

Development Of Adaptive Arabic Language Teaching Materials To Support Inclusive Learning

Muhamad Fuad Hasim¹, Mirwan Akhmad Taufiq^{*2}, Arya Pratama Ramadhani³,
Dewi Nur Masitho⁴, Adam Nashirulloh⁵

^{1,2,3,4,5}Pendidikan Bahasa Arab, Fakultas Tarbiyah dan Keguruan,
Universitas Islam Negeri Sunan Ampel, Surabaya, Indonesia
hasimfuadmuhamad@gmail.com¹, mirwan@uinsa.ac.id^{*2},
aryapratama445@gmail.com³, dnmasitho45@gmail.com⁴,
adamalfatih1991@gmail.com⁵

Abstract

The increasing demand for inclusive education requires the availability of teaching materials that accommodate the diverse learning needs of all students, including those with special needs. As a subject with complex grammatical structures, Arabic presents a unique challenge in inclusive classroom settings, particularly in Islamic schools. This study examines the development of adaptive Arabic language teaching materials to support inclusive learning at MTs Miftahul Afkar Kediri. Using a qualitative approach with an evaluative-descriptive design, this research applies the CIPP (Context, Input, Process, Product) evaluation model, supported by the Universal Design for Learning (UDL) framework. Data were collected through classroom observations, in-depth interviews, and document analysis. The results show that Arabic teachers have independently developed adaptive teaching materials by simplifying content, using visual and audio supports, and adjusting learning activities to match the students' varied needs. These efforts reflect UDL principles such as multiple means of representation and engagement, even though no training for teachers in UDL. Adaptive materials have positively impacted student motivation and participation, especially among students with learning barriers. Regular students also benefited from the more interactive and multimodal approach. However, several challenges remain, including institutional policy support, limited teacher training, and the lack of standardized material evaluation procedures. This study contributes to developing inclusive education practices in madrasahs by emphasizing the importance of adaptive teaching materials and the teacher's role as a curriculum designer. The novelty of this study lies in its integration of the UDL approach within the context of Arabic instruction and the focus on student engagement as an indicator of effectiveness. Findings from this study offer a practical reference for other inclusive madrasahs seeking to develop equitable and accessible Arabic learning experiences for all students.

Keywords: Inclusive; Learning; Arabic Language; Adaptive; Materials; Universal Design

INTRODUCTION

Inclusive education is a pedagogical approach that aims to ensure that all students, including those with special needs, have equal access to quality education (Demchenko et al., 2021). This concept was born from the principle of social justice, which places diversity as a strength and not an obstacle in the learning process (Devine & Ash, 2022).

In line with this principle, educational institutions at all levels are expected to accommodate differences in student abilities, backgrounds, and needs in a fair and dignified manner.

Inclusive education has become a crucial foundation for the transformation of modern education systems, emphasizing equity and accessibility for all learners. Within this framework, the principle of diversity is viewed not as a barrier but as a source of strength that enriches the learning experience (Jardinez & Natividad, 2024). This idea encourages a paradigm shift from a homogeneous approach to a more differential and adaptive approach, particularly in the context of learning in madrasas that are increasingly open to students with special needs.

The Indonesian government has responded to this need by establishing an inclusive education policy through various regulations, one of which is the Regulation of the Minister of National Education Number 70 of 2009 (Puspandari & Sinaga, 2023). In this context, madrasas, as formal religious educational institutions, play a vital role in providing inclusive education. However, the implementation of inclusive education in madrasas has not been fully optimal. Various structural, cultural, and pedagogical obstacles remain major challenges (Syaifudin, 2021).

One of the real obstacles faced in implementing inclusive education in madrasas is the unpreparedness of inclusive learning devices (Nurdin et al., 2024), especially in Arabic language learning. This subject has quite complex linguistic characteristics, both in terms of grammatical structure and vocabulary (Issa, 2023). This presents a unique challenge for students with special needs, especially those with cognitive, motor, or visual or hearing impairments.

Ideally, teaching materials should be the main tool that is flexible and adaptive to differences in student abilities (Isaeva et al., 2025). Adaptive teaching materials not only provide learning content, but also accommodate delivery strategies that are appropriate to the conditions and learning styles of students (El-Sabagh, 2021). Unfortunately, the reality on the ground shows that most Arabic language teaching materials used in madrasas are still one-dimensional, conventional, and designed without regard for the principle of inclusivity.

Madrasas, as educational institutions based on Islamic values, face a dual challenge: maintaining the integrity of the religious curriculum while addressing the demands of inclusive pedagogy. Implementing inclusive learning in madrasas is not simply about opening access, but also involves adapting materials, strategies, and teaching tools to suit the diverse needs of students. In this context, teaching materials play a key role as a bridge between curriculum objectives and classroom realities (Shah & Inamullah, 2025).

However, the reality on the ground shows that most available teaching materials, particularly in Arabic, are still uniform and lack adaptability. Arabic itself is known for its complex linguistic structure, across morphology, syntax, and semantics, posing unique challenges for regular students, let alone students with learning disabilities. Therefore, it is necessary to evaluate the Arabic language curriculum and instructional materials based on tracer studies (Taufiq et al., 2024) and the needs of inclusive learners.

