support, as well as between accessibility/instructional support and extent of utilization of assistive and instructional technologies.

The process involved a series of sequential steps. First, the researcher secured approval by submitting a transmittal letter to the Schools Division Office of Cebu Province and the school principal of Moalboal National High School. Second, the researcher distributed adapted and validated survey questionnaires to all 46 teacher respondents handling inclusive classrooms. Third, the researcher retrieved the completed questionnaires and checked them for completeness and consistency. Fourth, the researcher applied statistical treatment using descriptive statistics (frequency, percentage, mean, standard deviation) to answer the descriptive research questions and inferential statistics (Pearson product moment correlation coefficient) to test the null hypotheses at 0.05 level of significance. Fifth, the researcher analyzed and interpreted the statistical outputs, relating the findings to the Unified Theory of Acceptance and Use of Technology (UTAUT) framework and existing literature. Finally, the researcher formulated an evidence-based action plan based on the findings.

The output of this study was a comprehensive, evidence-based action plan designed to enhance technological integration in inclusive classrooms at Moalboal National High School. The action plan addressed the specific gaps identified in the findings, including strengthening facilitating conditions, the lowest rated UTAUT construct at an aggregate mean of 3.97; bridging the intention behavior gap, with behavioral intentions at 4.36 versus use behavior at 4.11; and increasing the utilization of specialized assistive technologies, with assistive software at 3.91 and specialized devices at 3.91, from "Often" to "Always." The action plan included targeted professional development programs, infrastructure improvements, budget allocation for SEN assistive tools, parent engagement strategies, and a monitoring and evaluation framework. This output served as a practical guide for school administrators, teachers, and the Department of Education to improve inclusive education practices through effective technological integration for learners with Special Educational Needs.

This study was conducted at Moalboal National High School (MNHS), located in Basdiot, Moalboal, Cebu. Moalboal is a small provincial town in the southern part of Cebu Province. Classified as a fourth-class municipality, its economy primarily relies on agriculture,

fishing, and tourism. According to the 2020 census, the municipality has a population of 36,930 residents. It extends to a peninsula along the western tip of Cebu, bordered to the west by the Tañon Strait. MNHS offers both junior and senior high school programs. The junior high school currently serves 1,217 learners with 45 teaching personnel, while the senior high school accommodates 800 learners with 35 teachers. In total, the school has 2,017 learners and 80 teaching staff. In terms of physical and organizational infrastructure, the school is equipped with basic technological facilities, including computer laboratories, internet access, and multimedia resources such as projectors and Smart TVs, which are utilized for general instructional purposes. However, the school lacks specialized assistive technology laboratories or dedicated resource rooms specifically designed for learners with SEN. The availability of specialized devices such as screen readers, adaptive keyboards, speech to text software, and augmentative communication tools remains limited. Organizationally, MNHS operates within the framework of Department of Education policies on inclusive education, with designated personnel including an ICT Coordinator and property custodians to manage existing technology assets. Yet, the school has not fully established a formalized Inclusive Learning Resource Center (ILRC) as mandated by Republic Act No. 11650, nor does it have a dedicated Special Education (SPED) focal person to systematically oversee assistive technology integration for SEN learners. This organizational structure, while providing foundational support, presents gaps in systematic professional development, budget allocation for SEN specific tools, and protected planning time for teachers, contributing to the intention behavior gap identified in the study. Moalboal National High School in Basdiot, Moalboal, Cebu, was chosen as the research environment because it provides a representative setting for studying technological integration in inclusive classrooms. As a public secondary school offering both junior and senior high school programs, MNHS accommodates a diverse learner population, including students with Special Educational Needs.

The respondents of this study were 46 teachers selected from the total 80 teaching personnel of Moalboal National High School in Basdiot, Moalboal, Cebu. The selection focused on teachers who were directly involved in delivering lessons to both junior and senior high school students, particularly those engaged in inclusive classrooms with learners who have Special Educational Needs during the School Year 2025–2026. The remaining 34 teaching personnel were excluded because they were not assigned to inclusive classrooms or did not have learners with SEN under their supervision. A purposive sampling method was employed for this study. This non probability sampling technique was justified on several grounds. First, the study required respondents who possessed specific, relevant characteristics, namely direct and current experience handling inclusive classrooms with learners with SEN. Only these teachers could provide valid and reliable responses regarding technological integration, acceptance, utilization, and accessibility outcomes. Second, purposive sampling ensured that the respondents met the inclusion criteria: permanent or temporary teaching personnel at MNHS; assigned to a class section that included at least one learner with identified SEN; and had been teaching in an inclusive classroom for at least one semester. Teachers who did not meet these criteria, such as those handling only regular classes without SEN learners, non-teaching personnel, or teachers on extended leave, were deliberately excluded to maintain the specificity and relevance of the data. Third, given the specialized nature of inclusive education, a random sampling method could have resulted in the inclusion of respondents without the necessary experience or the exclusion of qualified respondents, thereby compromising the validity of the findings. Fourth, purposive sampling allowed the researcher to focus exclusively on the target population that could meaningfully contribute to answering the research questions, particularly those related to technology acceptance, utilization, and accessibility for learners with SEN. Thus, the use of purposive sampling ensured that the 46 selected respondents possessed the essential knowledge, experience, and perspective required to provide accurate

and relevant data for the study. In terms of distribution by grade level, Grade 7 accounted for 8 respondents or 17.39%, Grade 8 accounted for 8 respondents or 17.39%, Grade 9 accounted for 8 respondents or 17.39%, Grade 10 accounted for 8 respondents or 17.39%, Grade 11 accounted for 7 respondents or 15.22%, and Grade 12 accounted for 7 respondents or 15.22%, for a total of 46 respondents or 100.00%.

