

Universal Design for Learning in Islamic Education: Strategic Management for Children with Special Needs

Oktawini Ofiani^{1*}, Hendra Harmi², Deri Wanto³

¹Islamic Education Department, Universitas Islam Sarolangun, Jambi, Indonesia

^{1,2}Islamic Education Department, Institut Agama Islam Negeri Curup, Bengkulu, Indonesia

Email: oktaoppo329@gmail.com¹, hendra.harmi@iaincurup.ac.id², deriwanto@iaincurup.ac.id³

DOI: <http://doi.org/10.33650/al-tanzim.v9i4.10822>

Received: 19 February 2025

Revised: 21 March 2025

Accepted: 12 September 2025

Abstract:

This study aims to analyze the management strategies of Universal Design for Learning (UDL) applied in Islamic education to support children with special needs in schools. This research uses a qualitative, case-study approach. Data was collected through interviews, observations, and documentation. Data analysis is carried out using an interactive model comprising three main stages: data reduction, data presentation, and conclusion. The results showed that PAI teachers implemented the principles of UDL by utilizing various media and approaches, such as images, videos, Braille Qur'an, and sign language, to ensure that all students, including those with sensory, motor, and cognitive barriers, could access the material effectively. In addition, teachers provide flexibility in the learning pace and set learning goals tailored to individual students' abilities. The implication of this study is the importance of teacher capacity building in the use of adaptive media and educational technology, as well as continuous training to support the optimal implementation of UDL. This research also contributes to enriching the understanding of the application of UDL in religious education for children with special needs (ABK), thereby improving inclusivity and the quality of learning for students with diverse needs.

Keywords: *Universal Design for Learning, Children with Special Needs, Management Strategy*

Abstrak:

Penelitian ini bertujuan untuk menganalisis strategi manajemen Universal Design for Learning (UDL) yang diterapkan dalam pendidikan Islam untuk mendukung anak-anak dengan kebutuhan khusus di sekolah. Penelitian ini menggunakan pendekatan kualitatif dengan jenis studi kasus. Data dikumpulkan melalui wawancara, observasi, dan dokumentasi. Analisis data dilakukan dengan model analisis interaktif, yang mencakup tiga tahap utama: reduksi data, penyajian data, dan penarikan kesimpulan. Hasil penelitian menunjukkan bahwa guru PAI mengimplementasikan prinsip UDL dengan memanfaatkan berbagai media dan pendekatan, seperti gambar, video, Al-Qur'an Braille, dan bahasa isyarat, untuk memastikan bahwa semua siswa, termasuk yang memiliki hambatan sensorik, motorik, dan kognitif, dapat mengakses materi secara efektif. Selain itu, guru memberikan kebebasan dalam tempo belajar dan menetapkan tujuan pembelajaran yang disesuaikan dengan kemampuan individual siswa. Implikasi dari penelitian ini adalah pentingnya pengembangan kapasitas guru dalam penggunaan media adaptif dan teknologi pendidikan, serta pelatihan berkelanjutan untuk mendukung implementasi UDL secara lebih maksimal. Penelitian ini juga memberikan kontribusi dalam memperkaya pemahaman tentang penerapan UDL dalam pendidikan

agama untuk anak berkebutuhan khusus (ABK), yang dapat meningkatkan inklusivitas dan kualitas pembelajaran bagi siswa dengan berbagai kebutuhan.

Kata Kunci: *Universal Design for Learning, Anak Berkebutuhan Khusus, Strategi Manajemen*

Please cite this article in APA style as:

Ofiani, O., Harmi, H., & Wanto, D. (2025). Implementing Universal Design for Learning in Islamic Education: Strategic Management for Children with Special Needs. *Al-Tanzim: Jurnal Manajemen Pendidikan Islam*, 9(4), 1287-1300.

INTRODUCTION

Education is a fundamental right for every individual, including children with special needs (Lindner et al., 2023; Shutaleva et al., 2023; Jardinez et al., 2024). Inclusive and quality education is crucial to ensure that every child, regardless of physical or intellectual disability, can access education tailored to their needs (Kenny et al., 2023; Jimoh et al., 2024). In this context, Universal Design for Learning is highly relevant because its adaptive principles can help accommodate diverse learning styles and needs, including those of students with special needs (Espada-Chavarria et al., 2023; Rusconi et al., 2023). This demonstrates that although various national policies support inclusive education, its implementation in Islamic religious education for children with special needs remains limited. At the Sarolangun Special Needs School (SLBN), for example, the application of inclusive principles in Islamic Religious Education learning remains very limited, with methods that are more conventional and less responsive to the individual needs of students with special needs. Therefore, this research is crucial to examine the application of UDL in Islamic education for children with special needs, to create an education system that is more inclusive, adaptive, and aligned with Islamic values.

