

# Special Education Integration Program: Teacher's Insights on utilizing Technology in ESL Classroom

*Nur Ain Wajihah Abdullah Zawawi*<sup>1\*</sup> and *Harwati Hashim*<sup>1</sup>

<sup>1</sup>Faculty of Education, Universiti Kebangsaan Malaysia, Malaysia

**Abstract.** In the dynamic landscape of technology-infused education, this research delves into English language instruction for students with special needs within Malaysia's Special Education Integration Program (SEIP). Despite the potential benefits of technology, educators in Special Education grapple with distinctive challenges. The pandemic-driven transition to technology underscored its pivotal role in bridging educational disparities for special needs students. Aligned with Malaysia's commitment to inclusive education, this study focuses on the intersection of technology and special education. The research aims to garner insights and recommendations from special education teachers regarding technology integration in SEIP ESL classrooms. Employing a qualitative approach, the study conducted semi-structured interviews and analyzed data thematically based on the participants' answers. Findings highlighted a positive transformation in ESL instruction upon technology usage, elevating student participation, engagement, and independent learning. However, a notable absence of specialized tools or software for SEIP students has also been uncovered. Implications extend to pedagogical practices in special education, proposing avenues for future research. This study reveals an unexplored dimension of technology advancement tailored to SEIP students in Malaysia, making a substantial contribution to the theoretical and practical discourse on inclusive education and technological innovation in ESL classrooms.

## 1 Introduction

### 1.1 Background of Study

Modern education has undergone a remarkable transformation, with technology playing a pivotal role in reshaping both the learning experience for students and the teaching methodologies employed by educators. The integration of technology into the educational landscape has introduced new dimensions of interactivity, personalization, and engagement, particularly in the domain of English as a Second Language (ESL) instruction. This shift towards a technology-enhanced education environment has brought forth a multitude of advantages, including improved teaching and learning processes, heightened student

---

\*Corresponding author: [ainwajihahaz@gmail.com](mailto:ainwajihahaz@gmail.com)

engagement and motivation, and the facilitation of global communication and collaboration [1,2].

The Ministry of Education (MOE) in Malaysia has instituted the Zero Reject Policy (Dasar Sifar Pendidikan). This policy mandates that every child in Malaysia, irrespective of their background or abilities, should have access to quality education. A key initiative within this policy is the Special Education Integration Program (SEIP), known as Program Pendidikan Khas Integrasi (PPKI), which aims to provide inclusive education to students with special needs or learning disabilities. Within the SEIP, Special Needs Students (SNS) are educated alongside their typically developing peers, fostering an environment of integration and inclusivity. This program is currently offered in 1,521 primary and 822 secondary schools across Malaysia.

Special Needs Students (SNS), characterized by various forms of disabilities such as visual impairments, auditory disabilities, speech impairments, physical challenges, learning difficulties, or combinations thereof, require tailored attention and support [3]. This diverse spectrum of special needs implies that these students may necessitate different pedagogical approaches when it comes to language learning [4].

Educators generally recognize the potential of educational technologies as a beneficial initiative in the education system, but their mastery and effectiveness remain low in meeting the learning needs of special needs students. Hence, the path to the seamless and effective integration of technology is not without its challenges. In many educational settings, including Malaysia, the scarcity of technological resources and inadequate teacher training in information and communication technology (ICT) has often prompted educators to default to traditional teaching methods, especially when it comes to handling special education students. These special needs students are observed to struggle to adapt to the online learning materials provided by teachers [5].

However, the landscape changed dramatically with the arrival of the COVID-19 pandemic, forcing educational institutions to swiftly transition from in-person classes to a technology-driven, virtual learning environment. This rapid transformation affected students and teachers alike, including those within the special needs education sector.

## **1.2 Statement of Problem**

In the rapidly evolving landscape of Malaysian education, the emphasis on 21st-century learning and digital literacy has paved the way for technology's integration in ESL classrooms, offering promising benefits [6,7,8]. However, an extensive study by Zamri & Alias [9] points to significant challenges in the application of information and communication technology (ICT) within Special Education Integration Program (SEIP) classrooms, including teacher proficiency, the need for face-to-face interaction, and inadequacies in online teaching aids.