The primary instrument for this study was adapted from Venkatesh et al. (2003), which was a structured questionnaire designed to gather data on teachers' perceptions and practices regarding technological integration in inclusive classrooms. The questionnaire was divided into four parts, each addressing specific research variables. Part I of the questionnaire gathered the demographic profile of the teacher respondents. This section included items on name (optional), sex (male or female), age brackets (21–25, 26–30, 31–35, 36–40, 41–45, 46 and above), position rank (Master Teacher I, Teacher 3, Teacher 2, Teacher 1), highest educational attainment (Doctorate Degree, With Doctorate Units, Master's Degree, With Master's Units, Bachelor's Degree), years of teaching experience (1–3, 4–6, 7–9, 10–12, 13 and above), inclusive/special education trainings attended (yes or no), level of ICT competence (basic, intermediate, advanced), and access to technological resources (laptop/computer, internet access, projector/Smart TV, mobile devices/tablets). This section utilized a checklist format to facilitate ease of response and accurate data collection. Part II of the questionnaire measured the level of teachers' acceptance and utilization of technology in inclusive classrooms, adapted from the Unified Theory of Acceptance and Use of Technology by Venkatesh et al. (2003). This section consisted of 28 items distributed across six constructs: Performance Expectancy (6 items), Effort Expectancy (6 items), Social Influence (5 items), Facilitating Conditions (5 items), Behavioral Intentions (4 items), and Use Behavior (3 items). Respondents rated each statement using a 5-point Likert scale: 5 (Strongly Agree), 4 (Agree), 3 (Moderately Agree), 2 (Disagree), and 1 (Strongly Disagree). The items were contextualized to reflect inclusive classroom settings and the use of assistive and instructional technologies for learners with SEN. Part III of the questionnaire assessed the level of accessibility and instructional support provided to learners with SEN through technological integration. This section contained 10 indicators derived from the literature on inclusive education and assistive technology. The indicators measured the extent to which technology helped SEN learners access instructional materials independently, reduced learning barriers, supported communication, enabled equal participation, facilitated differentiated instruction, monitored progress, enhanced collaboration, strengthened motivation and confidence, and improved overall classroom inclusivity. Respondents rated each indicator using the same 5-point Likert scale as in Part II. Part IV of the questionnaire measured the extent of utilization of assistive and instructional technologies by teachers in inclusive classrooms in terms of frequency and purpose. This section contained 15 indicators that asked teachers to rate how often they used various technologies and for what instructional purposes. The indicators included daily technology use, incorporation of assistive technologies during lesson delivery, use of digital tools for assessment, integration of technology in collaborative activities, use for remediation and intervention, use of assistive software (e.g., text to speech, speech to text), use of multimedia tools, use of mobile applications for SEN, use of learning management systems, use of specialized devices (e.g., screen readers, adaptive keyboards), and use of technology for improving understanding, individualized instruction, communication, progress monitoring, and engagement. Respondents rated each indicator using a 5-point frequency scale: 5 (Always), 4 (Often), 3 (Sometimes), 2 (Rarely), and 1 (Never).

To ensure the validity and reliability of the adapted questionnaire, the researcher employed a multi stage validation process. First, the instrument was subjected to content

validity testing by a panel of five experts in the fields of special education, educational technology, and research methodology. The experts included three faculty members from the Graduate Teacher Education program of Cebu Technological University Main Campus specializing in Special Education and educational technology, and two experienced SPED practitioners from the Division of Cebu Province. The panel evaluated the questionnaire items based on four criteria: relevance to the research objectives, clarity and comprehensibility of the language, appropriateness of the items for the target respondents, and completeness of the content coverage for each construct. Each expert rated the items using a 4 point relevance scale (1=Not Relevant, 2=Somewhat Relevant, 3=Quite Relevant, 4=Highly Relevant). Based on the expert evaluations, the researcher computed the Content Validity Index (CVI) for each item and for the overall instrument. Items with a CVI score below 0.78 were revised or removed as recommended by the experts. The final version of the questionnaire incorporated the feedback, including rephrasing of items for clarity, addition of contextual examples specific to inclusive classrooms, and deletion of redundant or ambiguous items.

Following the content validation, the questionnaire underwent a pilot testing phase. The pilot study was conducted with 15 teachers from a different school in Cebu with similar characteristics to MNHS in terms of inclusive education implementation and technology availability. These teachers were not included in the actual study sample to avoid contamination of results. The pilot testing aimed to assess the internal consistency and reliability of the instrument, determine the clarity and comprehensibility of the items, estimate the time required for completion, and identify any potential issues with the questionnaire's format or instructions. The reliability of the instrument was assessed using Cronbach's alpha coefficient, which measures the internal consistency of the items within each construct. The pilot testing yielded the following Cronbach's alpha values for each UTAUT construct: Performance Expectancy ($\alpha = 0.87$), Effort Expectancy ($\alpha = 0.84$), Social Influence ($\alpha = 0.82$), Facilitating Conditions ($\alpha = 0.85$), Behavioral Intentions ($\alpha = 0.88$), and Use Behavior ($\alpha = 0.79$). For Part III (Accessibility and Instructional Support), the Cronbach's alpha was 0.86, and for Part IV (Extent of Utilization of Assistive and Instructional Technologies), the Cronbach's alpha was 0.89. All alpha values exceeded the acceptable threshold of 0.70, indicating that the questionnaire demonstrated good to excellent internal consistency reliability (Nunnally & Bernstein, 1994). The overall reliability coefficient for the entire instrument was $\alpha = 0.91$, indicating high overall reliability. Based on the pilot testing feedback, minor revisions were made to two items to improve clarity. The final questionnaire was then prepared for administration to the actual respondents.

The process of collecting data for this study was carried out in three stages: the Preliminary Stage, Data Gathering Stage, and Post Data Gathering Stage. Each stage was systematically implemented to ensure the accuracy, reliability, and ethical integrity of the research process. In the Preliminary Stage, the researcher first secured formal approval from the School Principal of Moalboal National High School to conduct the study within the school. The research proposal, including its objectives, significance, methodology, and ethical considerations, was presented to obtain informed consent. Coordination with the school administration was done to schedule the distribution and collection of the questionnaires. Teacher respondents were oriented about the purpose of the study, the content of the questionnaire, and the confidentiality of their responses. Ethical considerations such as voluntary participation and anonymity were emphasized to ensure respondents' rights were respected. In the Data Gathering Stage, after securing permissions, the researcher administered the questionnaires to all teacher respondents of MNHS using a purposive sampling approach. Clear instructions were provided to ensure accurate and honest responses. The researcher coordinated with the school administration to schedule appropriate times for teachers to complete the questionnaires, minimizing disruption to classes. Respondents were assured of confidentiality and voluntary participation, emphasizing that their responses would be used

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solely for research purposes. The administration of the questionnaire was conducted during the teachers' free periods or scheduled faculty meetings to maximize participation rates. In the Post Data Gathering Stage, upon completion of the questionnaire administration, the researcher collected and organized the responses, checking for completeness and consistency. Data were then encoded and analyzed using appropriate statistical tools to address the research questions. Finally, the researcher securely stored the data to maintain confidentiality and adhere to ethical research standards. Findings from the analysis informed the preparation of the action plan and recommendations for enhancing technological integration in inclusive classrooms.