Although many regulations and policies support inclusive education, the implementation of UDL in Islamic teaching, particularly in religious education for children with special needs, remains very limited. The management of inclusive education is often hampered by limited human resource capacity, including the number of trained teachers and the availability of appropriate learning resources for children with special needs (Rosidah et al., 2024; Somad et al., 2024; Chinhara et al., 2024,). This results in a suboptimal educational process, particularly in terms of character development and religious understanding appropriate to each student's capacity. Therefore, it is crucial to examine and design appropriate management strategies to implement UDL (Universal Design for Learning) in Islamic religious education for children with special needs to address this challenge.

Field observations indicate that in many educational institutions, particularly special schools (SLB), the application of inclusive principles in Islamic religious education remains minimal. At SLBN Sarolangun, for example, the Islamic Religious Education learning process tends to be conventional, with methods that are less adaptive to the individual needs of children with special needs. PAI teachers at the school have also not received sufficient training in inclusive approaches and the use of disability-friendly media. As a result, religious instruction fails to accommodate students' diverse learning styles,

which, in turn, undermines the strengthening of spiritual and social values that should be a primary goal of Islamic education for children with special needs.

Previous research has shown that implementing UDL in education can improve learning effectiveness by adapting methods and media to meet students' diverse needs (Levey, S. (2023); Bahorana et al., 2023; Bray et al., 2024). Research conducted by Riviana (2024) and Muhammad et al. (2024) emphasizes the importance of inclusive learning for children with special needs in shaping their character. However, there is limited research examining the application of UDL in the context of Islamic education, particularly in religious education for children with special needs. Existing research focuses more on the general curriculum or education for regular students, while the need for a faith-based and adaptive approach for children with special needs remains unaddressed.

Furthermore, previous studies have not explored in depth how UDL principles can be integrated into Islamic education, particularly in Islamic Religious Education learning (Pratama et al., 2024, Pandia, et al., 2024; Faisal et al., 2025). There are still shortcomings in inclusive curriculum development, suboptimal teacher training, and appropriate media organization for children with special needs (Bessarab et al., 2025; Bahridinovich et al., 2025). Therefore, this study aims to address this gap by developing a UDL implementation management model for Islamic education that supports children with special needs. This research is expected to contribute to the design of more adaptive, inclusive, and context-specific learning strategies in Islamic educational institutions.

The novelty of this research lies in the development of a UDL-based managerial model that integrates an Islamic educational approach with the principle of inclusivity. This research will also identify and analyze the challenges and practical solutions faced by teachers and academic institutions in implementing UDL principles in Islamic religious education classes for children with special needs. Thus, this research can make a significant contribution to creating an education system that is not only responsive to the diverse needs of students but also supports the fulfillment of the rights of children with special needs in a more holistic Islamic religious education.

This research aims to analyze how Universal Design for Learning management strategies can be applied in Islamic education to support children with special needs in schools. This research will likely identify strategic steps that can improve the quality of Islamic Religious Education learning at Sarolangun Special Needs School (SLBN) and provide a model that can be applied in other Islamic educational institutions. Therefore, this research is expected to contribute to creating a more inclusive, adaptive, and value-based Islamic education that is relevant to each student's needs, especially children with special needs.

RESEARCH METHOD

This research uses a qualitative design with a case study approach (Amadi, 20223; Tisdell et al., 2025), chosen to explore and understand in depth

the phenomena related to the implementation of an inclusive Islamic Religious Education integration model in the character development of children with special needs. The qualitative approach was chosen because it provides flexibility in exploring meaning and understanding through interviews, observation, and documentation, and allows researchers to examine phenomena within a natural social context. The case study method aims to investigate the processes, challenges, and strategies used to manage PAI learning for children with special needs, with a focus on the diverse needs and specific conditions at the Sarolangun Special Needs School. This method is highly appropriate for this research, as it enables researchers to obtain a holistic, comprehensive picture of the learning practices implemented within a specific, limited context.