Moreover, the pre-pandemic era witnessed special needs teachers underscoring the effectiveness of hands-on, concrete learning experiences for students with disabilities [10], suggesting a potential pedagogical shift concerning technology use in special education, especially within ESL contexts.

Despite the surge in technology adoption during the COVID-19 pandemic, research on technology's role in Special Education within Malaysia, particularly in ESL classrooms, remains notably scarce. This research gap necessitates exploration, given the distinct challenges and opportunities that technology integration may present within the unique context of SEIP classrooms.

### **1.3 Research Objectives**

The purpose of this study is to investigate Special Education Teachers' perceptions, challenges, and recommendations regarding the integration of technology in ESL classrooms within the Special Education Integration Program (SEIP) in Malaysia for Special Needs Students (SNS).

### **1.4 Research Questions:**

1. What are the Special Education Teachers' perceptions regarding the integration of technology in ESL classrooms within the Special Education Integration Program (SEIP) for Special Needs Students (SNS) in Malaysia?
2. What challenges do Special Education Teachers encounter when utilizing technology in ESL classrooms within the SEIP for SNS?
3. What recommendations do Special Education Teachers propose based on their own experience for improving the effective use of technology in ESL classrooms for the SEIP students?

## **2 Literature Review**

### **2.1 Special Education Integration Program (SEIP) in Malaysia**

The Special Education Integration Program (SEIP), also known as Program Pendidikan Khas Integrasi (PPKI), is an initiative by the Malaysian Ministry of Education that aims to provide inclusive education for students with special needs in mainstream schools. This program places children with special needs in special classes within regular schools, allowing them to learn alongside their typically developing peers [11]. The students under SEIP are usually students with special needs that require a moderate level of support. The program places children with special needs in special classes within regular schools. The evolution of special education in Malaysia has been influenced by global movements towards inclusion, as well as government policies and international declarations [12].

Collaboration between general and special education teachers is crucial for the successful inclusion of students with disabilities in regular schools. Zulkifli et al. [13] stated in their study that adequate funding and resources should be provided for professional development and ongoing support for teachers working with special needs students. The Special Education Integration Program (PPKI) in Malaysia aims to provide inclusive education in mainstream schools for students with special needs.

### **2.2 English Language Learning for SEIP**

In the context of English language teaching and learning, a qualitative case study by Karuppannan et al. [14] investigated the effectiveness of lesson delivery and the sequence of content and learning expectations in English language classrooms attached to special education schools. The study stated that there are challenges in English Language Learning for pupils with special needs. Those difficulties viewed under the lens of Special Education, as listed by Hamayan, are:

1. Difficulty in reading and spelling words due to memory issues, trouble processing sounds, and struggles with reading (like dyslexia).
2. Trouble understanding text due to difficulties with language processing, organizing information, and remembering things.

3. Poor writing skills are caused by processing issues, memory challenges, fine motor skill problems, slow thinking speed, and difficulty in developing language abilities.
4. They are easily distracted, possibly due to difficulties in processing what they hear, attention problems like ADHD, or trouble with processing information quickly.
5. Inability to remember what's been taught, likely due to memory and language processing problems.
6. When speaking, they may add, delete, or substitute words and use paraphrases due to memory or oral language processing difficulties, as well as word-finding issues.

To promote effective English language learning for Special Needs Students, Karuppannan et al [14] discussed teachers need to be patient, adopt and adopt a flexible approach, and allow students to work at their own pace. Teachers should incorporate enjoyable games, encouraging active participation from the pupils.

### **2.3 Technology in English Language Learning**

Over the years, integrating technology into ESL classrooms has shown benefits for both teachers and students. One of the main advantages is in terms of students' motivation. A study by Gilakjani [15] has shown that the use of technology in language classes can significantly enhance learners' motivation, which is important because motivated learners are more engaged and willing to participate actively in the learning process, which can lead to improved academic performance.

Furthermore, integrating technology in ESL classrooms allows students to be responsible for their learning. By using technology, students can learn at their own pace and depending on their learning styles. This promotes learner autonomy and independence, as learners are not solely dependent on their teachers for instruction. Additionally, technology provides learners with opportunities for authentic language learning experiences, as they can access real-world resources and communicate with native speakers of the target language [15].

