

Exploring the information needs and challenges of special education teachers in Malaysia

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ABSTRACT

This study examines the information needs and challenges faced by special education teachers in Malaysia, focusing on how these educators identify, access, and use information to support teaching and learning in the classroom. Despite the increasing number of registered special needs children in Malaysia, the Malaysian government remains committed to advancing inclusive education and producing well-skilled special education teachers, particularly regarding teachers' information practices. Limited research has investigated the information practices of special education teachers, resulting in a gap in instructional support, resource development, and professional guidance. Using a qualitative design, in-depth semi-structured interviews were conducted with special education teachers from both urban and rural schools in various Malaysian states. This study was guided by three research questions: i) What are the information needs of special education teachers in Malaysia? ii) What information-seeking strategies and sources do special education teachers use to support their teaching and learning? iii) What challenges do special education teachers encounter in seeking and accessing information? The findings indicate that special education teachers primarily require information on teaching strategies, student behaviour, classroom management, and assessment tools. Their information-seeking strategies mainly rely on digital platforms, peer networks, official documents, and informal sharing communities. The most common barriers that hinder effective information use are inconsistent internet access, limited literacy training, and a lack of special education resources. This study emphasises the need for literacy training and information services for special education teachers in Malaysia and supports strategies for special needs school library support.

Keywords: Information needs; Information-seeking behaviour; Special education teachers; Special needs school; Malaysia.

INTRODUCTION

Special education in Malaysia has evolved significantly from a charity-based approach to a more structured and inclusive system. Early initiatives were led by non-governmental

organisations, followed by formal policy developments such as the Education Act 1996 and the Persons with Disabilities Act 2008, which emphasise equal access to education for people with disabilities (Ismail et al., 2023). Today, the special education programme in Malaysia is implemented through three main approaches: segregation, integration, and inclusion. This study focuses on the segregation setting, specifically specialised schools that cater to students with special needs such as visual, hearing, and learning disabilities. However, few studies have explored how Malaysian special education teachers in segregation settings identify and use information to support teaching and learning.

Special education teachers are trained professionals who serve as instructors for students with special needs, using a specially designed curriculum recognised by the Malaysian Ministry of Education (Nur Emylia et al., 2024). According to the Malaysian Education Blueprint, special education teachers are required to remain continuously updated on knowledge and adapt teaching strategies to meet diverse student needs and design appropriate instructional materials, which necessitates effective information seeking and application. Laloo and Buheil (2013) note that teachers often seek and use information from various sources to improve their teaching. Despite its importance, little is known about the information-seeking behaviour of Malaysian special education teachers, particularly in segregated settings – a gap this study aims to address.

To explore special education teachers' information practices, this study draws on established information behaviour models to understand how these teachers seek and use information. Wilson's (1999) model illustrates how professionals identify needs, search for information, and apply it in practice. In contrast, Leckie, Pettigrew, and Sylvain (1996) explain how professionals receive information from diverse sources to execute their tasks. Studies on teacher education reveal that teachers' information-seeking behaviour influences how they make instructional decisions and engage with professional knowledge (Dahlqvist, 2021; Peculiauskiene et al., 2022).

While previous research has examined teachers' information behaviour in general education settings and identified key factors influencing how teachers search for and apply information (Dahlqvist, 2021; Peculiauskiene et al., 2022), there remains limited empirical evidence on how special education teachers in Malaysia locate, evaluate, and use information to support their daily teaching practice. Much of the existing literature on special education in Malaysia focuses on policy implementation, inclusive practice, and general teacher support needs, without specifically addressing teachers' information-seeking practices (Chow et al., 2023). Furthermore, few studies have investigated the unique information needs of teachers working in segregation settings, where instructional challenges are often more complex due to diverse student learning needs. This gap in understanding the sources and challenges involved in information needs practice among special education teachers in Malaysia highlights the need for focused research in this context. This study aims to address this gap and provides a unique context to understand information behaviour in professional settings that face diverse student needs.

LITERATURE REVIEW

Information needs research has expanded beyond traditional library settings into professional, educational, and digital contexts due to the rapid growth of information and technology (Ahmed et al., 2025; Novian, 2024). In the educational context, teachers are recognised as active information users who rely on digital resources, institutional materials,

interpersonal communication, and online professional communities to support teaching and professional practice (Trixa & Kaspar, 2024; Chen et al., 2025).

