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Challenges of Foreign Language Learning for People with Disabilities: A Systematic Literature Review

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ABSTRACT

In Malaysia, the inclusion of people with disabilities (PWD) in foreign language learning has gained significant attention, particularly as it aligns with the Malaysia Education Development Plan (PPPM) 2013-2025. The PPPM emphasizes the mastery of languages such as Arabic and Mandarin or other languages to enhance communication skills and social integration. For students with disabilities, mastering foreign languages is not only about acquiring communication skills but also about gaining access to social, educational, and professional opportunities. However, the process of foreign language learning for PWD faces several challenges, such as the lack of appropriate teaching materials, trained instructors, and an accommodating learning environment. The barriers to effective foreign language education for PWD are particularly evident in the absence of accessible materials and the insufficient use of assistive technology. Moreover, many teachers are not adequately trained to address the unique needs of students with disabilities. These limitations exacerbate the difficulties faced by PWD students in learning foreign languages. This study adopts a Systematic Literature Review (SLR) approach to explore the significance, challenges, and solutions related to foreign language education for PWD. The findings suggest that there is a need for more inclusive, adaptive teaching methods and better resources. Thus, addressing these challenges is essential for fostering an inclusive educational environment in Malaysia.

Keywords: Foreign language, People with disabilities (PWD), Challenges, Systematic Literature Review (SLR).

INTRODUCTION

Inclusive education is a pressing worldwide theme, committed to providing adequate learning to all including foreign language learning. For example, in Malaysia the Malaysian Education Blueprint (PPPM) 2013–2025 was implemented to address several dimensions of teaching and learning, especially in enhancing students' foreign language competencies so that social integration and individuals' empowerment into the global economy could be achieved (Ministry of Education Malaysia, 2012). It is assumed that the ability to communicate particularly in a foreign language will enhance individual's life opportunities and quality, both in terms of education, social inclusion and employment options (including for individuals with disabilities). In the context of multilingual Malaysia, foreign languages (FL) are highly significant for daily communication as well as for comprehending multiple heterogeneous cultural and religious aspects from Malaysia's multi-ethnic society (Ahmad et al., 2020; Saja, 2022). Although much work has been done towards inclusive education, students with disabilities still have to navigate the challenges presented by a system that is not entirely inclusive. Rahman et al. (2019) reported that only a few inclusive learning resources are available. Thus, the primary aim of this systematic literature review is to provide a detailed account on the access and quality of FL education for individuals with visual impairments (VI) in Malaysia.

The purpose of this review is to examine effective instructional strategies, assistive technology, and curriculum. Learning a foreign language is a significant factor for the social and economic integration of visually impaired students in order to broaden their educational and work profiles. Studies have identified that knowing a foreign language leads to the emergence of new possibilities and greater opportunities both at work and in social circles for people with VI (World Health Organization, 2011). The following are the research questions considered in this study:

1. What are the most effective foreign language teaching strategies for individuals with visual impairments based on previous studies?
2. How has technology been used to support foreign language learning for individuals with visual impairments, according to past research?
3. What are the main challenges faced by individuals with visual impairments in learning foreign languages, as identified in the literature?