Another benefit of integrating technology in ESL classrooms is it creates a more meaningful learning environment. Technology can provide interactive and engaging learning experiences that cater to the diverse needs and interests of learners [7]. For example, the use of Web 2.0 technology allows for collaborative learning and the development of 21st-century skills, such as communication, collaboration, and critical thinking [16]. This not only enhances language learning but also prepares learners for the demands of the digital age.

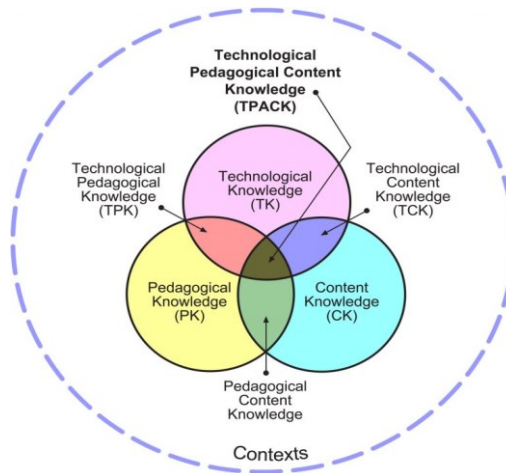
However, it is important to acknowledge that there are also barriers to integrating technology in ESL classrooms. Some of these barriers include limited access to technology, lack of teacher training and support, and concerns about distractions and misuse of technology [7]. Teachers' attitudes and beliefs toward technology can also influence their willingness to integrate technology into their lessons [17].

Integrating technology into ESL classrooms offers numerous benefits, including increased learner motivation, learner autonomy, authentic language learning experiences, and the development of 21st-century skills. Zulkifli et al. [13] have proposed that the use of technology can significantly enhance the learning experience for students with special educational needs, making it easier for them to communicate, learn, and participate in learning activities.

### **2.4 Technological Pedagogical Content Knowledge (TPACK) Framework**

The TPACK (Technological Pedagogical Content Knowledge) framework stands as a comprehensive theoretical model delving into the seamless integration of technology into educational settings. This model encapsulates the confluence of technological knowledge, pedagogical knowledge, and content knowledge [18]. In essence, TPACK underscores the

synergy between technology, pedagogy, and content knowledge in the realm of teaching practices [19]. A pivotal aspect of this framework lies in its capacity to empower educators with insights into leveraging technology effectively, especially in addressing the unique needs of students within the English as a Second Language (ESL) context [20].



**Fig. 1.** TPACK is a beneficial conceptual framework for thinking about, analyzing, and assessing what educators need to know to integrate technology into their classrooms, but it must ultimately be viewed as a framework for how teachers can best create this integrated knowledge [21]

Teachers equipped with a well-developed TPACK, cultivated through hands-on experimentation with technology, demonstrate heightened confidence and proficiency in integrating technology seamlessly into their instructional methodologies [19]. Within the ESL sphere, the TPACK framework serves as a guiding force for educators, directing them towards judiciously employing technology to enrich language learning experiences for students with special needs. Recognizing the pivotal role of integrating technology with pedagogical and content knowledge, the TPACK framework aligns seamlessly with the goals of ESL classrooms [22].

In the ESL landscape, technology emerges as a powerful ally, facilitating language acquisition, offering authentic language experiences, and fostering communication and collaboration among students [22]. Practical implementations of this integration include the use of multimedia resources, online language learning platforms, and communication tools to immerse students in interactive language activities and furnish personalized feedback [22]. This amalgamation of pedagogical expertise with technological tools enables teachers to craft meaningful and engaging learning experiences tailored to the unique requirements of students with special needs.

Moreover, the TPACK framework underscores the imperative for educators to possess an in-depth understanding of the content they are imparting. In the context of ESL, this entails proficiency in language structures, vocabulary, and the cultural nuances of the target language [23]. Armed with this content knowledge, teachers can adeptly select technological tools and resources aligned with the language learning objectives of their students. Examples of such applications encompass language learning apps, online dictionaries, and multimedia materials, offering authentic language exposure and opportunities for practice [23]. By seamlessly integrating technology into language instruction, teachers not only address the

diverse needs of students with special requirements but also contribute to the creation of a more inclusive and enriched learning environment.