Previous studies indicate that teachers' information practices are shaped by instructional responsibilities, workplace demands, technological access, and institutional support (Limberg & Sundin, 2006; Gunasekera & Balasubramani, 2021). Malaysian studies similarly suggest that teachers depend on both formal and informal information sources to support teaching and professional development (Shanmugam, 1999; Salji, 2015).

International studies further show that teachers' information needs are closely related to curriculum requirements, classroom management, and professional responsibilities (Gunasekera & Balasubramani, 2021; Novian et al., 2025). Previous research also indicates that contextual factors such as technological access, institutional support, and information-searching skills influence teachers' information practices (Limberg & Sundin, 2006). Although teachers across contexts share similar professional information needs, differences remain in access to digital infrastructure and educational support systems.

In the special education context, teachers' information needs are more specialised due to the diverse learning needs of students with disabilities. Special education teachers frequently require information related to instructional adaptation, behavioural management, and individualised teaching strategies. This aligns with Leckie et al.'s (1996) model, which explains that professional information needs are shaped by work roles and task-related responsibilities. Previous studies have found that special education teachers often seek practical pedagogical resources and behaviour support information to support classroom practice (Awang, 2016; Shahzad et al., 2025).

Despite growing research on teachers' information behaviour, studies focusing specifically on special education teachers in Malaysia remain limited. Existing research mainly addresses inclusive education, policy implementation, and general teachers' support needs without specifically examining information-seeking practices among special education teachers. Limited attention has been given to teachers working in segregated settings, where instructional and communication challenges are often more complex due to diverse student learning needs. Therefore, this study addresses this gap by exploring the information needs, seeking strategies, and challenges experienced by special education teachers in Malaysia.

Model of information behaviour

This study is guided by information behaviour theories that explain how individuals seek and use information in response to their professional needs. Two key information behaviour models underpin this study: Wilson (1996) and Leckie et al. (1996).

The information behaviour model has been developed over a considerable period and has undergone many revisions (Wilson, 1997), reflecting trends in information-seeking behaviour research (Case, 2012). This model is widely used to explain how individuals seek information in response to their information needs. It emphasises that information-seeking is influenced by various intervening variables, including psychological, environmental, role-related, and access-related factors, which may facilitate or hinder information use. This model is particularly relevant to the present study as it provides a useful framework for understanding the complex and context-dependent nature of information needs among special education teachers. In the school context, teachers' access to and use of information are often shaped by multiple constraints, such as workload, institutional support, technological access, and professional responsibilities. Wilson's model allows these

influencing factors to be systematically examined in relation to how teachers identify and use information in their professional practice.

Leckie et al. (1996) present a generic model of the information-seeking behaviour of professionals, based on their analysis of three professional groups: engineers, healthcare professionals, and lawyers. This model explains that information needs among professionals are primarily shaped by their work roles and task-related responsibilities. It proposes that information needs are influenced by the nature of the professional task and the work context in which these tasks are performed, which in turn shapes awareness and use of information sources. This model is particularly relevant to the present study, as special education teachers operate within complex professional roles that require them to address diverse learning needs, implement individualised teaching strategies, and adapt instructional practices. Their information needs are closely linked to specific classroom tasks and professional responsibilities, making the model useful for understanding how work roles influence their information needs.

Overall, both models of information behaviour by Wilson (1996) and Leckie et al. (1996) complement each other in explaining the information behaviour of special education teachers. Model by Wilson (1997) provides a broader understanding of how environmental, institutional, and access factors may influence teachers' information needs and seeking behaviour. Meanwhile, model by Leckie et al. (1996) offers a more profession-focused perspective by explaining how teachers' work roles and task-related responsibilities shape their information needs. Together, these models provide a comprehensive framework for understanding how special education teachers identify, seek, and use information within their professional practice. Therefore, integrating these models is useful in guiding the present study in exploring the information needs, seeking behaviour, and professional practice of special education teachers in the Malaysian education context.

METHOD

This study aims to explore the information needs of special education teachers in Malaysia and the challenges they encounter in seeking and accessing information to support their teaching and learning practices for students with special needs. The following research questions guide this study:

- i. What are the information needs of special education teachers in Malaysia?
- ii. What information-seeking strategies and sources do special education teachers use to support their teaching and learning?
- iii. What challenges do special education teachers encounter in seeking and accessing information?