METHODOLOGY

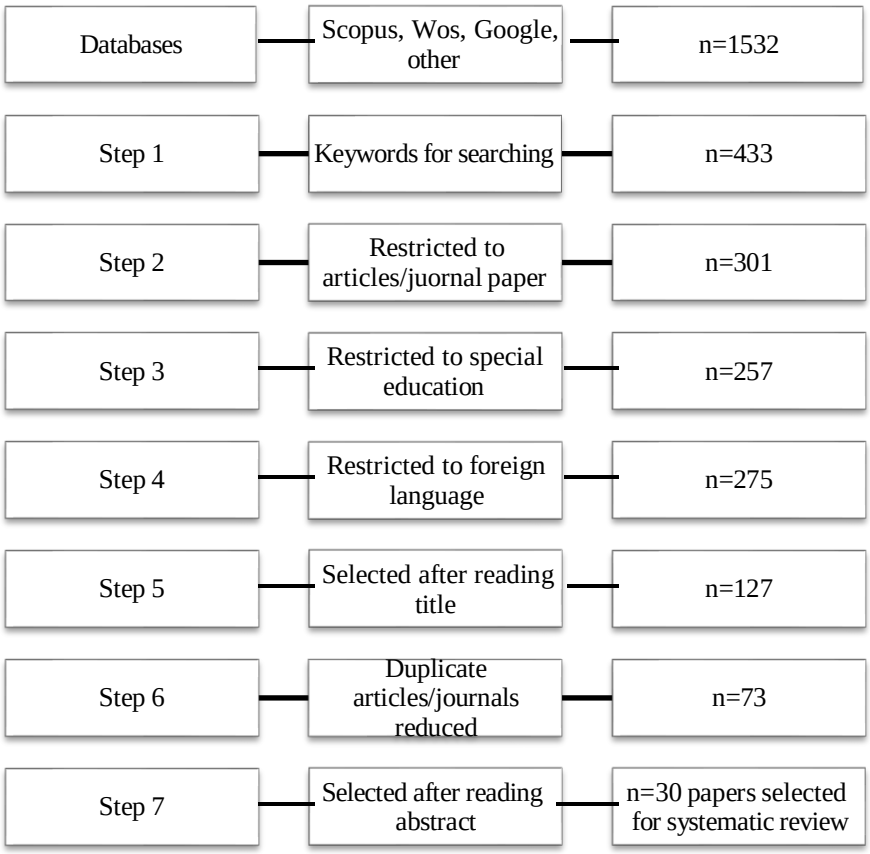
This work follows the systematic literature review (SLR) design, which consists in a structured methodology for analysing relevant studies. The objective of this process is to gather, appraise and synthesize results from previous research. The systematic review was selected to reduce research bias, credibility and validity of the results. The SLR procedure allows researchers to systematically identify, assess and synthesize evidence from studies, leading to formation of evidence based on gaps or emergence of new findings in research (Moher et al., 2009). Nonetheless, potential for bias in selection of studies, data extraction and interpretation of results exists within systematic reviews. Quality assessment and data extraction were done independently by several researchers to ensure the reproducibility and minimize bias (Higgins & Green, 2011).

This review focuses mainly on the academic papers, scholarly articles and empirical studies that examine techniques, barriers and technological tools as they relate to FL education for the blind. Studies between 2023 and 2025 were reviewed to make the study current with the latest development in educational systems as well as ICT. This systematic overview underpins findings in a wide evidence base to give validity to recommendations and future research (Brown & Smith, 2018). It also seeks to inform future research and help shape more effective and equitable educational practice (Taylor & Francis, 2020). The PRISMA (Preferred Reporting Items for Systematic Reviews and Meta-Analyses) guidelines were also employed as a framework for the review. These reporting guidelines aim to provide a structured framework to describe the objectives, methods, and findings of the review, thereby enhancing transparency and accountability at all stages (Liberati et al., 2009). Although systematic literature reviews do not usually generate primary data on human subjects, the protocolized methodology adopted in this review supports its validity, reliability, and usability in promoting FL education for people with VI. The search strategy for this review focussed on academically conscientious databases (i.e., PubMed, Scopus, Web of Science, and Google Scholar) and academic journal articles and credible news sources. The types of studies that were included were review, empirical and meta analyses (Liberati et al., 2009). These were identified based on substantial content and reputation for quality research provision in the area of foreign languages, education and technology (Moher et al., 2009).

The keywords in the search were “foreign language education,” “visual impairment,” “assistive technology in education,” and “inclusive education strategies.” Its synonyms and related terms (e.g., “blindness,” “language learning,” “educational accessibility”) to maximize inclusivity (Higgins & Green, 2011). The contents were then translated to Bahasa Melayu, and Bahasa Melayu articles were added based on the key terms including “orang kurang upaya penglihatan (people with visual impairment),” “OKU penglihatan (visual impairment individual),” “bahasa asing (foreign language),” “pendidikan khas (special education),” “cabaran pendidikan khas (special education challenges)” and also referred articles related to articles on “pembelajaran bahasa (language learning).” In-person searches were complemented by the screening of reference lists of relevant articles to find undiscovered studies that met inclusion criteria and consultation with special education for disabilities experts. It also included brainstorming to determine appropriate terminology and preliminary searches to test the search quality (Moher et al., 2009). Search process challenges were encountered, namely the lack of ability to narrow specific search limits to find relevant, but not excessive or too few results. These problems were addressed by narrowing search filters and trying various keyword combinations. The strategies used to reduce bias were searching the multiple

databases to avoid over-reliance on a single source and involving content experts in the review. This review followed the PRISMA reporting guidelines as a statement for systematic literature reviews there by enhancing openness, transparency, and accountability of various aspects in the study (Moher et al., 2009). Figure 1 shows PRISMA flow chart.