This research was conducted at the Sarolangun State Special Needs School, located in Sarolangun Regency, Jambi Province. The selection of the research location was based on several important considerations. First, SLBN Sarolangun has a diverse population of children with special needs, including those with visual impairments, hearing impairments, intellectual disabilities, and autism. This allows researchers to examine how Universal Design for Learning principles are applied in inclusive Islamic Religious Education. Second, SLBN Sarolangun has integrated an inclusive Islamic Religious Education model into its character development efforts for children with special needs, making it an ideal setting to explore the application of UDL principles in religious education. Furthermore, SLBN Sarolangun has adequate access to data collection through purposive sampling, allowing researchers to focus on the pedagogical and conceptual relevance of implementing UDL in religious education for children with special needs.

Data in this study were collected through three main techniques: observation, interviews, and documentation (Opara et al., 2023). Observations were conducted directly in the field to capture the dynamics of Islamic Religious Education learning for children with special needs. Researchers conducted two forms of observation—non-participant and participant—to understand the learning practices implemented by Islamic Religious Education teachers. Semi-structured interviews were also conducted to explore the experiences, perspectives, and strategies implemented by the principal, Islamic Religious Education teachers, and students regarding inclusive learning. These interviews provided in-depth data on the challenges and solutions faced in managing Islamic Religious Education learning for children with special needs. Documentation techniques were used to collect secondary data, including Individual Learning Plans (IRPs), curriculum documents, and related archives, providing a more detailed picture of the implementation of the inclusive Islamic Religious Education model at Sarolangun Special Needs School (SLBN). This combination of data collection techniques enabled in-depth data triangulation and strengthened the validity of the research findings.

Data analysis was conducted using the interactive analysis model developed by Miles and Huberman (1984), which consists of three main stages: data reduction, data presentation, and conclusion drawing. In the first stage, data collected through observation, interviews, and documentation were reduced to

relevant information that supported the research focus. The filtered data was then grouped into interrelated categories. In the second stage, the grouped data were presented in narrative form, describing key findings, including patterns and themes that emerged from the data reading process. The final stage, conclusion drawing, involved interpreting the analysis results to test the validity of the findings and to identify conclusions that could serve as the basis for practical recommendations. This analysis process is iterative and dynamic, with researchers engaging in verification and reflection to ensure that the conclusions drawn accurately reflect the phenomena in the field.

RESULT AND DISCUSSION

Result

Flexibility in Material Delivery

In the context of implementing Universal Design for Learning, the principle of Flexibility in Material Delivery emphasizes the importance of adapting learning materials, methods, media, and assessments to the diverse needs and abilities of students, particularly children with special needs. In Islamic education at SLBN Sarolangun, flexibility is reflected in the way teachers provide freedom in the pace of learning, set individual learning objectives, and use a variety of media and approaches that enable all students, whether with sensory, motor, or cognitive disabilities, to access religious material in a way that suits their learning style. This flexibility also involves adapting to each student's context and conditions during each learning session, so they can learn comfortably and without pressure.

One Islamic Religious Education teacher at SLBN Sarolangun revealed that teachers provide freedom in the pace of learning to suit individual student needs. The teacher explained: "I give freedom in the pace of learning. Students who quickly grasp the material can immediately move on to the next task, while students who are still struggling, I give additional time without pressure so they remain comfortable learning." This statement reflects the application of the principle of flexibility, which prioritizes student comfort in learning. Teachers don't force all students to achieve the same results at the same time; instead, they allow students to develop at their own pace and abilities.

One student at the Sarolangun Special Needs School stated that a flexible approach to learning significantly helps students understand the material more easily and meaningfully. The student said: "It's easier to understand the material because the learning becomes more meaningful and memorable. For example, practicing prayers directly helps me memorize and understand when to recite them." This student emphasized that when learning is tailored to his needs and delivered in a relevant manner, the material is not only easier to understand but also easier to remember and apply in everyday life.

Islamic Religious Education teachers at the Sarolangun Special Needs School demonstrate flexibility across various aspects of learning. Teachers adjust learning objectives according to each student's individual abilities and development. For example, in teaching prayer procedures, students with cognitive disabilities are focused on understanding basic movements and short

prayers. In contrast, more able students are given tasks to memorize verses or understand the deeper meaning of prayers. Teachers also provide extra time for students who need it, and allow students to move on to their assignments more quickly if they have mastered the material. Researchers interpret this as an effort by teachers to create a learning environment that not only accommodates diversity but also encourages the development of individual students in line with their potential.