### 3 Methodology

This study employed a qualitative research approach to elucidate the perspectives of special education teachers regarding the integration of technology in special education, particularly in SEIP ESL classrooms. The chosen qualitative research method was a semi-structured interview technique. The qualitative research methodology involves a meticulous analysis of a phenomenon within its natural environment, enabling the generation of detailed descriptions and narratives about the said phenomenon [24]. In this study, qualitative data-gathering methods were applied to provide a realistic and holistic understanding of the views and experiences of special education teachers in the context of technology integration. The semi-structured interview technique, a key component of the qualitative research arsenal, was strategically employed to extract rich insights and nuanced perspectives from participants, ensuring a thorough exploration of their beliefs and approaches. The utilization of this methodology holds significant worth in the field of special education, as it empowers researchers to delve into the intricate nature of special education environments with enhanced understanding and increased precision [25].

#### 3.1 Participants and Data Collection

For this study, seven Special Education Integration Program (SEIP) teachers from both secondary and primary schools in Malaysia actively participated. The data collection involved virtual semi-structured interviews conducted through platforms such as Google Meet or Zoom. Detailed demographic characteristics of the participants are presented in Table 1.

**Table 1:** Demographic Characteristics of Participants

Participants	Age	Type of School	Level of Education	Years of Teaching Experience in ESL for
P1	44 yrs	Secondary	Master	15 years
P2	32 yrs	Secondary	Bachelor Degree	7 years
P3	35 yrs	Primary	Master	7 years
P4	51 yrs	Secondary	Doctorate (PhD)	20 years
P5	42 yrs	Primary	Bachelor Degree	13 years
P6	33 yrs	Primary	Bachelor Degree	8 years
P7	29 yrs	Secondary	Bachelor Degree	2 years

Individual interviews were scheduled at mutually convenient times for both the researcher and the participating teachers. Explicit permissions were sought from all participants before the commencement of the research to ensure the integrity of the data collection process. The interviews were systematically recorded and subsequently transcribed to facilitate rigorous analysis and interpretation in the context of this study.

Each interview session, structured around open-ended questions, unfolded over a duration of 35-50 minutes. The variance in time was contingent upon the responses provided by the

participants, given the nature of open-ended inquiries. This meticulous approach allowed for a comprehensive exploration of the views and experiences of the participating teachers within the Special Education Integration Program. The entire process adhered to ethical considerations, as participants were duly informed, and their consent was obtained before the initiation of any data collection activities.

### 3.2 Analysis of Data

The study's data were analyzed thematically, involving the identification of themes derived from participants' responses within the interview transcriptions. The responses garnered from the research were systematically categorized into themes, employing a meticulous content analysis approach. This involved the extraction and organization of data based on recurring patterns, enabling the identification of prominent themes and sub-themes. The data analysis process encompassed the articulation of teachers' responses to specific questions within the defined thematic framework, accompanied by a quantification of the number of teachers contributing to each thematic category. This rigorous analytical procedure facilitated a comprehensive understanding of the nuances present in the participants' responses, offering valuable insights into the focal areas explored in the study.

## 4 Findings

This section presents the outcomes derived from the study, aligning with both the overarching objective and specific sub-objectives.

### 4.1 Demographic Section

In the interviews, questions such as age, years of experience in teaching English for SEIP, and type of schools the participants are teaching are relevant to the study as well since these factors can affect the competency level of the teachers in using technology in their classroom.

The interview also asked the participants about the number of SEIP students they have in a class on average and the type of disabilities they have encountered. The participants stated that, on average, they would have 8-10 SEIP students in a class, and the Special Needs Students that they encountered are mostly focusing on learning disabilities with minimal support, such as ADHD, Slow Learner, Dyslexia, Autism, Reading, or Writing Comprehension Deficit. Special Needs Students with severe disabilities would mostly be referred to Special Education Schools in Malaysia rather than the Special Education Integration Program. Nevertheless, the SEIP students have their own sets of challenges for the teachers as they are a class with a spectrum of disabilities, and it is up to the teachers' wisdom to choose suitable technology to be used in the teaching and learning of English.