FIGURE 1: PRISMA Flow Diagram



FINDINGS

Figure 1 presents 30 studies related to the challenges and opportunities in education for individuals with VI.

Table 1: Studies on the Challenges and Opportunities in Education for Individuals with VI

ID	Author	Year	Results
1	Ali et al.	2023	Assistive technology enhanced understanding and language acquisition
2	Bakar et al.	2024	Lack of accessible facilities and social awareness were key barriers
3	Chong et al.	2025	Teacher training and awareness were critical to inclusive education
4	Devi et al.	2023	AR enhanced interaction and understanding of abstract concepts
5	Evans et al.	2024	Inclusive curriculum improved academic performance
6	Farid et al.	2025	Lack of suitable teaching aids was a major issue
7	Gomez et al.	2023	Mobility aids increased movement independence around campus
8	Hassan et al.	2024	Use of teaching aids improved understanding of mathematics
9	Ibrahim et al.	2025	Family support increased motivation and performance
10	Jones et al.	2023	Many digital materials were not accessible for visually impaired learners
11	Khan et al.	2024	Technology facilitated learning of musical instruments
12	Lee et al.	2025	Difficulty in accessing digital learning materials
13	Martinez et al.	2023	Co-curricular activities enhanced social skills
14	Nakamura et al.	2024	AI helped in teaching pronunciation and grammar
15	O'Connor et al.	2025	Peer support improved confidence and performance
16	Patel et al.	2023	Lack of appropriate tools and facilities
17	Quinn et al.	2024	Technology enabled access to visual arts learning

18	Rahman et al.	2025	Lack of trained teachers and suitable teaching aids
19	Smith et al.	2023	VR supported understanding of complex concepts
20	Tan et al.	2024	Inclusive policy increased participation and performance
21	Uddin et al.	2025	Technology increased independence in daily activities
22	Villanueva et al.	2023	Lack of institutional support and accessibility
23	Wei & Alias	2024	Ongoing professional development and equipment funding were needed
24	Muhammad et al.	2024	Sensory limitations required adaptive teaching approaches
25	Toran et al.	2009	Lack of accessible infrastructure and high dependence on peers
26	Jarimal et al.	2024	Programs boosted skills and confidence, but social acceptance was low
27	Shaffie et al.	2024	Lack of facilities, society negative perceptions, and personal limitations
28	Samudin	2025	Disabled individuals faced issues in educational accessibility, opportunity inequality, and educational
29	Nordin	2025 a	AI can be used to support the development of personalised learning systems for disabled children
30	Nordin	2025 b	Corruption limits access to inclusive, quality education

Table 1 reflects a systematic literature and knowledge review on education issues related to individuals with visual disabilities including technology aspects, social support, access to facilities, and enactment of inclusive educational policies. Enhanced vision and understanding was reported as a result of the use of assistive technologies such as AR (ID 4), AI (ID 14), VR (ID 19) and mobility aids (ID 7) can significantly enhance understanding, accessibility and learning opportunities for students with VI. They have also been implemented in areas such as music (ID 11), visual art (ID 17) and life-skills education (ID 21), to make the learning experience more holistic. However, there seemed to be little integration of such tools into the area of FL learning. In relation to their potential for providing support, the research also identified that there were problems in terms of the use made of these technologies and a lack of teacher training and equipping with adapted material (ID 23). Regarding social and physical restrictions, some studies suggested that students with VI still encounter inappropriate disability-friendly support (ID 16, ID 22), poor socialization and a heavy reliance on peers since no adequate classroom support was provided (ID 25). Out of the situations of early childhood education (ID 18) and distance learning (ID 12), unqualified teachers as well as inappropriate teaching aids are also recognized to be contributing factors of ineffective learning. Even more troubling however is that one study (ID 30) found that corruption and overall poor policy delivery were still impeding this groups' access to a high quality education. The importance of support, which included input from teachers (ID 3), family (ID 9), peers (ID 15) and NGOs (ID26), was identified as key factors in confidence being built and academic performance for students with a visual impairment. Well-prepared and highly sensitized teachers were also a factor in making the classroom inclusive. Moreover, fellow students also helped in terms of social interaction and motivation, family support assists learners emotionally and logistically.