This study was conducted with strict adherence to ethical standards to protect the rights and welfare of all participants. Teachers were informed of the purpose, objectives, and procedures of the study and provided voluntary informed consent, with the option to withdraw at any time without penalty. Respondents' personal information and responses were treated with confidentiality and anonymity, and all data were securely stored in compliance with the Data Privacy Act of 2012 (Republic Act No. 10173). The study ensured that participation did not cause any physical, psychological, or social harm, and that the data collected were used solely for academic purposes, reported objectively, and credited appropriately to all sources.

The data gathered from the validated questionnaire were carefully tabulated, analyzed, and interpreted using appropriate statistical tools to answer the specific research questions of the study. Frequency was used to determine the number of respondents falling under each category or response option, and it was computed by counting the number of teachers who selected each response option for each demographic variable. Percentage was used to determine the demographic profile of the teacher respondents, such as age and sex, position rank, educational attainment, years of teaching experience, inclusive/special education trainings attended, level of ICT competence, and access to technological resources; percentage expresses the frequency of each category as a proportion of the total number of respondents, allowing for meaningful comparison across categories, and it was calculated by dividing the frequency of each category by the total number of respondents (N=30) and multiplying by 100. Weighted Mean was employed to determine the level of teachers' acceptance and utilization of technology in inclusive classrooms, the level of accessibility and instructional support provided to learners with Special Educational Needs, and the extent of utilization of assistive and instructional technologies; the weighted mean allowed for a clear interpretation of respondents' perceptions on the Likert scale, with the average score indicating the overall level of agreement or frequency for each construct and indicator. Standard Deviation was calculated to measure the variability or dispersion of responses from the mean, indicating the degree of consistency or diversity in teachers' perceptions regarding technological integration and its impact on accessibility and instructional support; a low standard deviation indicated that respondents' ratings were clustered closely around the mean, suggesting consensus among teachers, while a high standard deviation indicated wide variation in responses, suggesting disagreement or diverse experiences among teacher respondents. The Pearson Product Moment Correlation Coefficient (r) was used to determine the significant relationship between teachers' acceptance and utilization of technology (performance expectancy, effort expectancy, social influence, facilitating conditions, behavioral intention, and use behavior) and the level of accessibility and instructional support for learners with SEN, and between the level of accessibility and instructional support for learners with SEN and the extent of utilization of assistive and instructional technologies by teachers in inclusive classrooms. The correlation analysis indicated both the strength and direction of the relationship between variables. The significance level was set at 0.05 (two tailed).

After data collection, the weighted mean for each indicator was computed to determine the overall level of technological integration, accessibility, and instructional support for learners with Special Educational Needs. Each respondent's answers were assigned a numerical value corresponding to the Likert scale used in each part of the questionnaire. The weighted mean was calculated by summing the numerical responses for each indicator and dividing by the total number of respondents, providing an aggregated score for each dimension and construct. For Part II (Technological Integration in Inclusive Classrooms) and Part III (Accessibility and Instructional Support for Learners with SEN), a 5 point Likert scale was used to measure teachers' level of agreement, interpreted as follows: a range of 4.21–5.00 corresponded to a scale of 5, verbally described as Strongly Agree, indicating a very high level of agreement or effectiveness in technological integration and support for learners with SEN; a range of 3.41–4.20 corresponded to a scale of 4, verbally described as Agree, indicating a high level of agreement or effectiveness in technological integration and support for learners with SEN; a range of 2.61–3.40 corresponded to a scale of 3, verbally described as Moderately Agree, indicating a moderate level of agreement or effectiveness in technological integration and support for learners with SEN; a range of 1.81–2.60 corresponded to a scale of 2, verbally described as Disagree, indicating a low level of agreement or effectiveness in technological integration and support for learners with SEN; and a range of 1.00–1.80 corresponded to a scale of 1, verbally described as Strongly Disagree, indicating a very low level of agreement or effectiveness in technological integration and support for learners with SEN. For Part IV (Extent of Utilization of Assistive and Instructional Technologies by Teachers in Inclusive Classrooms), a 5 point frequency scale was used to measure how often teachers utilized various technologies, interpreted as follows: a range of 4.21–5.00 corresponded to a scale of 5, verbally described as Always, indicating that teachers consistently and regularly utilize the technology in inclusive classrooms for learners with SEN; a range of 3.41–4.20 corresponded to a scale of 4, verbally described as Often, indicating that teachers frequently utilize the technology, though not on every occasion, for learners with SEN; a range of 2.61–3.40 corresponded to a scale of 3, verbally described as Sometimes, indicating that teachers occasionally utilize the technology for learners with SEN; a range of 1.81–2.60 corresponded to a scale of 2, verbally described as Rarely, indicating that teachers seldom utilize the technology for learners with SEN; and a range of 1.00–1.80 corresponded to a scale of 1, verbally described as Never, indicating that teachers do not utilize the technology at all for learners with SEN.

RESULTS AND DISCUSSION

This chapter presents and discusses the results of the study conducted among 46 teacher-respondents of Moalboal National High School, Moalboal, Cebu, during the school year 2025–2026. The study employed a descriptive-correlational research design, utilizing a structured survey questionnaire as the primary data collection instrument to gather information on the demographic and professional profile of the respondents, their acceptance and utilization of technology as measured through the six constructs of the Unified Theory of Acceptance and Use of Technology (UTAUT), the level of accessibility and instructional support provided to learners with Special Educational Needs (SEN) through technological integration, and the extent of utilization of assistive and instructional technologies in terms of frequency, type, and purpose. Frequency counts, percentages, means, and standard deviations were used to describe the data, while the Pearson product-moment correlation coefficient (r) was employed to determine the significance and direction of relationships between key variables, with the null hypotheses tested at the 0.05 level of significance. The discussion that follows is grounded entirely in the data gathered from the respondents and is interpreted in direct relation to the specific objectives of the study.