This allows each student to learn at their own pace and ability. Teachers provide flexibility in the timing and pace of learning, tailor learning objectives to individual needs, and adapt learning methods and media to suit students' learning styles better. This helps students feel comfortable and stress-free during the learning process, thereby increasing their understanding and engagement in Islamic Religious Education.



Figure 1. Learning Flexibility

Flexibility in Islamic Religious Education learning at Sarolangun Special Needs School focuses on adapting to students' individual needs, including learning pace, learning objectives, and the media used. Teachers actively adapt learning to suit various student needs, offering choices in learning methods (for example, hands-on practice or visual media) and additional time or repetition for students who need them. This flexibility not only improves students' understanding of the material but also motivates them to actively engage in learning without feeling pressured. By providing appropriate freedom and adjustments, teachers create an environment that supports optimal student development.

Multiple Means of Representation

In the context of implementing Universal Design for Learning, the focus is on using various media and aids to deliver learning materials to students with diverse needs and learning styles. In Islamic education at Sarolangun Special Needs School (SLBN), this includes the use of various visual and audio aids, as well as hands-on practice in Islamic Religious Education learning. Media used include images, animated videos, hijaiyah letter cards, Braille Qurans, and simulations of religious practices such as prayer and ablution. The primary goal of using these various methods is to ensure that every student, including those with sensory, motor, or cognitive disabilities, can access the material and achieve

the learning objectives in a way that best suits their needs.

Interviews with Islamic Religious Education teachers at Sarolangun Special Needs School revealed that they strive to design learning that is flexible and accessible to all students, regardless of the type of disability they experience. The PAI teacher explained: "In designing PAI learning objectives, we adhere to the principles of UDL, ensuring that the objectives are flexible and achievable by all students, regardless of their intellectual, sensory, or physical disabilities. For example, objectives related to understanding the pillars of faith are not only presented verbally but also through visual media, illustrated stories, and simple simulations. The goal is that every child, with their different learning styles, can still achieve competencies according to their abilities."

This statement reflects the commitment of Islamic Religious Education teachers at Sarolangun Special Needs School to implementing the principles of Universal Design for Learning, which emphasizes the importance of flexibility in delivering materials to ensure accessibility for all students, including those with special needs. By using a variety of media, such as illustrated stories, videos, and simulations, teachers provide students with opportunities to access information most effectively, tailored to their learning styles. This also includes adapting to individual student needs, such as using pictures for deaf students or the Braille Quran for blind students.

Researchers found that students highly appreciated the application of this diverse learning method. The student stated, "I really like the way my Islamic Religious Education teacher teaches. The Islamic-themed educational games make the lessons fun and engaging. The prayer and ablution simulations help me better understand how to perform them correctly, and the stories of the prophets motivate me to emulate their good qualities. Furthermore, when I receive praise, stickers, or simple gifts from my teacher, I feel appreciated and become more enthusiastic about learning."

This student's statement demonstrates how varied media and a fun approach help students engage with and understand Islamic Religious Education material. Visual media and simulations not only clarify understanding but also increase student motivation to learn more.

The above illustrates how UDL-based Islamic Religious Education uses a variety of media and approaches to meet students' diverse needs. First, the teacher develops flexible materials, using visual aids, audio, and hands-on simulations to help students understand the material in ways that suit their learning styles. Second, Islamic Religious Education teachers adapt their teaching methods by incorporating educational games and Islamic stories to create a fun, engaging learning environment for students. Third, collaboration between Islamic Religious Education teachers, special education teachers, and parents also strengthens the implementation of UDL principles, ensuring that each student receives learning tailored to their abilities and needs.

Furthermore, researchers found that Islamic Religious Education teachers at Sarolangun Special Needs School actively integrate UDL principles into their lesson planning and implementation. Islamic Religious Education is delivered not only through conventional methods, such as lectures, but also through visual

media (images and videos), audio (Quranic recitations), and live simulations (such as prayer and ablution practices). Teachers also provide various aids, such as Braille Qurans for blind students and pictures and written materials for deaf students.