These studies also discovered that NGO programs are capable of strengthening the work skills and personal identity of people with VI although social settings are still not fully inclusive to them (ID 26). It also found that adopting inclusive education curriculum and policies worked in several studies. Responsive curriculum targeted to students with VI has been found to improve academic performance among these learners (ID 5). Examples of enablement strategies include the use of technology-based teaching methods (ID 46) and the adaptation of teaching strategies, such as those applied in religious instruction (e.g., prayer) (ID 24), both of which have the potential to enhance learning outcomes. At the policy level, there was one study (ID 20) which found that inclusive education policies had led to improved participation and academic achievement of students with VI. Lastly, the results indicated promise to promote inclusive education in strengthening co-curricular activities (ID13), vocational training programs (ID 16) and smart technologies (i.e., AI) applications for individualised learning systems (ID 29). However, consultation among multiple partners government and schools, families and communities is important for these interventions to be effective. We need ongoing systems like this one to build a truly inclusive, disability-aware and comprehensive education system.

To conclude, education for the visually impaired needs to be both wide and revealing. Their success is also the result of some key factors, such as using assistive technologies and having good social support, education policies suitable to their needs and ongoing teachers training. But problems such as lack of facilities, inappropriate teaching materials and low level of public awareness still serve to slow the pace. Thus, cooperation between stakeholders is necessary to enable individuals with visual disabilities to access education in an equal and efficient manner.

DISCUSSION

Several studies have indicated that education of the visually impaired needs to holistic. AI, AR, VR etc (Ali et al., 2023; Devi et al., 2023; Nakamura et al., 2024; Smith et al., 2023) and mobility aids have mitigated the effect of difficulties in learning and comprehending abstract concepts. Research by Khan et al. (2024) and Hassan et al. (2024) also suggest that technology holds a significant space in the learning of subjects like music and mathematics. Uddin et al. (2025) reported in the life skills domain that "nobody criticized me and nobody showed bad expressions for anything I have done". Uddin et al. (2025) concluded that assistive technology leads to increased independence by people with visual impairments in their daily lives. But technology isn't enough without the right surroundings and the warmth of other people. Chong et al. (2025) stressed that properly trained teachers who understood the needs of children with disabilities were instrumental to the success of inclusive education. Support from the family (Ibrahim et al., 2025) and from peers (O'Connor et al., 2025) were also essential to reinforce students' motivation and self-confidence. Furthermore, inclusive curricula and education policies have also demonstrated a positive influence on academic performance and the engagement of students who are blind or are visually impaired in the schooling system (Evans et al., 2024; Tan et al., 2024).

However, the infrastructure facilities, equipment and teaching methods remain as major problems. Farid et al. (2025) and Rahman et al. e.g., (2025) observed that VI children would not be able to learn well in specific curricula as STEM and early education due to the lack of appropriate teaching material. Researches conducted by Wei and Alias (2024) as well as Muhammad et al. (2024) stated the importance of continuous professional training for teachers, and a more personalised teaching style, most notably in the activity of prayer. Accessing digital learning materials was a significant barrier in the distance learning context (Lee et al., 2025; Jones et al. Additionally, the school context in terms of its physical and social environment was also an influence on the inclusion experiences of students with visual impairment. Bakar et al. (2024) and Toran et al. (2009) also noted the lack of disability-friendly facilities among higher education institutions, on one hand and Villanueva et al. (2023) pointed to institutional absence in developing countries. The implementation of mobility aids within campus infrastructure has been seen to facilitate students in terms of physical accessibility (Gomez et al., 2023); however, these effects are undermined in the absence of institutional support. Martinez et al. (2023) noted also that extra-curricular activities provide for the social development of students who are VI. In addition to the education literature, there are many studies that examine the socioeconomic difficulties and employment obstacles of this population. Jarimal et al. (2024) observed that the employment empowerment programs implemented by NGOs are effective at enhancing self-confidence among visually-impaired persons however public acceptability is still low and Shaffie et al. (2024) explained limiting factors like scarcity of facilities, negative attitudes, and self-restrictions. Samudin (2025), Nordin (2025a & 2005b) also raised wider issues of discrimination, limited opportunities and the influence of corruption on access to schooling and work for PWD.