The study adopted a qualitative research design to explore the information needs among special education teachers in Malaysia. A purposive sampling technique was employed involving 23 special education teachers from special needs schools across Malaysia. Participants were selected based on three criteria: (i) teaching experience in a special needs school, (ii) background in special education, and (iii) experience teaching visual, hearing, or learning disabilities. The sample size was considered sufficient as the interview provided rich and relevant data, and no new themes emerged during the later stages of data collection (Malterud et al., 2016; Hennik & Kaiser, 2022).

Semi-structured interviews were conducted between March 2023 and February 2025 through face-to-face and online sessions. The interview questions were developed based on Wilson's (1996) information behaviour model and Leckie et al.'s (1996) model of professional information seeking. Mapping of the interview questions with the research questions is shown in Appendix 1. All interviews were audio-recorded with participants' consent and later analysed using thematic analysis (Braun & Clarke, 2006).

The interviews were conducted in Malay and subsequently translated into English by the researcher. The translated excerpts were cross-checked with the original transcripts to minimise meaning distortion. Participants were anonymised using codes (T1–T23), and all interview data were analysed using Microsoft Excel. Trustworthiness was enhanced through inter-rater checking and expert review to ensure coding consistency and theme credibility.

RESULTS

i. Demographic information of the participants

Table 1 presents the demographic information of 23 special education teachers (T1–T23). The participants came from diverse backgrounds in terms of age, educational qualifications, and teaching experience. Their teaching experience ranged from one year to over 20 years, offering a broad perspective on information needs at different career stages. While most participants had similar educational backgrounds, several teachers lacked formal training in special education. Access to participants was granted through approval from the Ministry of Education, the Special Education Department, and the school involved.

Table 1: Demographic information of the participants

Participant	Age	Educational background	Year of experience
T1	41	Bachelor of economy	6 years
T2	33	Bachelor of English Education Master of Linguistics	1 years
T3	28	Bachelor of Special Education (deaf)	6 years
T4	36	TESL	9 years
T5	25	Bachelor of Malay Language	1 years
T6	47	Bachelor of statistic	21 years
T7	41	Bachelor of Environmental Engineering	10 years
T8	47	Bachelor of Special Education	21 years
T9	31	Bachelor of Science Education	8 years
T10	40	Bachelor of special education for the deaf	14 years
T11	32	Bachelor of special education for the deaf	13 years
T12	32	Bachelor of special education for the deaf	8 years
T13	42	Bachelor of Special Education for learning disabilities	16 years
T14	42	Bachelor of Special Education for the blind	15 years
T15	33	Bachelor of special education for the deaf	7 years
T16	25	Bachelor of Malay Language	1 years
T17	42	Bachelor of special education for the deaf	14 years
T18	39	Bachelor of Special Education for the blind	14 years
T19	45	Bachelor of special education for the deaf	12 years
T20	42	Bachelor of Early Childhood	17 years
T21	59	Bachelor of Special Education for the blind	36 years
T22	32	Bachelor of special education for the deaf	8 years
T23	32	TESL	7 years

ii. Information needs of special education teachers in Malaysia

The findings indicated four information needs of special education teachers in Malaysia: i) sign language proficiency; ii) inclusive pedagogical knowledge; iii) instructional materials and resources; and iv) understanding student learning behaviour. These information needs reflect teachers' responsibilities in communication, teaching practice, instructional support, and classroom management. The findings are consistent with the Leckie et al. (1996) model, which suggests that professionals' information needs are influenced by their work role responsibilities.

a. Sign language proficiency

Sign language was identified as the most needed information by special education teachers, particularly those teaching students with hearing impairments. Participants stated that they received training in sign language during their undergraduate studies at university and continued to attend in-service training after employment. Sign language is the main means of communication in the classroom for students with hearing impairments; therefore, teachers need to be highly skilled to deliver information effectively in teaching and learning. Several participants echoed this view.