Figure 1. Arabic Alphabet and Braille Quran as Primary Learning Media for Special Needs Students in Islamic Religious Education Learning

This approach demonstrates the teachers' efforts to create inclusive learning, enabling students with diverse needs to effectively access the material. By utilizing diverse media, such as images, videos, and simulations, teachers can convey material more clearly and comprehensively to students with diverse needs. Collaboration with parents and accompanying teachers also facilitates the development of more adaptive lesson plans tailored to each student's individual needs. This indicates that applying UDL principles in Islamic Religious Education learning at Sarolangun Special Needs School can help students with special needs better understand and engage in religious learning.

The application of UDL principles emphasizes diverse ways of presenting information to meet students' individual needs. Teachers at Sarolangun Special Needs School do not rely solely on one teaching method; instead, they use a variety of media and approaches accessible to all students, including those with physical, sensory, or cognitive disabilities. The use of visual and audio aids, as well as hands-on, experiential approaches (such as simulations), demonstrates that Islamic Religious Education learning at this school is highly responsive to students' diverse needs. Furthermore, collaboration among teachers, special needs teachers, and parents demonstrates how an inclusive learning process can be effectively managed through coordinated effort and attention to individual student needs.

Multiple Means of Engagement and Adaptiveness

The use of diverse and adaptive learning strategies in the context of implementing Universal Design for Learning involves teachers' efforts to create learning experiences tailored to each student's needs, especially children with special needs. In Islamic education at SLBN Sarolangun, this involves applying various approaches, media, and methods to enable students to learn in ways that suit their abilities and learning styles. Teachers use multiple strategies, such as game-based learning, worship simulations (e.g., prayer and ablution), and

Islamic stories, to increase student motivation, participation, and understanding. This approach also includes adaptations to group activities, the use of visual and audio media, and flexibility in the pace of learning to accommodate individual student development.

Tabel 1. Multiple Means of Engagement and Adaptiveness

Interview	Indicators	Informant
"We use various media, such as images, videos, and simulations. For blind students, we use Braille Quran and verbal descriptions. For deaf students, we prioritize visuals and sign language."	Use of diverse and adaptive learning media	Teacher
"I really enjoy the Islamic Religious Education teacher's teaching methods. The Islamic-themed educational games make the lessons fun and engaging."	Student engagement in learning activities	Student

Table 1 shows two critical perspectives regarding diverse and adaptive learning strategies. From the standpoint of Islamic Religious Education teachers, the use of various adaptive learning media is a key strategy. Teachers ensure that every student, whether visually impaired or hearing impaired, can access Islamic Religious Education materials through appropriate aids. This reflects the UDL principle, which emphasizes diversity in material delivery methods so that all students, without exception, can learn optimally. The adaptive strategies implemented by Islamic Religious Education teachers at Sarolangun Special Needs School demonstrate a commitment to accommodating each student's individual needs through the use of teaching aids such as Braille Qurans and sign language.

Meanwhile, from the students' perspective, they benefit from teachers' active involvement through the freedom to choose methods that suit their learning styles, such as memorizing prayers. This demonstrates that adaptive learning is not only based on varied media and learning strategies but also provides students with space to feel more involved and valued in the learning process. Students are given the choice to choose methods they feel comfortable with, which naturally increases their confidence and motivation to learn. Teachers at Sarolangun Special Needs School are highly responsive to students' diverse needs in Islamic Religious Education. They not only use a variety of learning media but also adapt their learning approaches to suit their individual needs, such as using visual aids for deaf students and verbal descriptions for blind students. Furthermore, teachers give students the freedom to learn at their own pace, helping them progress without feeling pressured. Researchers interpret this as a concrete example of the engagement principle in UDL, in which students are actively involved in the learning process in ways that best suit their needs.

PAI learning at Sarolangun Special Needs School implements UDL principles by paying close attention to students' diverse learning styles. PAI teachers not only use visual and audio aids but also allow students to set their own pace and choose methods that suit their needs. This approach encourages students to be more engaged in learning, feel valued, and develop at their own pace. By offering choices and adapting teaching methods, teachers create an

inclusive, adaptable learning environment.

There is integration between the use of various learning media, adaptation to individual student needs, and freedom in the learning process. Teachers flexibly adapt teaching strategies to each student's specific needs, including learning pace and preferred learning methods. This approach not only increases student participation but also encourages them to feel more comfortable and confident in their learning. Thus, learning at Sarolangun Special Needs School demonstrates a thorough application of UDL principles that emphasize diversity, inclusivity, and respect for each student's learning process.