With respect to the demographic profile of the respondents, the data revealed that out of 46 teacher-respondents, the majority were female (40 or 86.96%) while only 6 (13.04%) were male. The largest age bracket was 31-35 years, comprising 16 teachers (34.78%), followed by the 36-40 age bracket with 12 teachers (26.09%), the 26-30 bracket with 9 teachers (19.57%), the 41-45 bracket with 6 teachers (13.04%), and the 46 and above bracket with the fewest respondents at 3 teachers (6.52%). Male teachers were present only in the 36-40 (1 male), 31-35 (4 males), and 26-30 (1 male) age brackets, with none reported in the 41-45 and 46 and above brackets. This predominance of female teachers reflects the broader national trend in the Philippine basic education system, where the teaching profession remains largely female-dominated, while the concentration of respondents in the 31-35 and 36-40 age brackets suggests that most teachers handling inclusive classrooms are in their mid-career stage, possessing a balance of classroom experience and openness to pedagogical innovation. These findings align with recent scholarship highlighting the continued prevalence of female educators in special education settings and the critical role of mid-career professionals in adopting innovative pedagogical approaches (Polat et al., 2024; Zawawi & Hashim, 2024), with the overrepresentation of female teachers mirroring national trends in the Philippines and similar observations in special education contexts globally (Alarba, 2023; Alenezi et al., 2023). Such demographic profiles are instrumental in shaping the efficacy of technology-enhanced inclusive pedagogies (Foykas et al., 2026), particularly since more experienced educators tend to demonstrate greater awareness of enabling factors such as professional development and resource accessibility (Factor & Saenz, 2025). Mid-career teachers aged 31 to 40 are typically more adaptable to new technologies while still valuing structured training, making them ideal candidates for peer-led technology mentoring programs, while the scarcity of male teachers suggests that professional development activities on assistive technologies must be designed with gender-sensitive approaches to ensure full participation.

In terms of position rank, the largest group of respondents was Teacher 1, comprising 22 teachers (47.83%), followed by Teacher 3 with 18 teachers (39.13%), Teacher 2 with 5 teachers (10.87%), and Master Teacher 1 with only 1 teacher (2.17%). No respondents held the positions of Master Teacher II, Master Teacher III, Head Teacher, or Principal. Nearly half of the teachers handling inclusive classrooms were therefore at the entry or early career level, while a substantial proportion had reached Teacher 3, a rank typically achieved after several years of service and fulfillment of performance-based criteria, though the very low representation of Master Teacher I indicated limited career advancement into supervisory or mentoring roles. This distribution has significant implications for professional development planning, as the large number of Teacher 1 respondents suggests a need for foundational training on assistive technologies and inclusive pedagogy, while the substantial Teacher 3 group represents a valuable resource for peer mentoring and could be developed into technology champions or lead trainers. The limited number of Master Teachers suggests a potential gap in formalized mentorship and instructional leadership, which is critical for continuous pedagogical improvement and the widespread adoption of inclusive technological strategies (Párraga et al., 2025), a finding consistent with studies emphasizing the necessity of professional development courses for the successful implementation of inclusive education (Alarba, 2023) and the hindrance posed by inadequate teacher training in leveraging technology for special educational needs (Fernández-Batanero et al., 2022).

Regarding highest educational attainment, the majority of teacher-respondents, 32 out of 46 (69.57%), had completed master's units but had not yet earned a master's degree, while only 4 teachers (8.70%) held a completed master's degree and 1 teacher (2.17%) had attained a doctorate degree. Teachers whose highest educational attainment was a bachelor's degree

numbered 9 (19.57%). A combined total of 37 teachers (80.44%) had therefore pursued graduate-level studies, yet only 5 teachers (10.87%) had actually completed a graduate degree, suggesting that while most teachers had initiated advanced studies, many had not yet finished their degree programs, likely due to financial constraints, workload demands, or limited access to graduate schools in the locality. This trend underscores potential systemic barriers that may impede the full realization of professional qualifications despite demonstrated commitment to continuing education (Polat et al., 2024), which aligns with findings in other educational contexts where teachers in special education exhibit positive attitudes toward professional growth but face challenges in digital competency and technology integration without targeted support (Azizoğlu & Çakır, 2025; Foykas et al., 2026). Insufficient training and resources have similarly been identified as major obstacles to the integration of assistive technology in special education settings despite positive attitudes toward it (Khasawneh, 2024), and comparable research indicates that teachers often lack comprehensive training and administrative support to effectively implement digital tools for students with SEN, underscoring the need for ongoing professional development and resources (Lustica et al., 2025; Santillán et al., 2024).

With regard to years of teaching experience, the largest group of teacher-respondents, 19 out of 46 (41.30%), had 7 to 9 years of teaching experience, followed by those with 10 to 12 years of experience at 11 teachers (23.91%), those with 13 or more years at 6 teachers (13.04%), and those in the 4-6 years and 1-3 years brackets, each comprising 5 teachers (10.87%). The majority of respondents, 36 teachers or 78.26%, had accumulated 7 or more years of teaching experience, reflecting a predominantly experienced teaching force, while only 10 teachers (21.74%) fell within the early-career range of 1 to 6 years. The concentration of teachers in the 7-9- and 10-12-year brackets, representing 65.21% combined, indicates an optimal window for professional development interventions, as these teachers possess sufficient practical experience to recognize the challenges of teaching learners with SEN while remaining receptive to integrating assistive and instructional technologies. These findings align with contemporary research highlighting the critical role of experienced educators in navigating the complexities of inclusive classrooms and integrating technological advancements to support diverse learning needs (Hosni et al., 2023), as veteran teachers often demonstrate a deeper understanding of pedagogical strategies tailored for students with special educational needs (Priyadharsini & Mary, 2024), while studies indicate that experienced educators nonetheless require targeted professional development to effectively integrate technology in inclusive settings even as early-career teachers may exhibit higher digital competencies (Azizoğlu & Çakır, 2025).In terms of inclusive or special education trainings attended, 24 teachers (52.17%) had not attended any such training, while 22 teachers (47.83%) reported having attended at least one. This near-even split, with a slight majority lacking formal professional development specifically focused on inclusive or special education, is concerning given that these teachers are currently handling learners with SEN in inclusive classrooms, a gap that may be attributed to limited availability of specialized training programs in the locality, insufficient budget allocation, or the relatively recent implementation of inclusive education policies under the Department of Education's Inclusive Education Policy (DO 21, s. 2019). This substantial gap highlights a critical challenge for effectively integrating technology to support learners with Special Educational Needs (Fernández-Batanero et al., 2022), aligning with findings underscoring the necessity for professional development to equip teachers with effective pedagogical strategies and thereby enhance their self-efficacy and motivation in educating learners with SEN (Alarba, 2023). This deficit in training impedes the effective integration of specialized assistive technologies crucial for addressing the diverse learning needs of students with SEN (Lustica et al., 2025), an issue further compounded by a lack of resources and administrative support that often hinder effective implementation even when

teachers possess adequate digital literacy (Lustica et al., 2025), and consistently identified as a significant barrier to the effective use of technology for SEN learners (Polat et al., 2024).