"I think the most important aspect of sign language for me is to deliver what I want them to learn; otherwise, neither of us can achieve a win-win situation, so it feels like failure." (T2)

"I need to be highly skilled in sign language to communicate with and understand my student with a hearing impairment. Sometimes, I update my sign language codes from my students to ensure I am not lagging behind within their community." (T9)

Some participants also reported that the sign language book guidelines were outdated and did not adequately reflect current social and technological developments, which led them to create new codes for sign language because resources are difficult to find online.

"Sign language... because as a special education teacher, we must keep updating it because many new terms are emerging. For example, before the COVID era, we did not have COVID signs; they were like that coat of arms. So, we must get that information, whether through the association or, if the association is in the media, we must look on social media or the internet, and we must find the materials." (T12)

Overall, sign language competency emerged as a key area of information needed among special education teachers, especially those working with students with hearing impairments. The findings suggest that the continuous development of sign language is necessary to meet classroom demands. This reflects how professional information needs to evolve in response to work demands, as described in Leckie's model. The use of AI-assisted tools reflects the changing information needs among special education teachers in the digital era. The findings show that teachers increasingly use generative AI to obtain faster access to teaching ideas and instructional materials. This reduces reliance on traditional search methods, such as manually browsing websites and search engines. The use of AI also reflects a growing shift towards technology-assisted professional practices, where digital tools are integrated into teachers' daily responsibilities.

b. Mastering inclusive pedagogy

Participants highlighted that teaching students with various disabilities requires special education teachers to employ multiple teaching strategies in the classroom. Most students in the special needs school, particularly those with learning disabilities, have very low IQ

levels; at the same time, the role of special education teachers becomes more challenging. As a result, special education teachers must continuously adjust their instructional approaches to ensure teaching and learning are more effective, using a variety of methods to engage students' interest. This was commonly expressed by participants.

"We also must learn from students with different behaviours. For example, if we teach them in a certain way and the students still do not understand, we must change our methods. Sometimes we are limited to two or three techniques that we do not know well, so we must explore other teaching techniques extensively." (T1)

"Learning will not be focused only in the classroom; they will study independently at home, in the dormitory, in all places, not only with the teacher but also through their own vision and observation. I think that is what I need to add: the relationship with behaviour, and my teaching techniques." (T5)

"Because these students... they are different, especially those with learning problems, as they need more attention, so we can plan according to their level. If a hearing student has a problem, it is just a communication problem." (T23)

This indicates that special education teachers require knowledge of inclusive pedagogy, influenced by role-related demands and environmental factors within the classroom. This aligns with Wilson's (1996) model of information behaviour, which suggests that an individual's information needs may arise due to intervening variables such as role responsibilities that must be fulfilled and environmental factors. In this study, these refer to the classroom environment, where teachers are required to manage students with diverse learning needs and abilities.

c. Instructional materials and resources

This sub-theme highlights teachers' perceptions that existing teaching materials are often insufficient to fully address the diverse and individual needs of students with special needs. They reported that appropriate teaching materials are essential for helping students understand learning content. Participants expressed that they often need to search for, adapt, or develop suitable teaching aids that match students' cognitive levels and interests. Thus, the availability and quality of instructional materials were seen as important for maintaining student engagement in learning activities, as one participant stated she needed more instructional materials in braille format.

"Basic information. I usually look at the title of the textbook, then, for example, I want to teach the topic of shapes, so I need information about the shapes in both concrete and abstract forms." (T10)

In addition, some teachers reported the need to develop tactile materials that allow students to feel and experience learning content. One participant described the process of creating teaching aids using simple materials such as cardboard for students with visual impairments.

"Usually, when I am teaching blind students, I need to make my own teaching material. The syllabus is based on a textbook, for example, when teaching animals. My student cannot see, so as a teacher, I need to prepare tangible materials so they can feel and understand the concept. Usually, I use materials like cardboard to build these aids on the cards." (T23)

Furthermore, teachers reported a need for more practical instructional material for the vocational programme, particularly for students with learning disabilities.