Discussion

The results of this study indicate that applying Universal Design for Learning principles in Islamic Religious Education learning aligns well with the existing literature on diverse and adaptive learning strategies. In the context of UDL, which emphasizes providing multiple ways to deliver material to students with diverse needs, these findings demonstrate that teachers have implemented these principles by using a variety of media, such as images, videos, and simulations, as well as using sign language and the Braille Quran for deaf and blind students. This aligns with Vasinda & Pilgrim (2023) and Mary (2023) findings, which stated that UDL aims to provide all students with access to knowledge and skills in ways tailored to their abilities, including through a variety of media.

However, there is a slight discrepancy with the existing literature, namely, the limited use of more advanced adaptive learning technologies. Although teachers are creative in creating their own learning media, such as prayer cards and praise boards, previous literature suggests the use of more sophisticated adaptive learning technologies to support the learning of students with special needs (Khasawneh et al., 2024; Gevorgyan, 2024; Masruroh et al., 2024). This study found that despite the introduction of technology, there remain gaps in the provision of adequate adaptive learning tools and in teacher training for their use. This suggests room for improvement in the implementation of educational technology in schools.

The theoretical implications of these findings concern how UDL principles can be adapted in religious education for children with special needs. UDL theory emphasizes the importance of allowing flexibility in the pace of learning, using a variety of media, and adapting methods to ensure each student can learn in a way that best suits their needs (Saborío-Taylor et al., 2024; Sharma et al., 2024; Montgomery, 2024). These findings emphasize the importance of diversity in learning, not only in delivering material but also in providing opportunities for students to actively engage in learning in ways that suit their learning styles. Therefore, this study adds to the literature on the application of UDL in Islamic religious education by demonstrating that these principles can be effectively applied even within resource constraints.

The practical implication is the importance of developing teacher capacity to use more diverse and adaptive media, particularly in relation to more sophisticated learning technologies. Teachers have demonstrated high creativity

by creating their own teaching aids, but significant challenges remain regarding the limited availability of learning media, particularly more interactive technology-based aids. Therefore, to increase the effectiveness of UDL implementation, schools need to prioritize ongoing teacher training in the use of adaptive educational technology. The implementation of more sophisticated aids will enhance the learning experience for students with special needs, enrich Islamic Religious Education learning, and ensure that each student can access materials tailored to their needs.

Overall, this study's findings indicate that applying UDL principles in Islamic Religious Education can create a learning experience that is inclusive, adaptive, and responsive to each student's needs. By implementing a variety of learning strategies and media that are tailored to students' learning styles and needs, learning can be more effective and meaningful. This study highlights the importance of active student engagement, flexible learning pace, and accessible media to ensure that each individual has an equal opportunity to develop according to their potential.

CONCLUSION

The most important finding of this study is that applying Universal Design for Learning principles to Islamic Religious Education can create an inclusive, adaptive learning experience that is tailored to the individual needs of students, especially children with special needs. This research shows that using a variety of media and approaches tailored to students' learning styles and needs can make learning more effective and meaningful. Furthermore, freedom in learning pace and adapting learning objectives to each student's individual abilities are crucial strategies for creating a comfortable and supportive environment for their development. The lesson learned is the importance of flexibility and adaptation in education to ensure each student can learn to their full potential.

The strength of this paper lies in its contribution to understanding the application of UDL in Islamic religious education, particularly in addressing students' diverse needs. This research adds to the literature by highlighting how diverse and adaptive learning strategies can enhance students with special needs' participation, motivation, and understanding. However, limitations of this study include the limited use of adaptive learning technology and limited teacher training. For future research, further work is needed on the use of more sophisticated learning technologies to support the implementation of UDL, as well as on the development of ongoing training for educators to more effectively enrich the learning experience of students with special needs.

ACKNOWLEDGMENT

We want to express our deepest gratitude to the Rector of IAIN Curup, the Director of the Postgraduate Program, and all the lecturers who have provided guidance, support, and invaluable knowledge during this research process.