As for the level of ICT competence, the majority of teacher-respondents, 30 out of 46 (65.22%), rated themselves at the intermediate level, while 11 teachers (23.91%) reported basic ICT competence and only 5 teachers (10.87%) reported advanced ICT competence. A combined total of 41 teachers (89.13%) therefore possessed either basic or intermediate ICT skills, with only a small fraction reaching the advanced level, though no teacher reported having no ICT competence whatsoever. The predominance of intermediate-level competence reflects a workforce functionally capable of using technology for routine instructional tasks, yet the relatively low percentage of advanced users suggests that very few teachers possess the specialized skills required to customize assistive technologies or adapt software for individual learner needs, while the presence of 23.91% of teachers at the basic level indicates that nearly one in four respondents may struggle with even fundamental technology tasks. Previous research has similarly indicated a consistent challenge in fully leveraging technological tools for educational purposes among teachers (Polat et al., 2024), a persistent gap between basic digital literacy and advanced technological application that often limits the effective integration of specialized assistive technologies crucial for diverse SEN requirements (Lustica et al., 2025; Zawawi & Hashim, 2024), further exacerbated by inadequate training and a lack of accessible support for educators to develop the necessary competencies for utilizing ICTs with students with special needs (Fernández-Batanero et al., 2022; Santillán et al., 2024).

Concerning access to technological resources, based on multiple response analysis, the most accessible resource was the laptop or computer, reported by 44 teachers and ranked first, followed by internet access and projector or Smart TV, each reported by 43 teachers and sharing ranks 2.5, while mobile devices or tablets were accessible to 42 teachers, ranking fourth. Access rates ranged from 91.30% (42 out of 46 for mobile devices or tablets) to 95.65% (44 out of 46 for laptops or computers), and the minimal variation across the four resource types suggested a relatively well-equipped technological environment, with no teacher reporting zero access to any of these resources. This widespread accessibility to diverse digital tools is foundational for implementing differentiated instruction and fostering an inclusive learning environment (Párraga et al., 2025), and is crucial given that various studies emphasize the importance of teachers' awareness and utilization of technology in facilitating inclusive practices, especially for students with special educational needs (Johler & Krumsvik, 2022). Digital technologies equipped with built-in accessibility features significantly enhance access to learning materials and enable personalized content tailored for individual student needs within inclusive settings (Bešić et al., 2024; Priyadharsini & Mary, 2024), and readily available digital resources empower educators to more effectively integrate assistive technologies and adaptive learning platforms, thereby supporting diverse learning styles and promoting equitable access to education for all students (Simos & Katsiampoura, 2025).

Turning to the level of teachers' acceptance and utilization of technology in inclusive classrooms, as measured through the six UTAUT constructs, the aggregate mean score for Performance Expectancy (PE) was 4.57 (SD = 0.60), interpreted as Strongly Agree. Among its six indicators, the highest mean score was recorded for "Tech makes content accessible for visual/auditory impairments" (M = 4.80, SD = 0.45), followed by "Tech tools enhance SEN students' lesson participation" (M = 4.57, SD = 0.62) and "Tech enables personalized instruction in mixed classes" (M = 4.57, SD = 0.62), while "Assistive apps accelerate SEN learning goal achievement" obtained a mean of 4.54 (SD = 0.62), "Digital aids boost academic results for diverse needs" scored 4.52 (SD = 0.62), and the lowest indicator, "Gamified platforms engage learners with ADHD/autism," registered a mean of 4.43 (SD = 0.65). The

consistently low standard deviations, ranging from 0.45 to 0.65, indicated strong consensus among respondents regarding technology's performance benefits for SEN learners, particularly its assistive function for sensory disabilities. This high performance expectancy aligns with findings that emphasize technology's crucial role in bridging educational disparities for students with special needs and enhancing their engagement and participation (Zawawi & Hashim, 2024), and is further supported by studies indicating that technology such as screen readers and speech-to-text software significantly enhances accessibility and fosters an inclusive educational landscape for diverse learners (Akbar et al., 2023).

The aggregate mean score for Effort Expectancy (EE) was 4.42 (SD = 0.67), also interpreted as Strongly Agree. The highest-rated indicator was "Inclusive lesson plans integrate tech tools easily" (M = 4.63, SD = 0.53), followed by "I quickly learn new assistive technologies" (M = 4.46, SD = 0.62), "Classroom tech interfaces suit teacher use" (M = 4.46, SD = 0.59), and "Initial training simplifies ongoing tech setup" (M = 4.43, SD = 0.62), while the two lowest indicators, "Adapting apps for SEN requires minimal effort" (M = 4.24, SD = 0.85) and "Daily tech integration feels effortless" (M = 4.28, SD = 0.83), exhibited the greatest variability, suggesting less consensus regarding the ease of customizing applications specifically for SEN learners. Educators generally perceive the cognitive load required to utilize new technologies in inclusive settings as minimal, fostering a positive predisposition toward adoption (Cancino & Ibarra, 2023), consistent with findings that effort expectancy positively influences behavioral intention to adopt technology in educational contexts (Adigun et al., 2025; Alhwaiti, 2024); however, the nuanced findings of the present study suggest that while general technological integration is perceived as manageable, the specific application for diverse learning needs still presents a higher perceived effort, a distinction not always explicitly delineated in broader effort expectancy research (Duong et al., 2023; Shen et al., 2025; Taufiq-Hail et al., 2024).

The aggregate mean score for Social Influence (SI) was 4.23 (SD = 0.76), interpreted as Strongly Agree. The highest-rated indicator was "DepEd mandates support inclusive tech use" (M = 4.41, SD = 0.65), followed by "Colleagues promote tech in inclusive settings" (M = 4.37, SD = 0.68) and "Networks share effective SEN tech practices" (M = 4.28, SD = 0.75), while "School admins supply SEN tech resources" received a mean of 4.13 (SD = 0.78), interpreted as Agree, and the lowest-rated indicator, "Parents endorse tech for their SEN child," obtained a mean of 3.96 (SD = 0.94), also interpreted as Agree, with the highest variability among all indicators reflecting considerable disagreement regarding parental support. This pattern highlights a potential need for targeted interventions to enhance administrative support and increase parental engagement in leveraging technology for students with special educational needs (Alanazy & Alrusaiyes, 2021; Marin et al., 2025), aligning with scholarship emphasizing the critical role of comprehensive training programs and robust educational policies in maximizing the potential of assistive technologies for SEN learners (Mulhim & Almulhem, 2024; Santillán et al., 2024), while a lack of institutional support and inadequate teacher preparedness often impedes successful technology integration in inclusive classrooms for students with diverse impairments (Goldman et al., 2024; Lustica et al., 2025).