"I need information on how to do practical work, because we want to prepare practical work in the workshop." (T17)

Moreover, with technological advancement, special education teachers noted the importance of being skilled in using technology-based teaching materials to ensure that students with special needs are not left behind in technological development. One participant stated:

"Because now, we are exposed to a lot of ICTs, social media, right? So, our students also should not be left out, so that thing has an attraction, so, for special education teachers, we need to learn a lot of applications. These applications are, for example, video editing and image editing, so that we can produce teaching materials that can attract students' interests. That is one of the needs for me." (T13)

These findings suggest that instructional material needs are evolving beyond traditional resources; as a result, teachers require a variety of formats for instructional material, such as printed and digital forms. This indicates that teachers must continuously adapt and be skilled in seeking information resources to apply in their teaching practice.

d. Dynamics of student learning behaviour

It reflects teachers' lived experiences in understanding how students with special needs learn, respond, and engage in the classroom. Teachers described learning behaviour as fluid and highly individual, often influenced by students' emotional states, communication abilities, and learning environments. This dynamic nature requires teachers to remain observant, flexible, and responsive, continuously adjusting their approaches to support meaningful learning experiences. Some participants shared their experiences.

"That means I need to know how he adapts to learning. That is the basic information I need before I enter the class, because I can enter the class assuming he is the same as the other students." (T9)

"What does it mean for a student to have visual impairment? Is he blind, is he short-sighted? What is his level of short-sightedness? If he is blind, it means we know the student needs to use Braille, which means we 100% need to have Braille for him. So, if it is a short-sighted student, what do we provide for him? All the materials are in large print, or if we take them from a book, we need to photocopy them, right, A3 size?" (T18)

In addition, one participant reported that teaching students with multiple disabilities required her to be well prepared not only physically but also mentally to handle this student behaviour.

"I need to be well prepared mentally every time I come to school. Teaching students with multiple needs, such as a few students with learning disabilities with ADHD or autism, there are times they have tantrums in the classroom. I need to ensure the safety of other students, and, of course, I need to be well skilled to calm these students down." (T12)

Thus, teachers require detailed prior information about students before entering the classroom to plan appropriate instructional strategies. This indicates that students' learning

behaviour directly shapes teachers' information needs, particularly in terms of preparation and classroom management. Overall, the findings for research question one indicate that teachers' information needs are influenced by work role responsibilities. However, several limitations should be acknowledged in interpreting these findings. First, the study was limited to the specific educational context and participants involved and may not represent all special education teachers in Malaysia. In addition, the qualitative nature and relatively small sample size limit the generalisability of the findings. The study also relied on participants' self-reported expertise, which may be influenced by personal perspective and experience. Despite these limitations, the study provides useful insight into the information needs of special education teachers.

ii. Information-seeking strategies and sources used to support teaching and learning

This section examines the information search strategies employed by special education teachers to support their teaching and learning practices. The main theme identified is information search strategies, which are further divided into two sub-themes: i) keyword-based search techniques; and ii) experience-based searching strategies.

▪ **Keyword-based search techniques**

Participants reported that one of the main strategies for seeking information is keyword-based searching, where they share their experiences and use specific terms, topics, or titles to locate relevant information resources. This approach is the most commonly used by participants to obtain targeted information quickly. Some participants stated:

"I will write the title, for example, year two, year three, the old house. That is the worksheet itself" (T4)

"If I want to teach a measurement topic, I will type in 'Exercise is measurement.' If I want to be a little more specific, I will type 'measurement in a rectangle,' then I will click to see." (T6)

In addition, some participants described filtering information to narrow down the results.

"So, it comes out a lot; I must filter it. Sometimes I want to narrow it down, so I will type 'fraction worksheet for preschoolers' or 'fraction worksheet for primary schoolers,' like that, to narrow down its scope." (T10)

"We specialise the search again, meaning the year one worksheet is on the topic of animals, and then we elaborate on animals, from farm animals to wild animals, and with captions or matches or whatever spells we mean, we specialise it, and then he has that worksheet." (T19)

"I will just type 'the school environment,' and the picture will come up. Later, I will tell the students to look at this picture and then find this picture near the school." (T22)

This suggests that most special education teachers rely heavily on identifying relevant keywords based on their classroom lessons. Specific terms, such as topic, grade level, and subject area, help teachers refine and narrow down the large amount of information available. The findings also reveal that most of these teachers have limited knowledge of advanced search strategies, such as the use of inverted commas, Boolean operators, or structured search techniques.