REFERENCES

- Amadi, A. (2023). Integration in a Mixed-Method Case Study of Construction Phenomena: From Data to Theory. *Engineering, Construction and Architectural Management*, 30(1), 210-237. <https://doi.org/10.1108/ECAM-02-2021-0111>
- Bahriddinovich, J. M., Sayrikhonovnaa, K. G., & Bakhromovna, N. D. (2025). Problems of Teaching and Educating Children with Disabilities in Inclusive Education. *Global Science Review*, 2(1), 306-310.
- Barahona, M., David, V., Gallegos, F., Reyes-Rojas, J., Ibaceta-Quijanes, X., & Darwin, S. (2023). Analysing Preservice Teachers' Enactment of the UDL Framework to Support Diverse Students in a Remote Teaching Context. *System*, 114, 103027. <https://doi.org/10.1016/j.system.2023.103027>
- Bessarab, A., & Haliieva, O. (2025). Curriculum Adaptation for Children with Special Educational Needs: Best Practices in Inclusive Education. *American Journal of Psychiatric Rehabilitation*, 28(1), 493-499.
- Bray, A., Devitt, A., Banks, J., Sanchez Fuentes, S., Sandoval, M., Riviou, K., ... & Terrenzio, S. (2024). What Next for Universal Design for Learning? A Systematic Literature Review of Technology in UDL Implementations at Second Level. *British Journal of Educational Technology*, 55(1), 113-138. <https://doi.org/10.1111/bjet.13328>
- Chinhara, H., & Kuyayama, A. (2024). Challenges to the Provisioning of Equitable Quality Education Opportunities in Inclusive Early Childhood Development Classes Attached to Primary Schools: A Case of One District in Zimbabwe. *Social Sciences & Humanities Open*, 10, 100957. <https://doi.org/10.1016/j.ssaho.2024.100957>
- Espada-Chavarria, R., González-Montesino, R. H., López-Bastías, J. L., & Díaz-Vega, M. (2023). Universal Design for Learning and Instruction: Effective Strategies for Inclusive Higher Education. *Education Sciences*, 13(6), 620. <https://doi.org/10.3390/educsci13060620>
- Faisal, M., Rusydi, R., Romiyilhas, R., & Huda, N. (2025). Dynamics of Islamic Religious Education Learning for Children with Special Needs at Slb Ypplb Padang City. *Islamic Studies in the World*, 2(2), 61-71.
- Gevorgyan, S. (2024). The Use of Adaptive Learning Technologies in E-Learning for Inclusive Education: A Systematic Review. *E-Learning Innovations Journal*, 2(1), 90-107. <https://doi.org/10.57125/ELIJ.2024.03.25.05>
- Jardinez, M. J., & Natividad, L. R. (2024). The Advantages and Challenges of Inclusive Education: Striving for Equity in the Classroom. *Shanlax International Journal of Education*, 12(2), 57-65. <https://doi.org/10.34293/education.v12i2.7182>
- Jimoh, Z. O., Jacob, U. S., & Ayomide, T. (2024). Adapting Teaching Strategies to Empower Learners with Intellectual Disabilities in Inclusive Environment. *International Journal of Intellectual Disability*, 5(1), 39-45.
- Kenny, N., McCoy, S., & O'Higgins Norman, J. (2023). A Whole Education Approach to Inclusive Education: An Integrated Model to Guide Planning, Policy, and Provision. *Education Sciences*, 13(9), 959. <https://doi.org/10.3390/educsci13090959>