The aggregate mean score for Facilitating Conditions (FC) was 3.97 (SD = 0.83), interpreted as Agree, the lowest among the six UTAUT constructs. The highest-rated indicator was "Tech support resolves classroom issues promptly" (M = 4.13, SD = 0.83), followed by "PD programs target inclusive tech skills" (M = 4.11, SD = 0.67) and "Schedule allows tech planning time" (M = 3.98, SD = 0.86), while the two lowest-rated indicators were "School provides reliable devices/internet" (M = 3.80, SD = 0.96) and "Budget covers SEN assistive tools" (M = 3.80, SD = 0.83), with device and internet reliability showing the highest variability (SD = 0.96) and thus substantial disagreement regarding infrastructural dependability. This aligns with findings emphasizing the critical need for schools to be adequately equipped with

technology to enhance the quality of education in inclusive environments, particularly given that a significant portion of schools still lack basic computer laboratories, and with observations that specialized assistive technologies remain scarce and underused despite frequent use of basic digital tools (Lustica et al., 2025). Such infrastructural and resource limitations, including high acquisition costs and outdated technology, are consistently reported as significant barriers to effective technology integration in inclusive settings (Hamid et al., 2025; López et al., 2025), underscoring the necessity for improved infrastructure and digital resources to foster inclusive learning environments (Ranbir, 2024; Wulandari et al., 2024).

The aggregate mean score for Behavioral Intentions (BI) was 4.36 (SD = 0.65), interpreted as Strongly Agree, the second-highest among the six constructs. The highest-rated indicator was "I will seek more training on SEN technologies" (M = 4.50, SD = 0.62), followed by "Tech integration fits my teaching philosophy" (M = 4.37, SD = 0.61), while both "I intend to use tech routinely for SEN inclusion" and "I plan to recommend tech tools to peers" obtained identical means of 4.28 (SD = 0.66 and SD = 0.72, respectively). No indicator fell below the Strongly Agree threshold, and the low to moderate variability across all four indicators indicated general consensus regardless of teachers' age, experience, position rank, or ICT competence. This strong consensus regarding behavioral intention aligns with broader trends emphasizing technology's role in creating equitable and inclusive learning environments (Párraga et al., 2025), reinforced by studies demonstrating that perceived usefulness and perceived ease of use significantly influence behavioral intention (Alhwaiti, 2024), while teachers' inclination to seek additional training in SEN technologies suggests a proactive stance toward professional development crucial for successful technology integration (Adigun et al., 2025) and resonates with findings that continuous training and support are paramount for maximizing the potential of assistive technologies within diverse educational contexts (Altakhaineh et al., 2026).

The aggregate mean score for Use Behavior (UB) was 4.11 (SD = 0.96), interpreted as Agree, the lowest overall variability notwithstanding the lowest mean. The indicator "Tech frequency will increase next semester" scored highest at 4.20 (SD = 0.88), followed by "I apply multiple tech types (apps, devices)" at 4.13 (SD = 0.93), while "I currently use tech daily/weekly for SEN" ranked lowest at 4.00 (SD = 1.07), reflecting the greatest variability and considerable disagreement among respondents. None of the indicators reached the Strongly Agree threshold, and the overall use behavior score lagged behind the stronger behavioral intentions reported for the BI construct, confirming an intention-behavior gap. These use behavior findings align with recent scholarship highlighting persistent challenges in fully leveraging technology for SEN learners despite increased awareness and access to digital tools (Polat et al., 2024), as implementation of specialized assistive technologies remains limited due to insufficient resources and lack of specific training (Lustica et al., 2025; Santillán et al., 2024), a discrepancy consistent with an "awareness-implementation gap" in which teachers understand concepts but lack practical confidence, emphasizing the necessity for professional development tailored to actual classroom integration (Ng et al., 2025).

The summary of the six UTAUT dimensions yielded an aggregate mean of 4.28 (SD = 0.75), interpreted as Strongly Agree, with Performance Expectancy ranking highest at 4.57, followed by Effort Expectancy at 4.42, Behavioral Intentions at 4.36, Social Influence at 4.23, Use Behavior at 4.11, and Facilitating Conditions lowest at 3.97. Standard deviations ranged from 0.60 for Performance Expectancy to 0.96 for Use Behavior, with a notable drop observed between Behavioral Intentions (4.36) and Use Behavior (4.11), as well as between Social Influence (4.23) and Use Behavior (4.11). This overall pattern indicates that teachers are psychologically ready and confident regarding technology adoption, as reflected in the high

Performance Expectancy, Effort Expectancy, Behavioral Intentions, and Social Influence scores, yet the comparatively lower Facilitating Conditions and Use Behavior scores reveal an implementation gap in which favorable intentions do not fully translate into daily practice due to inadequate infrastructure, unreliable internet, limited budget, and insufficient planning time. Numerous studies support the role of technology in inclusive education (Hosni et al., 2023), with assistive technologies and adaptive systems enhancing participation, motivation, and achievement (Priyadharsini & Mary, 2024), and while teachers generally perceive technology as useful and effective (Layachi & Pitchford, 2024), inadequate support, poor physical conditions, and a lack of specialized tools continue to hinder comprehensive implementation (Polat et al., 2024; Zawawi & Hashim, 2024), creating what has been termed an "awareness-implementation gap" (Ng et al., 2025) that necessitates professional development and adequate infrastructure (Párraga et al., 2025).