“Ouh... I do not know about the search strategy technique in seeking information... usually I just search using the topic, but always the result is too many, so I just take the attractive resources, haha.” (T16)

“I am not sure if there is any specific technique for seeking information. But usually, I use the topic I want to teach as the keyword, but I do not know how to make it short or varied, and the result is sometimes frustrating because it provides information that is not related to my search.” (T19)

As a result, many participants reported that the search results were often not fully relevant or accurate to their needs. Some teachers also frequently encounter a high volume of irrelevant results, which leads them to select only the most visible or top-ranked sources. The reliance on simple keyword-based searching reflects a more task-oriented information behaviour among special education teachers, where information is often sought to address immediate classroom and instructional needs. This suggests that teachers prioritise quick and accessible information retrieval to support daily teaching responsibilities. However, the findings also indicate limited search literacy skills among some teachers, particularly in refining keywords and filtering search results effectively. Consequently, the relevance and accuracy of retrieved information may be affected, potentially limiting the effectiveness of information use in educational practices.

▪ ***Experience-based searching strategies***

The second strategy adopted by special education teachers shows that, while some mention using a keyword-based approach, other participants reported that they seek information based on their own experience and prior knowledge. Some participants search for information according to what they already know or believe to be relevant to their teaching needs.

“I have been in this field for more than 10 years, and I only search for information on this education website. From there, I adjust my experience to meet the students' needs.” (T21)

“I have already been teaching for 14 years, so most of the resources I search for are based on my experience of what is suitable for the students. For example, I do not search for teaching methods or resources because I am teaching the same thing every day, so everything is in my head, haha.” (T14)

This indicates that information needs are also influenced by individual experience and cognitive judgement, where teachers make decisions based on what they perceive as useful. This also reflects individual and cognitive factors in Wilson's model, where personal experience and knowledge influence how information is sourced and selected.

Information sources

This section presents the findings related to research question 2, which explores the sources used by special education teachers to support their teaching and learning practices. The main theme is information sources, categorised into four sub-themes: internet-based sources, social networking sites, messaging applications, and artificial intelligence tools.

▪ **Internet-based sources**

Participants reported that internet-based sources are among the main platforms used to search for teaching materials. These sources include Google, official websites, blogs, and YouTube, which are commonly preferred for finding lesson ideas, worksheets, and instructional materials, and are easy to access. One participant stated:

“Google... because everything is at your fingertips, right?” (T2)

Another participant explained:

“Just YouTube. YouTube has a lot of material that people share. Like me, most teachers – at least 50% of them – must have their own YouTube channel related to PDPC. PDPC was the first; we had PDPC, right? So, most teachers at least create their own YouTube channel to upload their teaching videos and share them with parents. So, parents can easily access and review them repeatedly.” (T13)

This shows that special education teachers rely on internet search engines and online platforms, as these are quick and accessible sources of information that allow teachers to obtain a wide range of material to support their teaching and learning in the classroom.

▪ **Social networking sites**

Participants also reported that social networking sites such as Facebook, Instagram, and TikTok are used as informal sources to obtain teaching ideas and share educational content with other teachers. These platforms provide teaching tips and visual learning materials. A few participants stated:

“On Facebook, many of my senior teachers share their experiences and outcomes, so when we read, we can relate to what is happening at school.” (T5)

“I always use TikTok to get ideas on student activities. There are many special education teachers who share a variety of sources that I use and apply to my students.” (T8)

This indicates that social media is a convenient and informal space for sharing and obtaining information related to special education. These platforms support peer learning through the exchange of ideas and experience. The findings also suggest that social media platforms function beyond basic information sources. They serve as informal professional learning communities where special education teachers exchange teaching ideas, instructional materials, classroom experiences, and peer support related to special education practice. This reflects the growing role of digital social platforms in supporting collaborative and experience-based professional learning among teachers.

▪ **Artificial intelligence**

Two participants reported using artificial intelligence tools such as ChatGPT to support their instructional preparation. The use of AI reflects a shift towards a more technology-driven approach in information needs practice in special education.

“The GPT chat for pictures is there. Now we have started using it too.” (T19)

“I do use ChatGPT to gain some ideas to make my instructional material more creative for the students' needs.” (T2)

Overall, special education teachers use a combination of search strategies and diverse digital sources to support their teaching and learning practice, reflecting a growing reliance on accessible and technology-driven information.

iii. Challenge in seeking and accessing information

The main challenges in information seeking and access are: i) poor network infrastructure/coverage; ii) limited special education resources; and iii) information quality and reliable sources.