- Khasawneh, Y. J. A., & Khasawneh, M. A. S. (2024). Cognitive Load Analysis of Adaptive Learning Technologies in Special Education Classrooms: A Quantitative Approach. *International Journal of Advanced and Applied Sciences*, 11(12), 34-41. <https://doi.org/10.21833/ijaas.2024.12.004>
- Levey, S. (2023). Universal Design for Learning. *Journal of Education*, 203(2), 479-487. <https://doi.org/10.1177/00220574211031954>
- Lindner, K. T., & Avramidis, E. (2023). Do Teachers Favor the Inclusion of All Students? A Systematic Review of Primary Schoolteachers' Attitudes Towards Inclusive Education. *European Journal of Special Needs Education*, 38(6), 766-787. <https://doi.org/10.1080/08856257.2023.2172894>
- Mary, S. A. (2023). Universal Design for Learning (UDL) in Diverse Classrooms. *Shanlax International Journal of Arts, Science and Humanities*, 11, 125-132. <https://doi.org/10.34293/sijash.v11iS1-Nov.7102>
- Masruroh, U., Firdaus, R., Fitriawan, H., & Yulianti, D. (2024). Development Study of Technology-Based Adaptive Learning Modules for Students with Special Needs. *Jurnal Teknologi Pendidikan: Jurnal Penelitian dan Pengembangan Pembelajaran*, 9(3), 526-533. <https://doi.org/10.33394/jtp.v9i3.12250>
- Montgomery, D. P., & Snow, K. (2024). Supporting Students with Diverse Learning Needs Using Universal Design for Learning in Online Learning: Voice of the Students. *Journal of Teaching and Learning*, 18(2), 55-72. <https://doi.org/10.22329/jtl.v18i2.7453>
- Muhammad, D. H., Khozin, K., & Humaidi, M. N. (2024). Inclusive Curriculum Based on Islamic Values in Building Independent Character in Children with Special Needs. *International Journal of Education, Social Studies, and Management (IJESSM)*, 4(3), 1148-1161. <https://doi.org/10.52121/ijessm.v4i3.490>
- Opara, V., & Ryan, M. K. (2023). Reflecting on the Use of Google Docs for Online Interviews: Innovation in Qualitative Data Collection. *Qualitative Research*, 23(3), 561-578. <https://doi.org/10.1177/146879412111045192>
- Pandia, W. S. S., Lee, S., & Khan, S. (2024). The Fundamentals of Islamic Religious Education in Inclusive Schools Meet Special Needs Children's PAI Issues. *Assyfa Journal of Islamic Studies*, 2(1), 77-86. <https://doi.org/10.61650/ajis.v2i1.322>
- Pratama, D., Pranajaya, S. A., Mailizar, M., & Jannah, M. (2024). Universal Design for Learning (UDL) in the Islamic Religious Education Assessment Model: Systematic Literature Review. *Jurnal Sustainable*, 7(1), 140-152. <https://doi.org/10.32923/kjimp.v7i1.4670>
- Riviana, N. (2024). The Concept and Role of Teacher Personality for Children with Special Needs in the Perspective of the Qur'an. *Fikroh: Jurnal Pemikiran dan Pendidikan Islam*, 17(2), 111-119. <https://doi.org/10.37812/fikroh.v17i2.1650>
- Rosidah, R., Setyawan, & Eken, Ö. (2024). Human Resource Management of Physical Education Teachers for Students with Special Needs in Inclusive Schools. *Retos: Nuevas Tendencias en Educación Física, Deporte y Recreación*, (61), 1495-1509. <https://doi.org/10.47197/retos.v61.110181>

- Rusconi, L., & Squillaci, M. (2023). Effects of a Universal Design for Learning (UDL) Training Course on the Development Teachers' Competences: A Systematic Review. *Education Sciences*, 13(5), 466. <https://doi.org/10.3390/educsci13050466>
- Saborío-Taylor, S., & Rojas-Ramírez, F. (2024). Universal Design for Learning and Artificial Intelligence in the Digital Era: Fostering Inclusion and Autonomous Learning. *International Journal of Professional Development, Learners and Learning*, 6(2), ep2408. <https://doi.org/10.30935/ijpdll/14694>
- Sharma, S. (2024). Enhancing Inclusive Learning Environments: Strategies for Curriculum Adaptation and Modification. *Future of Special Education in India*, 109.
- Shutaleva, A., Martyushev, N., Nikonova, Z., Savchenko, I., Kukartsev, V., Tynchenko, V., & Tynchenko, Y. (2023). Sustainability of Inclusive Education in Schools and Higher Education: Teachers and Students with Special Educational Needs. *Sustainability*, 15(4), 3011. <https://doi.org/10.3390/su15043011>
- Somad, A., Haryanto, S., & Darsinah, D. (2024). Inclusive Education for Special Needs Students in Indonesia: A Review of Policies, Practices, and Challenges. *JMKSP (Jurnal Manajemen, Kepemimpinan, dan Supervisi Pendidikan)*, 9(2), 1024-1035. <https://doi.org/10.31851/jmksp.v9i2.16192>
- Staden-Payne, I., & Nel, M. (2023, January). Exploring Factors that Full-Service School Teachers Believe Disable their Self-Efficacy to Teach in an Inclusive Education System. In *Frontiers in Education (Vol. 7, p. 1009423)*. Frontiers Media SA. <https://doi.org/10.3389/feduc.2022.1009423>
- Tisdell, E. J., Merriam, S. B., & Stuckey-Peyrot, H. L. (2025). *Qualitative Research: A Guide to Design and Implementation*. John Wiley & Sons.
- Vasinda, S., & Pilgrim, J. (2023). Technology Supports in the UDL Framework: Removable Scaffolds or Permanent New Literacies?. *Reading Research Quarterly*, 58(1), 44-58. <https://doi.org/10.1002/rrq.484>