With respect to the level of accessibility and instructional support provided to learners with SEN through technological integration, teachers strongly agreed overall, with an aggregate mean of 4.48 (SD = 0.60). All ten indicators scored within the Strongly Agree range, from 4.39 to 4.59. Specifically, "Digital tools help monitor the progress of learners with SEN" obtained the highest mean at 4.59 (SD = 0.54), followed by "The use of technology improves overall classroom inclusivity" at 4.54 (SD = 0.55), while "Technology supports communication for learners with speech or language difficulties," "Technology supports differentiated instruction for learners with SEN," and "Technology strengthens learners' motivation and confidence" each obtained a mean of 4.52 (SD = 0.55, 0.62, and 0.55, respectively). "Technology enhances collaboration between teachers, parents, and specialists" scored 4.50 (SD = 0.66), "Digital content is adapted to meet the specific needs of learners with SEN" scored 4.41 (SD = 0.62), "Assistive tools reduce learning barriers in my classroom" scored 4.43 (SD = 0.58), while "Technology helps learners with SEN access instructional materials independently" and "Learners with SEN can participate equally in class activities through technology" both scored 4.39 (SD = 0.65 and 0.68, respectively), the lowest among the ten indicators though still within the Strongly Agree range. The low standard deviations across all indicators, ranging from 0.54 to 0.68, reflect a robust consensus among teachers regarding the benefits of digital tools for differentiated instruction and inclusive learning environments (Polat et al., 2024), corroborating research showing that strategic technology use enhances learner participation, motivation, and academic achievement (Priyadharsini & Mary, 2024) and aligning with studies emphasizing that technology addresses learning barriers and provides equitable access for SEN students (D'Elia et al., 2025), reinforced by research on personalized, interactive technologies that empower learner agency and adaptive support (Layachi & Pitchford, 2024).

Regarding the extent of utilization of assistive and instructional technologies by teachers in inclusive classrooms in terms of frequency, type, and purpose, the aggregate mean score was 4.34 (SD = 0.74), interpreted as Always. Among the fifteen indicators, the highest mean was recorded for "I use multimedia tools (videos, interactive presentations)" (M = 4.65, SD = 0.57), followed by "I use technology to improve learners' understanding of lessons" (M = 4.61, SD = 0.65), and both "I use technology to support individualized instruction" and "I use technology to increase learner engagement and motivation" scored 4.57 (SD = 0.69 and 0.62, respectively). "I integrate technology in collaborative classroom activities" scored 4.52 (SD = 0.62), "I use technology to monitor and assess learner progress" scored 4.48 (SD = 0.66), "I use technology for remediation and intervention purposes" scored 4.41 (SD = 0.65), "I use technology in my inclusive classroom on a daily basis" and "I use technology to enhance communication with learners with SEN" both scored 4.37 (SD = 0.77 and 0.85, respectively), "I incorporate assistive technologies during lesson delivery" scored 4.35 (SD = 0.64), and "I use learning management systems or online platforms" scored 4.28 (SD = 0.66). In contrast, "I

use digital tools when assessing learners with SEN" fell to 4.11 (SD = 0.90), interpreted as Often, and the three lowest indicators, "I use mobile applications designed for learners with SEN" (M = 4.02, SD = 0.93), "I use assistive software (e.g., text-to-speech, speech-to-text)" (M = 3.91, SD = 0.89), and "I use specialized devices (e.g., screen readers, adaptive keyboards)" (M = 3.91, SD = 0.96), all fell within the Often range, with specialized devices showing the highest variability at SD = 0.96. This pattern reveals a critical distinction: teachers are confident and frequent users of general instructional technology, such as multimedia tools, learning management systems, and collaboration tools, yet are comparatively less frequent users of the specialized assistive technologies most critical for removing barriers for learners with SEN. This finding aligns with research indicating that despite the frequent use of basic digital tools, a significant lack of specialized assistive technologies for students with diverse impairments persists, hindering effective integration (Lustica et al., 2025), and is consistent with observations that while many teachers have access to general technological tools, their awareness and competency in utilizing specialized educational technology for SEN students remain limited (Polat et al., 2024), often compounded by insufficient investment in digital infrastructure and a lack of sustained administrative support (Lustica et al., 2025).

To determine the significant relationship between teachers' acceptance and utilization of technology and the level of accessibility and instructional support for learners with SEN, Pearson product-moment correlation coefficients were computed for each of the six UTAUT constructs. All six constructs demonstrated statistically significant positive relationships with the level of accessibility and instructional support, with p-values less than the 0.05 level of significance, leading to the rejection of the null hypothesis (Ho1) in every case. Effort Expectancy (EE) showed the strongest positive correlation ($r = 0.748$, $p = 0.000$), followed by Performance Expectancy (PE) ($r = 0.728$, $p = 0.000$), Social Influence (SI) ($r = 0.694$, $p = 0.000$), Behavioral Intentions (BI) ($r = 0.675$, $p = 0.000$), Facilitating Conditions (FC), which showed a moderate positive correlation ($r = 0.561$, $p = 0.000$), and Use Behavior (UB), which demonstrated the weakest yet still significant positive correlation ($r = 0.371$, $p = 0.011$). All correlations were positive, indicating that higher levels of technology acceptance and utilization were associated with higher levels of accessibility and instructional support for learners with SEN, with the strong correlations for Effort Expectancy and Performance Expectancy indicating that teachers who perceive technology as easy to use and useful for SEN learners are most likely to provide high levels of accessibility and instructional support, while the comparatively weaker but still significant correlation for Use Behavior suggests that the quality and purpose of technology use may matter more than mere frequency of use. These findings align with recent research highlighting the transformative potential of technology in creating more equitable and accessible learning environments for students with SEN (Priyadharsini & Mary, 2024), corroborated by studies demonstrating that integrating technology, especially when supported by ongoing teacher training, significantly enhances autonomy, motivation, and academic performance among students with SEN (Párraga et al., 2025), and further reinforced by evidence that digital learning environments, when adequately supported by technological tools and strategies, benefit students with special needs by providing inclusive educational opportunities and enhancing social integration (Akhmetova et al., 2022; Stalmach et al., 2024).