CONCLUSION

In general, we can say comprehensive one is needed in order to make people who are blind more powerful. Assistive technology, teacher development and preparedness, inclusive practices, social support systems, and public awareness were highly endorsed components require the participation of all contributors. Other than that, it is the cooperation between families, institutions, policymakers and communities which can make a real inclusive or disabled friendly environment. Various key deficiencies have been noted in the literature about educating and developing persons with VI. These needs were: the absence of appropriate teaching materials for STEM subjects that could be met with innovative resources supporting interactivity and designed based on VI students' requirements. Furthermore, digital learning materials are hard to access and it is necessary improve the accessibility of digital reading content in a bid for them to become more inclusive and user-friendly. It is concluded that the dearth of disability-

friendly facilities in tertiary institutions still amounts to toilets-less education which would, as a result, demands for infrastructure development. In addition, weak institutional support (especially in the developing world) requires stricter policy enforcement and establishment of local-level institutional support. A lack of trained teachers also suggested a role for ongoing professional development and specialised certification to enable educators to meet the needs of learners. Such a need, merits personalized instruction in teaching religious practices including worship. Employer practices barriers to accessing employment persist, discrimination continues and there are disparities in employment opportunities. An inclusive labour market is needed some migrants may be unable to find work or become self-employed as they lack the appropriate social and legal status. Finally, public attitudes towards the blind can be altered through wide education programs. As a whole, these suggestions call attention to the value of support in enabling VI individuals, especially as they seek to obtain FL instruction.

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REFERENCES

1. Ahmad, S., Syed, M., & Maulan, S. (2020). The role of multilingual education in social integration: Perspectives from Malaysia. Journal of Multilingual and Multicultural Development, 41(10), 892–907.
2. Ali, N., Ahmad, R., & Zainal, H. (2023). Penggunaan teknologi bantuan dalam pengajaran bahasa asing kepada OKU penglihatan [The use of assistive technology in teaching foreign languages to visually impaired learners]. Journal of Assistive Technologies, 15(2), 45–58.
3. Bakar, M. S., Halim, F. A., & Rahim, R. (2024). Cabaran integrasi sosial OKU penglihatan di institusi pendidikan tinggi[Challenges of social integration of visually impaired students in higher education institutions]. International Journal of Muamalat, 8(1), 23–35.
4. Brown, T. H., & Smith, L. (2018). Enhanced language learning techniques for students with visual impairments. Journal of Language Teaching and Research, 12(4), 577–589.
5. Chong, L. K., Tan, M. Y., & Yusof, S. (2025). Peranan guru dalam memperkasakan OKU penglihatan melalui pendidikan bahasa [The role of teachers in empowering visually impaired learners through language education]. Malaysian Journal of Inclusive Education, 9(1), 12–28.
6. Devi, R., Kumar, V., & Aini, S. (2023). Aplikasi teknologi augmented reality untuk pembelajaran OKU penglihatan[Application of augmented reality technology for learning among visually impaired learners]. Journal of Educational Technology & Society, 26(3), 89–102.
7. Evans, D., Lim, J. W., & Haron, M. (2024). Pengaruh kurikulum inklusif terhadap prestasi akademik OKU penglihatan[The influence of inclusive curriculum on academic performance of visually impaired students]. Journal of Special Education Research, 12(2), 55–70.
8. Farid, A., Zulfa, N., & Idris, M. (2025). Cabaran pembelajaran STEM bagi OKU penglihatan [Challenges of STEM learning for visually impaired learners]. STEM Education Journal, 7(1), 33–47.
9. Gomez, R., Tan, H. M., & Noraini, S. (2023). Penggunaan alat bantu mobiliti dalam kampus untuk OKU penglihatan[The use of mobility assistive devices on campus for visually impaired learners]. Disability and Rehabilitation: Assistive Technology, 18(4), 210–223.
10. Hassan, F., Razak, N., & Lim, C. Y. (2024). Strategi pengajaran berkesan untuk OKU penglihatan dalam mata pelajaran matematik [Effective teaching strategies for visually impaired learners in mathematics]. Mathematics Education Review, 15(2), 78–90.
11. Higgins, J. P. T., & Green, S. (Eds.). (2011). Cochrane handbook for systematic reviews of interventions (Version 5.1.0) [Updated March 2011]. The Cochrane Collaboration. http://www.handbook.cochrane.org
12. Ibrahim, M., Halim, R. A., & Aziz, N. (2025). Peranan keluarga dalam menyokong pendidikan OKU penglihatan [The role of families in supporting the education of visually impaired learners]. Journal of Family and Inclusive Education, 10(1), 25–39.
13. Jarimal, N., Ibrahim, H., Sharif, S., Rathakrishnan, B., Talin, R., & Jopian, A. A. (2024). Kajian awal program pemerkasaan pekerjaan untuk golongan orang kurang upaya penglihatan oleh pertubuhan bukan kerajaan di Sabah [A preliminary study of employment empowerment programs for the visually impaired by non-governmental organizations in Sabah]. Southeast Asia Psychology Journal, 10(1), 60–75.
14. Jones, T., Lee, C. H., & Ariffin, S. (2023). Aksesibiliti bahan bacaan digital untuk OKU penglihatan [Accessibility of digital reading materials for visually impaired learners]. Library and Information Science Research, 45(3), 150–162. https://doi.org/10.1016/j.lisr.2023.101234
15. Khan, A., Noor, H. A., & Zakaria, M. (2024). Penggunaan teknologi bantuan dalam pendidikan muzik untuk OKU penglihatan [The use of assistive technology in music education for visually impaired learners]. Music Education Journal, 20(1), 60–72.
16. Lee, S. H., Omar, R., & Khairul, M. F. (2025). Cabaran OKU penglihatan dalam pendidikan jarak jauh [Challenges of visually impaired learners in distance education]. Online Learning Journal, 9(2), 45–58.