### 4.2 Special Education Teachers' Perspectives on Competence in Utilizing Technology within the ESL Classroom

**Table 2:** Perspectives of Special Education Teachers Regarding Competence in Utilizing Technology within the ESL Classroom

Views	n
I think I can use technology well; I always use technology in class	6
I am not confident in using technology, and I prefer the traditional teaching method	1



The tabulated results depict the viewpoints of special education teachers in SEIP concerning their technological proficiency in the English classroom. Notably, the majority of teachers ( $n=6$ ) express confidence in their ability to effectively use technology for teaching mathematics. However, a solitary teacher acknowledges a lack of confidence in utilizing technology for teaching English, opting instead for traditional teaching methods.

### 4.3 Special Education Teachers' Perspectives on Technological Tools Employed in English Instruction for SEIP students.

**Table 3:** Utilization of Technological Tools in English Instruction by SEIP Teachers

Technological Tools	n
Laptop	4
Smart Phone	4
Tablet/iPad	5
Projector	2
Smartboard	1

The data in Table 3 outlines special education teachers' viewpoints regarding the technological tools employed in teaching mathematics. The findings reveal that special education teachers identified five distinct technological tools commonly utilized in English instruction. Notably, the majority of teachers ( $n=5$ ) emphasized the frequent use of tablets or iPads in their English classes. Additionally, laptops ( $n=4$ ), smartphones ( $n=4$ ), projectors ( $n=2$ ), and smartboards ( $n=1$ ) were reported as other prevalent technological tools for teaching English. A participant articulated, "I find it easier to use my iPad rather than my laptop in my ESL classroom. I rarely bring my laptop to class ever since I bought my iPad" (P2).

### 4.4 Perspectives of Special Education Teachers Regarding Educational Software or Applications Employed in the ESL Classroom.

**Table 4.** English Instruction related educational software or applications used in SEIP classroom

Technological Tools	n
Quizziz	7
Jamboard	3
Kahoot	5
Google Meet	2
Live Worksheet	2
Youtube	7
Canva	3
Audio Book	1



The data presented in Table 4 illustrates special education teachers' perspectives on the utilization of educational software and applications in the teaching of English. All SEIP teachers unanimously reported deriving benefits from Quizziz ( $n=7$ ) and YouTube ( $n=7$ ). Following closely, Kahoot emerged as the second most popular application, employed by five teachers, while Canva ( $n=3$ ) and Jamboard ( $n=3$ ) were also prevalent choices. Some teachers disclosed their continued use of Google Meet ( $n=2$ ) for students requiring additional attention after class, and a subset explored the use of Live Worksheet ( $n=2$ ) to introduce variety into their teaching approach. Additionally, one teacher incorporated audiobooks alongside YouTube as supplementary support in the classroom.

#### 4.5 Perspectives of SEIP Teachers Regarding the Efficacy of Technology in Teaching Different Language Skills in English

**Table 5** Technology's Efficacy in Facilitating English Language Skills

English Language Skills	n
Reading	3
Writing	2
Listening	5
Speaking	2
Grammar	6
Vocabulary	7

The findings detailed in Table 4.5 elucidate special education teachers' opinions on the skills that are more effectively taught using technology in English instruction. A predominant number of teachers highlighted vocabulary ( $n=7$ ) as the skill most positively impacted, closely followed by Grammar ( $n=6$ ). Furthermore, the core language skills of Listening ( $n=5$ ), Reading ( $n=3$ ), Speaking ( $n=2$ ), and Writing ( $n=2$ ) were identified as areas where technology plays a significant role in enhancing instructional effectiveness.

Expressing the sentiment, one SEIP teacher remarked, "Technology really helps in teaching English. It allows students to learn things in a real-world context without having to go out on their own. My students also become eager to answer in class than before" (P4).