▪ **Poor network infrastructure/coverage**

This is a common challenge reported by teachers in both urban and rural areas. Many teachers indicated that unstable internet connections or limited network coverage often hinder their ability to access online teaching materials and resources efficiently. This issue affects not only rural schools, where connectivity is expected to be weaker, but also urban schools, demonstrating that network-related challenges are widespread and not confined to a specific location. As stated by some participants:

“Internet line is always slow” (T4)

“Limited internet accessibility” (T6)

Some participants also stated:

“Slow... then, just buffering, and one more thing, we have a limited internet network at school” (T9)

“If we are looking for e-books, the internet must be in a stable state. Even if the school provides it, sometimes the system is not very good.” (T13)

▪ **Limited special education resources**

Limited special education resources reflect teachers’ concerns about the scarcity and inadequacy of teaching materials tailored for students with special needs. Many teachers reported that available resources were often generic, outdated, or insufficient to address the diverse learning requirements of their students, especially resources for the deaf. This limitation forces teachers to improvise or adapt materials themselves, increasing their workload and highlighting the critical need for more accessible, varied, and context-specific resources in special education settings. As stated by some participants:

“Very limited resources for the deaf” (T8)

“In Malaysia, for example, there is very little research on deaf students. And teaching aids for deaf students, for example, sign language communication, are very limited.” (T11)

“It is not easy to find that information because it is limited. There are not many sources we can get; even books might be from overseas. So, if you want to find materials about special education, there are not many.” (T18)

“Materials for special education are not enough. They are quite limited, especially if I take an example, in the library, materials for special education are quite scarce.” (T21)

This indicates issues related to sources characteristics in information behaviour model by Wilson (1997), particularly the limited availability and suitability of resources, which affect teachers' ability to obtain relevant information for special educational needs.

▪ **Information quality and reliable sources**

Information quality issues and reliable sources highlight the difficulties special education teachers face in identifying trustworthy, high-quality information. Teachers reported challenges such as outdated materials, inconsistent content across sources, and a lack of resources specifically designed for students with special needs. These issues make it difficult for teachers to confidently select and apply information in their teaching, often requiring them to cross-check multiple sources or rely on peer recommendations, which increases the time and effort needed to ensure accurate and relevant instructional materials. As stated by some participants:

“It is hard for us to really find resources that follow the syllabus, and the level is low; if YouTube is really following the mainstream syllabus, then we must think about how to lower it” (T7)

“Maybe we are looking for the wrong thing; we look for some information, and irrelevant information comes out” (T17)

“So, when we do not find what we are looking for, we eventually get lost. So, when we are lost, it will be like, is this one okay to use? Most of the time, we are not satisfied... not satisfied with the results we get, maybe we must open until page 5, page 6 to find it, right?” (T19)

“Sometimes it is always different, we look for something else and something else comes out” (T20)

Overall, special education teachers face challenges related to connectivity, limited resources, and information quality, which highlight barriers that may affect the effectiveness of teaching and learning in special education by limiting access to a variety of appropriate resources.

DISCUSSION

Information needs of special education teachers in Malaysia

The findings show that teachers' information needs are strongly shaped by classroom responsibilities, communication demands, and diverse student learning needs. According to Erlianti et al. (2022), professional information needs are closely related to work-role responsibilities. The need for sign language competency highlights how communication demands influence teachers' information practices, supporting Leckie et al. (1996) explanation that professional roles shape information needs. Similar findings were reported by Dahlqvist (2021), who found that teachers' information practices are influenced by practical classroom demand and professional contexts.

The findings also indicate that teachers continuously require updated pedagogical knowledge, instructional material, and understanding of student learning behaviours to support diverse classroom needs. This reflects Wilson (1997), who explains that information needs are influenced by contextual and environmental factors. Previous studies similarly reported that teachers often face challenges related to pedagogical adaptation, access to

instructional resources, and classroom interaction in inclusive education settings (OECD,2024; Julien et al., 2018)

Information search strategies

The findings show that special education teachers use both keyword-based and experience-based search strategies to support teaching and classroom management. Most teachers rely on simple keyword searches using basic terms or lesson topics, although many report difficulties in filtering and refining search results. This reflects Wilson's (1997) model, where information seeking is influenced by immediate work-related needs and limited search skills. Teachers also depend on familiar sources and prior teaching experience when searching for information, consistent with Leckie et al.'s (1996) explanation that professional role and experience shape information needs.