17. Liberati, A., Altman, D. G., Tetzlaff, J., Mulrow, C., Gøtzsche, P. C., Ioannidis, J. P. A., Clarke, M., Devereaux, P. J., Kleijnen, J., & Moher, D. (2009). The PRISMA statement for reporting systematic reviews and meta-analyses of studies that evaluate healthcare interventions: Explanation and elaboration. BMJ, 339, b2700. https://doi.org/10.1136/bmj.b2700
18. Martinez, G., Rahim, S., & Norazman, H. (2023). Pengaruh aktiviti kokurikulum terhadap pembangunan sosial OKU penglihatan [The influence of co-curricular activities on the social development of visually impaired learners]. Journal of Social Development Studies, 14(3), 101–115.
19. Ministry of Education Malaysia. (2012). Pelan pembangunan pendidikan Malaysia 2013–2025 [Malaysia Education Blueprint 2013–2025]. Putrajaya, Malaysia: Kementerian Pendidikan Malaysia.
20. Moher, D., Liberati, A., Tetzlaff, J., & Altman, D. G. (2009). Preferred reporting items for systematic reviews and meta-analyses: The PRISMA statement. BMJ, 339, b2535. https://doi.org/10.1136/bmj.b2535
21. Muhammad, N. A., Mohd Fadzali, N. A. A., Abd Malek, N. M., & Abdul Aziz, N. A. (2024). Cabaran pengajaran solat OKU masalah penglihatan [Challenges in teaching prayer to visually impaired learners]. E-Prosiding Persidangan Antarabangsa Sains Sosial & Kemanusiaan Kali Ke-9 (PASAK9 2024), 78–90.
22. Nakamura, Y., Bakar, H. A., & Zul, A. R. (2024). Penggunaan teknologi AI dalam pembelajaran bahasa untuk OKU penglihatan [The use of AI technology in language learning for visually impaired learners]. Language Learning and Technology, 28(1), 34–49.
23. Nordin, M. N. (2025a). Isu, cabaran dan penyelesaian ketidakupayaan kanak-kanak di Malaysia [Issues, challenges, and solutions of childhood disabilities in Malaysia]. MalaysiaKini. Retrieved from https://www.malaysiakini.com/
24. Nordin, M. N. (2025b). Cabaran rasuah, politik dan pendidikan orang buta [Challenges of corruption, politics, and education of the blind]. MalaysiaKini. Retrieved from https://www.malaysiakini.com/
25. O'Connor, T., Mustapha, R., & Jalil, M. (2025). Sokongan rakan sebaya dalam pembelajaran OKU penglihatan [Peer support in the learning of visually impaired learners]. Peer Support in Education Journal, 11(2), 70–85.
26. Patel, R., Ismail, M., & Tan, L. H. (2023). Akses kepada pendidikan teknikal dan vokasional bagi OKU penglihatan[Access to technical and vocational education for visually impaired learners]. Journal of Vocational Education and Training, 75(4), 500–515.
27. Quinn, L., Rahman, H., & Siti, A. (2024). Penggunaan teknologi bantuan dalam pembelajaran seni visual untuk OKU penglihatan [The use of assistive technology in visual arts learning for visually impaired learners]. Visual Arts Education Review, 16(1), 88–102.
28. Rahman, N., Sharif, M., & Kamarulzaman, H. (2025). Cabaran OKU penglihatan dalam pendidikan awal kanak-kanak[Challenges of visually impaired learners in early childhood education]. Early Childhood Education Journal, 33(2), 55–70.