#### 4.6 Perspectives of SEIP teachers on the challenges they encounter in using technological tools in ESL classroom

**Table 6:** Challenges in using technology in SEIP ESL classroom

Problems/Difficulties/Challenges	n
Unstable or no internet connection	7
Time wasted for Set Up	4
Limited technological resources	3
Lack of teachers' training	4
Inadequate basic infrastructures	6

The data presented in Table 4.6 elucidates the views of SEIP teachers regarding challenges encountered when employing technological tools in teaching English. Examination of the table reveals five distinct issues reported by teachers in their experience with these tools. The most prevalent challenges cited by teachers include unstable or no internet connections ( $n=7$ ) and inadequate basic infrastructures. Additionally, teachers identified the lack of training in educational technologies ( $n=4$ ) and the time required to set up ICT-based classrooms ( $n=4$ ) as significant hurdles. Furthermore, three SEIP teachers highlighted the limited technological resources available for government school teachers.

One teacher candidly expressed, "If I wanna use technology in my classroom, I have to buy gadgets on my own using my own money. The ones provided by the government are either not up-to-date or just not enough to cater for all teachers" (P1). Another teacher highlighted the impact of unstable internet connections on the use of applications, stating, "When it comes to using applications on my tablet, having an unstable internet connection is a major turn-off with the kids" (P3). This sentiment was echoed by another teacher who mentioned, "I like to use Quizziz and Kahoot since it is easy, but when the internet is hard to connect, I tend to give up integrating ICT in my classroom and give hands-on activity instead. I would not want to waste my limited classroom time" (P5). Additionally, a teacher expressed a desire for personalized training, saying, "I wish one-on-one training is given to expose us senior teachers to new educational technologies because it feels like the advancement is too fast and we could not catch up. Students sometimes know better than us in terms of ICT" (P4).

#### 4.7 Perspectives of SEIP teachers on the recommendations for using technological tools effectively in teaching English

**Table 7:** Recommendations for using technological tools effectively in ESL classroom

<b>Recommendation</b>	<b><i>n</i></b>
Educational Technologies training	7
Provide technological resources, e.g., gadgets, technicians	4
Have no recommendation	2

The findings in Table 4.7 encapsulate special education teachers' recommendations for enhancing the effective integration of technological tools in teaching English to SEIP students. Three distinct themes emerged from the responses. The unanimous suggestion from all SEIP teachers is to provide educational, technological training for teachers ( $n=7$ ) and students. Moreover, four special education teachers emphasized the importance of increasing technological resources for both SEIP students and teachers to enhance technology utilization in the classroom. However, two teachers conveyed that they had no specific recommendations for utilizing technology in the ESL classroom for SEIP students.

One special education teacher articulated the need for continuous technological training in the Special Education field, stating, "I think schools or the Ministry of Education needs to provide constant technological training, particularly in the Special Education field, as I can see students nowadays love the limitless potential that technology brings into the classroom. Sadly, many educational software or applications are more suited to cater to mainstream students" (P7). Another teacher expressed the desire for increased technological resources, saying, "I like to use technology, though it is such a hassle to set it up in class every time. When my students have to share my one iPad to answer questions, I really wish they are

provided with one each or a few at least to speed up teaching and learning in class. Or maybe give one smartboard for each class so I can just project my screen there without any arguments" (P1). Additionally, one special education teacher acknowledged the resource constraints and emphasized adaptability, stating, "I use technology mainly as reinforcement exercise, so I have no recommendations. When you have become government teachers for a while, you have learned to make do with what you have instead of asking from others" (P4).

## 5 Discussion

The first theme identified from the data delved into understanding the perceptions of Special Education Teachers regarding the integration of technology in ESL classrooms within the SEIP for Special Needs Students (SNS) in Malaysia. The findings underscore a positive outlook, with teachers expressing confidence and competence in leveraging technology. Notably, age emerged as a differentiating factor, with younger teachers exhibiting higher levels of comfort and proficiency. The research conducted by Bataineh and Anderson [26] found that educators in the age bracket of thirty and below exhibited greater confidence in integrating technology within the classroom, showcasing heightened perceptions of competence in comparison to their more senior counterparts, while Brown and Strommen [27] suggested that older age may be viewed as a barrier to learning technology skills which might hinder the usage of technology in the classroom. This positive perception is a foundational aspect in facilitating effective technology integration, setting the stage for further exploration into challenges and recommendations.