To determine the significant relationship between the level of accessibility and instructional support for learners with SEN and the extent of utilization of assistive and instructional technologies by teachers in inclusive classrooms, a Pearson product-moment correlation was likewise computed, yielding an r-value of 0.463 and a p-value of 0.001. Since the p-value of 0.001 was less than the 0.05 level of significance, the null hypothesis (Ho2) was

rejected, and the relationship was interpreted as significant. The correlation coefficient of 0.463 indicated a moderate positive relationship between the two variables, meaning that as teachers' extent of utilization of assistive and instructional technologies increased, the level of accessibility and instructional support for learners with SEN also tended to increase, though the moderate rather than strong magnitude of the relationship indicates that the extent of utilization explains only about 21% of the variance ($r^2 = 0.214$) in accessibility and instructional support, with the remaining variance likely attributable to factors such as the appropriateness of technology selection for specific learner needs, the quality of implementation, and teachers' pedagogical strategies. This finding is consistent with broader research indicating technology's pivotal role in fostering inclusive learning environments (Priyadharsini & Mary, 2024) and technological interventions that enhance autonomy and academic performance among students with SEN, though an awareness-implementation gap often exists between theoretical knowledge of technological benefits and practical application in classrooms (Ng et al., 2025), frequently stemming from insufficient teacher training and knowledge regarding effective technology integration strategies for diverse learning needs (Polat et al., 2024) and underscoring the necessity of continuous professional development that encompasses not only the operational aspects of various tools but also their thoughtful integration into pedagogical practices to maximize their impact on learning outcomes for students with SEN (Layachi & Pitchford, 2024; Párraga et al., 2025).

Taken together, the findings of this study demonstrate that the 46 teacher-respondents of Moalboal National High School possess a predominantly female, mid-career, and moderately experienced professional profile, characterized by strong graduate-study orientation but limited completion of advanced degrees, an inconsistent history of formal inclusive or special education training, and generally intermediate ICT competence supported by relatively high access to core technological resources. Across the six UTAUT constructs, teachers exhibited strongly favorable acceptance of technology for SEN inclusion, with an aggregate mean of 4.28 (SD = 0.75), driven especially by high Performance Expectancy, Effort Expectancy, and Behavioral Intentions, yet tempered by comparatively lower Facilitating Conditions and Use Behavior scores that reveal a persistent intention-behavior gap rooted in infrastructural and resource limitations. Teachers likewise reported strongly favorable perceptions of the accessibility and instructional support technology affords to learners with SEN (aggregate mean = 4.48, SD = 0.60) and consistently high extent of utilization overall (aggregate mean = 4.34, SD = 0.74), although specialized assistive software and devices remained comparatively underutilized relative to general instructional technologies. The statistically significant positive correlations between all six UTAUT constructs and accessibility and instructional support (r ranging from 0.371 to 0.748, all $p < 0.05$), as well as the significant moderate positive correlation between accessibility and instructional support and the extent of technology utilization ($r = 0.463$, $p = 0.001$), collectively affirm that teachers' beliefs, attitudes, and actual practices surrounding technology are meaningfully and measurably linked to the quality of support extended to learners with SEN. These results directly address the study's objectives by empirically establishing the profile of teachers handling inclusive classrooms, quantifying their acceptance and utilization of technology, describing the accessibility and instructional support learners with SEN currently receive, and statistically confirming the interrelationships among these variables, thereby contributing empirical evidence to the growing body of literature on technology-enhanced inclusive education in the Philippine public school context. These findings collectively provide the empirical foundation for the action plan proposed in the succeeding chapter, which is designed to strengthen facilitating conditions, expand specialized assistive technology training, and sustain the already strong acceptance and instructional support demonstrated by the teaching force at Moalboal National High School.

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CONCLUSION

The findings of this study collectively affirm that teachers at Moalboal National High School exhibit a high level of acceptance and a positive orientation toward the integration of technology in inclusive classrooms, as evidenced by their strong belief that technology is useful, manageable, and consistent with their teaching philosophy. Performance expectancy, effort expectancy, social influence, and behavioral intentions were all rated highly, reflecting teachers' genuine conviction that technology enhances their teaching effectiveness and their firm intention to continue integrating it into instruction for learners with Special Educational Needs. Despite this encouraging disposition, however, a critical gap emerges between teachers' strong behavioral intentions and their actual use behavior. This discrepancy is primarily attributed to inadequate facilitating conditions within the school environment, most notably unreliable devices and internet connectivity, insufficient budget allocation for SEN specific assistive tools, and limited time for instructional planning. These constraints indicate that while teachers possess the willingness and motivation to adopt technology, the institutional support necessary to translate that willingness into consistent practice remains insufficient.

Further examination of the data reveals that although teachers widely recognize the substantial benefits technology offers to learners with SEN, particularly in monitoring progress, supporting independent access to materials, and promoting equal participation, their actual use of specialized assistive technologies, such as text to speech and speech to text software and adaptive devices like screen readers and adaptive keyboards, remains inconsistent and considerably lower than their use of general instructional technologies such as multimedia tools and interactive presentations. This pattern suggests that while general purpose technologies have become integrated into everyday teaching practice, more specialized assistive tools essential for addressing the unique needs of SEN learners continue to be underutilized, likely due to limited access, insufficient training, or a lack of familiarity with such resources.

The study further established that teachers' acceptance and utilization of technology significantly and positively influence the level of accessibility and instructional support extended to learners with SEN, with all six constructs of the Unified Theory of Acceptance and Use of Technology demonstrating significant correlations, effort expectancy showing the strongest relationship and use behavior the weakest. This finding underscores that the ease with which teachers perceive technology to be used plays a particularly powerful role in shaping the quality of support provided to SEN learners. In addition, a significant moderate positive relationship was found between the level of accessibility and instructional support and the extent of utilization of assistive and instructional technologies, confirming that as instructional support strengthens, the application of these technologies in the classroom similarly increases. Taken together, these relationships affirm that teachers' attitudes toward technology are not merely personal or professional preferences but are directly consequential to the quality of educational experience afforded to learners with special needs.

In light of these findings, it becomes evident that strengthening the facilitating conditions within the school is essential to bridging the gap between teachers' positive intentions and their actual classroom practices. Addressing infrastructural limitations, expanding access to specialized assistive devices, and providing sustained, differentiated professional development focused specifically on assistive technology utilization are necessary steps toward enabling teachers to fully translate their favorable attitudes into consistent, effective, and inclusive instructional practices. To this end, the researcher recommends the adoption of the proposed action plan, "Bridging the Gap: Strengthening Facilitating Conditions

and Specialized Assistive Technology Utilization for Inclusive Classrooms at Moalboal National High School," which offers targeted strategies including the improvement of technological infrastructure, the establishment of a dedicated SEN Assistive Technology Fund, the implementation of a differentiated professional development program, the creation of a peer mentoring system, and the establishment of a monitoring and evaluation framework. School administrators are strongly encouraged to allocate the necessary resources and prioritize the implementation of this action plan within the next two school years, ensuring that the high performance expectancy and strong behavioral intentions demonstrated by teachers are ultimately realized as meaningful, sustained improvements in accessibility and instructional support for learners with Special Educational Needs.

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