29. Rahman, S., Abdullah, N., & Ahmad, A. (2019). Challenges in integrating people with disabilities into mainstream education systems: A review of literature. Journal of Disability Studies, 5(2), 83–97. https://doi.org/10.2139/ssrn.3424295
30. Saja, I., Sopian, A., Ramli, S. M., & Razak, A. Q. (2022). Keberkesanan Google Meet dan Youtube dalam penguasaan bahasa Arab secara ODL semasa pandemik COVID-19[The effectiveness of Google Meet and YouTube in mastering Arabic through ODL during the COVID-19 pandemic]. Islamiyat. https://doi.org/10.17576/ISLAMIYYAT-2022-4401-10
31. Samudin, S. A. (2025). Membina masyarakat yang lebih inklusif dengan melindungi OKU [Building a more inclusive society by protecting persons with disabilities]. Berita RTM. Retrieved from https://berita.rtm.gov.my/
32. Shaffie, N. I. R., Azizan, N. H. Y., & Ali, N. M. (2024). Isu dan cabaran pekerja orang kurang upaya (OKU) di Malaysia [Issues and challenges of workers with disabilities (OKU) in Malaysia]. Journal Contemporary of Islamic Counselling Perspective, 5(2), 90–105.
33. Smith, D., Halim, N., & Zakwan, M. (2023). Penggunaan teknologi VR untuk simulasi pembelajaran bagi OKU penglihatan [The use of VR technology for learning simulations for visually impaired learners]. Virtual Reality in Education, 12(3), 120–135.
34. Tan, K. Y., Rosli, H., & Adnan, F. (2024). Pengaruh dasar pendidikan inklusif terhadap OKU penglihatan [The influence of inclusive education policy on visually impaired learners]. Inclusive Education Policy Journal, 9(1), 40–55.
35. Taylor, E., & Francis, K. (2020). Technology in special education: The use of assistive technologies in foreign language learning for students with visual impairments. Educational Technology Research and Development, 68(1), 445–466.
36. Toran, H., Mohd Yasin M. H., Tohar, M. M., & Sujak, N. (2009). Sokongan dan halangan yang dihadapi pelajar-pelajar kurang upaya di sebuah institusi pengajian tinggi di Malaysia [Support and barriers faced by students with disabilities in a Malaysian higher education institution]. ASEAN Journal of Teaching & Learning in Higher Education, 1(2), 35–50.
37. Uddin, N., Noor, S. A., & Wahab, A. (2025). Penggunaan teknologi bantuan dalam pembelajaran kemahiran hidup bagi OKU penglihatan [The use of assistive technology in life skills learning for visually impaired learners]. Life Skills Education Journal, 7(2), 65–80.
38. Villanueva, M., Zainudin, M., & Khalid, A. (2023). Cabaran OKU penglihatan dalam pendidikan tinggi di negara berkembang [Challenges of visually impaired learners in higher education in developing countries]. Higher Education Challenges Journal, 18(4), 200–215.
39. Wei, Y., & Alias, A. (2024). Cabaran menggunakan alat bantu teknologi dalam pengajaran dan pembelajaran murid pendidikan khas penglihatan [Challenges of using assistive technology in teaching and learning of special education students with visual impairments]. Malaysian Journal of Social Sciences and Humanities, 9(1), 45–60.
40. World Health Organization. (2011). World report on disability. Geneva: World Health Organization. https://www.who.int/publications/i/item/9789241564182