The second theme uncovers the challenges faced by SEIP teachers in utilizing technology in ESL classrooms. The findings highlighted several significant hurdles, including connectivity issues, infrastructural limitations, training gaps, and resource constraints. Unstable or no internet connections and inadequate basic infrastructures emerged as primary challenges, resonating with broader issues in educational technology implementation. Although there is limited research in terms of challenges in using ICT for Special Education ESL classrooms, a few research regarding the use of ICT in ESL classrooms highlighted similar challenges faced by these teachers. For example, studies conducted by Ng & Yunus [28] and Halim & Hashim [7] supported the lack of ICT infrastructure and basic facilities as a barrier to teachers. These challenges underscore the need for systemic improvements and targeted interventions to bridge training and resource gaps, particularly in government schools.

The third theme of the findings focused on recommendations from SEIP teachers to enhance the effective use of technology in ESL classrooms. The findings revealed a unanimous call for educational and technological training for both teachers and students, emphasizing continuous professional development. Additionally, the recommendation for increased technological resources, especially in government schools, signifies a crucial step towards creating an environment conducive to effective technology integration, which is also supported in the study conducted by Chun and Yunus [29]. These recommendations serve as actionable insights for educational policymakers, administrators, and professional development initiatives.

The interview questions were strategically constructed based on the Technological Pedagogical Content Knowledge (TPACK) framework, weaving together technological, pedagogical, and content knowledge. By aligning with the TPACK framework, the study was able to unearth nuanced insights into the complex interplay of technology, pedagogy, and content in the specialized context of teaching English to special needs students. The TPACK-informed approach provides a robust foundation for addressing the challenges and opportunities in using ICT for Special Education Integration Programs.

## 6 Conclusion

To sum up, this research has diligently addressed the existing research gap concerning the challenges, opportunities, and best practices for effective technology integration in the Special Education Integration Program (SEIP) ESL classrooms for Special Needs Students (SNS) in Malaysia. The research problem statement highlighted the crucial research gap in the ESL Special Education field despite the potential benefits of technology integration, paving the way for a comprehensive investigation. The study's key findings shed light on the challenges faced by SEIP teachers, including connectivity issues, infrastructural limitations, and resource constraints. These insights provide a nuanced understanding of the intricacies involved in utilizing technology to enhance ESL instruction for special needs students.

Summarizing the key findings, SEIP teachers expressed general confidence in leveraging technology, with tablets and specific educational software emerging as preferred tools. Noteworthy recommendations include the necessity for continuous education, technological training, and increased technological resources. These findings underscore the importance of addressing challenges and enhancing resources to create an environment conducive to effective ESL instruction for SNS in SEIP classrooms. The identified challenges, coupled with the positive perceptions and recommendations, form a comprehensive framework for informing educational policies, professional development initiatives, and future research in the realm of technology integration for special needs students.

Looking forward, the key takeaways from this study bear significant implications for the future of technology integration in SEIP ESL classrooms. The recommendations for continuous professional development and increased resources necessitate collaborative efforts from educational institutions, policymakers, and relevant stakeholders. In order to bridge existing gaps, future initiatives should prioritize tailored training programs for SEIP teachers and ensure equitable access to technological resources. Moreover, ongoing research endeavors should explore the longitudinal impact of technological interventions in SEIP, with a focus on adapting strategies to the evolving landscape of educational technology.

In order to facilitate concrete transformation, a proactive stance needs to be advocated in the execution of the suggestions developed from this study. An effort for continuous teacher training, resource allocation, and collaborative efforts will not only enhance the ESL learning experiences for special needs students but also contribute to the broader discourse on inclusive education in the digital age. By heeding these insights and actively engaging in targeted initiatives, we can collectively work towards creating a more accessible, adaptive, and enriching educational environment for special needs students in the Malaysian context and beyond.