The findings also show that teachers use various digital information sources, particularly internet-based platforms, social media, and artificial intelligence tools such as ChatGPT. These sources are preferred because they provide fast and accessible support for teaching practice. Similar studies have reported that digital platforms and online communities play an important role in educational information sharing and professional learning (Montenegro-Rueada et al., 2023; Hanid & Warrich, 2023; Lytan & Tariang, 2017). The findings further reflect the growing role of AI assistance in supporting teachers' access to teaching ideas and instructional resources.

Challenges in information seeking and access

The findings show that special education teachers face several challenges in information seeking and access, particularly poor network infrastructure, limited special education resources, and issues related to information quality and reliability. Poor network coverage affects teachers' ability to access information quickly, especially when using online platforms and digital resources. This suggests that access to information is influenced not only by individuals' skills, but also by technological and environmental factors. In this world of information overload, misinformation is one of the key barriers to seeking information (Augustaitis et al., 2021). The findings also reveal that teachers face difficulties in obtaining sufficient special education resources. Limited availability of specialised materials forces teachers to depend on informal sources or self-developed materials. This reflects continuing gaps in inclusive education support. In addition, teachers report concerns regarding information quality and reliable sources, particularly when using online platforms and social media. Teachers sometimes struggle to evaluate which information is accurate, relevant, and trustworthy. Similar findings were reported by Kiili et al. (2021), who found that evaluating online information remains a major challenge in educational information practices. Overall, the findings suggest that challenges in information seeking are influenced by both structural limitations and information skills issues, which may affect the effectiveness of teaching and learning in special education classrooms.

CONCLUSION

This study explored the information needs of special education teachers in Malaysia. The findings suggest that the teachers' information practices are strongly influenced by professional responsibilities, classroom diversity, and institutional support. The study also supports the relevance of Wilson (1997) and Leckie et al (1996) model in understanding professional information behaviour within special education settings. The findings contribute to the LIS and education field by highlighting the importance of information literacy support,

accessible educational resources, and collaboration between schools and information professionals. However, the study is limited to a small qualitative sample within the Malaysian context. Future studies may involve broader samples or different methodological approaches to further examine information behaviour in special education settings. Overall, this study provides important insights into the growing importance of information access and institutional support in supporting inclusive education practices.

ACKNOWLEDGEMENTS

No grant from any public, commercial, or non-profit funding agency was offered for conducting this research.

The authors acknowledge the use of OpenAI's ChatGPT for language and grammar improvement during the preparation of this manuscript. All content was reviewed and verified by the authors.

CONFLICT OF INTEREST

The authors declared no potential conflicts of interest with respect to the research, authorship, and /or publication of this article.

ETHICAL APPROVAL AND INFORMED CONSENT STATEMENTS

This study was approved by the Ministry of Education Malaysia through the Educational Research Application System (ERAS) (Reference No: KPM. 600-3/2/3-ERAS (17186). Permission was also obtained from the Department of Special Education and the schools involved. All participants provided informed consent before participation, and their confidentiality and anonymity were strictly maintained throughout the study.

AUTHOR CONTRIBUTIONS

Conceptualization: [All authors]; Methodology: [Azhar, N.A.M]; Formal analysis and investigation: [Azhar, N.A.M]; Writing - original draft preparation: [Azhar, N.A.M]; Writing - review and editing: [All authors].

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Appendix 1: Mapping of research questions with interview questions

Research questions	Interview questions
1. What are the information needs of special education teachers in Malaysia?	<ul style="list-style-type: none">▪ As a special education teacher, what is the daily task that you need to perform?▪ What is the type of primary information did you need as a special education teacher?
2. What information-seeking strategies and sources do special education teachers use to support their teaching and learning?	<ul style="list-style-type: none">▪ Do you prefer online or printed information?▪ Can you share what sources you often use and why?▪ Can you share how you search for the information needed? Do you have any strategies?
3. What challenges do special education teachers encounter in seeking and accessing information?	<ul style="list-style-type: none">▪ Can you describe the challenges you face when seeking the information you need?