## References

1. S. N. S. Ibrahim, H. Hashim, *Creative Education*, **12**, 3 (2021)
2. A. A. Alhebshi, M. S. S. Halabi, *Journal for the Study of English Linguistics*, **18**, 1 (2020)
3. A. J. T. Tohara, S. M. Shuhidan, F. D. S. Bahry, M. N. B. Nordin, *Turkish Journal of Computer and Mathematics Education (TURCOMAT)*, **12**, 9 (2021)
4. J. Kagan, *Special Needs Child*, Retrieved from Investopedia: <https://www.investopedia.com/terms/s/specialneedschild.asp> (2021)
5. M. Supratiwi, M. Yusuf, F. K. Anggarani, *International Journal of Pedagogy and Teacher Education*, **5**, 1 (2021)
6. Malaysian Ministry of Education. *Malaysia Education Blueprint 2013 - 2025*. Putrajaya: MOE, (2013)

7. M. S. A. Abdul Halim, H. Hashim, *Journal of Counseling and Educational Technology*, **2**, 1 19 (2019)
8. N. Mirra, A. Garcia, *Reading Research Quarterly*, **56**, 3 (2020)
9. F. E. Zamri, A. Alias, *Malaysian Journal of Social Sciences and Humanities (MJSSH)*, **7**, 5 (2022)
10. L. Clarke, D. J. Kast, *Current: The Journal of Marine Education*, **34**, 2 (2020)
11. N. E. Rahmat, A. Mahmood, M. F. Othman, *International Journal of Academic Research in Progressive Education and Development*, **10**, 3 (2021)
12. K. F. Khairuddin, K. Dally, J. Foggett, *Journal of Research in Special Educational Needs*, **16**, S1 (2016)
13. Z. B. Zulkifli, A. B. Anal, *PICSAR*, **2**, 1 (2023)
14. G. Karuppannan, M. Paramalingam, F. Sultan, H. Duari, *European Journal of Special Education Research*, **7**, 3 (2021)
15. A. Gilakjani, *IJEL*, **5**, 7 (2017)
16. K. Rafiq, H. Hashim, *JELS*, **1**, 1 29 (2018)
17. E. Andre, *Tesol Journal*, **2**, 8 (2016)
18. T. Valtonen, W. Sointu, J. Kukkonen, S. Kontkanen, M. Lambert, K. Mäkitalo-Siegl. *Australasian Journal of Educational Technology*, **33**, 3 (2017)
19. D. Iskandar, *JTP - Jurnal Teknologi Pendidikan*, **24**, 3 (2022)
20. L. Cahyani, N. Azizah, D. Evans, *Formatif Jurnal Ilmiah Pendidikan MIPA*, **11**, 1 (2021)
21. M. J. Koehler, P. Mishra, K. Kereluik, T. S. Shin, C. R. Graham, *The technological pedagogical content knowledge framework*. Handbook of research on educational communications and technology, 101-111 (2014)
22. K. Semiz, M. Ince, *AJET*, **7**, 28 (2012)
23. Z. Arifin, M. Nurtanto, W. Warju, R. Rabiman, N. Kholifah. *IJERE*, **3**, 9 (2020)
24. M. M. Leko, B. G. Cook, *Learning Disabilities Research & Practice*, **36**, 4 (2021)
25. M. Alnaim, *Education Quarterly Reviews*, **1**, 2 (2018)
26. M. A. Bataineh, S. K. Anderson, *Contemporary Educational Technology*, **6**, 1(2015)
27. L. E. Brown, J. Strommen, *Family and Consumer Sciences Research Journal*, **46**, 3 (2018)
28. M. Ng, M. Yunus, *Creative Education*, **12**, 07 (2021)
29. T. Chun, M. Yunus, *Frontiers in Psychology*, **14**, (2023)
30. Malaysia Special Education Department, (2019). Retrieved from <https://www.moe.gov.my/korporat/bahagian- dan-unit/bahagian-pendidikan- khas>
31. E. Hamayan, C. M. Sanchoz, J. Darmino, *Special Education Considerations for English Language Learners: Delivering a Continuum of Services*, (Calson Publishing 2003)
32. B. Baglama, A. Yikmis, M. S. Demirok, *European Journal of Special Education Research*, **2**, 5 (2017)