Universal Design for Learning (UDL) theory, as described by CAST (2021), offers a relevant theoretical framework for designing instructional materials that are accessible to all students. UDL emphasizes three key principles: presenting information in a variety of formats, providing students with choices in how they express their learning,

and fostering sustained motivation and engagement (Boysen, 2024). Unfortunately, the UDL principle has not been widely applied in the development of Arabic language teaching materials in Indonesian madrasas.

In practice, teachers often bear the burden of learning innovation without adequate structural support. In many madrasas, including MTs Miftahul Afkar Kediri, teachers are required to develop materials independently and intuitively, without clear training or technical guidelines. As a result, teaching material development tends to be situational and not integrated into the broader learning system.

At MTs Miftahul Afkar Kediri, an institution that claims to provide inclusive education, the gap between expectations and reality is quite significant. While the school strives to accept students with special needs and provide equal access to education, its teaching resources, particularly Arabic language materials, remain limited in supporting individual learning needs.

Based on initial observations at MTs Miftahul Afkar, it was found that some teachers had independently adapted teaching materials by simplifying text, using visual illustrations, and providing audio pronunciations. This practice reflects an intuitive effort aligned with UDL principles, although it has not yet been fully realized theoretically by the practitioners.

Using the same printed teaching materials for all students without modification actually becomes an obstacle to learning (Hikam & Baihaqi, 2024). This causes students with special needs to struggle to understand the material, feel marginalized in the classroom, and ultimately experience a decline in learning motivation. This fact highlights the need to develop Arabic language teaching materials that are adaptive and responsive to the needs of inclusive students.

Adaptive teaching materials are innovative solutions designed with individual student characteristics in mind (Craig et al., 2022). Teaching materials that adhere to the principles of Universal Design for Learning (UDL) can expand access to learning and increase participation for all students. UDL encourages the presentation of materials in a variety of formats, provides alternative ways to demonstrate understanding, and fosters sustained student engagement.

This adaptive approach has been shown to have positive impacts, particularly in increasing the engagement and motivation of students with special needs. Previously passive students began to show active participation when the material was presented visually and interactively. This finding supports the results of other research (Pinera, 2021), which emphasizes the importance of multisensory media in second language learning.

However, the results of previous studies show that the application of UDL principles in the development of Arabic language teaching materials is still very limited. Research by (Nurfadillah & Munawwir, 2023), only highlights the integration of visual media in Arabic language learning without touching on the adaptation aspect for students with learning disabilities. Meanwhile, a study from (Ahmad & Setiawan, 2024) more emphasis on active learning strategies in teaching Arabic, but has not yet touched on the issue of designing inclusive teaching materials.

However, limitations in institutional policies, teacher training, and systematic evaluation remain major obstacles. Developed teaching materials often lack a data-driven learning needs assessment process. Teachers develop materials based on personal experiences without reference to a measurable evaluation framework or success rubric.

This results in inconsistencies in the quality of teaching materials across classes and academic years.

Therefore, systematic efforts are needed that not only focus on developing teaching materials but also encompass evaluation, reflection, and collaboration between teachers, students, and policymakers. Evaluation of teaching materials cannot be separated from the context in which they are used, including the classroom atmosphere, student characteristics, and the dynamics of learning interactions (Xiao et al., 2023).

Based on this background, this study seeks to in-depth evaluate the practice of developing adaptive Arabic language teaching materials applied in inclusive learning at MTs Miftahul Afkar Kediri. Using a qualitative approach and an evaluative design model based on the CIPP (Context, Input, Process, Product) model, this study aims to comprehensively capture the conceptual and practical aspects of the adaptive teaching materials used. Specifically, this research aims to answer two main problem formulations: (1) How is the implementation of the development of adaptive Arabic language teaching materials in inclusive learning at MTs Miftahul Afkar Kediri? and (2) What are the students' perceptions and involvement in the use of these adaptive teaching materials in the context of Arabic language learning?

In line with the formulation of the problem, the objectives of this study are: (1) to describe the development and implementation patterns of adaptive Arabic language teaching materials that support inclusive learning, and (2) to analyze students' perceptions and participation in the use of these teaching materials. These two objectives are aimed at contributing to the development of Arabic language learning theory based on inclusivity and pedagogical justice. Furthermore, in practice, the results of this study are expected to serve as a reference for teachers and curriculum developers in developing teaching materials that are more responsive to the learning needs of inclusive students.

The novelty of this research lies in three main aspects. First, it examines the development of adaptive Arabic language teaching materials specifically within the context of inclusive secondary madrasahs, a topic rarely explored in depth. Second, it examines not only the content aspects of the teaching materials but also how students with special needs experience, respond to, and participate in the learning process through these teaching materials. Third, it explicitly integrates UDL theory into its analytical framework, a theoretical approach that is still rarely applied in studies of Arabic language learning in Indonesia.

This study also enriches academic discourse on the relationship between inclusive pedagogical theory and foreign language teaching practice by presenting evidence-based field practice and critical reflection. This approach aligns with the global direction of 21st-century education, which demands more participatory, humane, and diversity-adaptive learning (Muhammadjonova & Akhmedova, 2025). Through empirical findings obtained from classroom observations, in-depth interviews, and document studies, this research offers a model for developing contextual, applicable, and student-centered teaching materials. These findings not only provide practical contributions but also highlight the importance of policy alignment toward inclusive education. This research is not merely an academic report on Arabic language teaching materials, but can also serve as advocacy to encourage a more equitable and transformative transformation of the learning system. In the long term, the results are expected to serve as a reference for other madrasahs in developing meaningful and sustainable inclusive learning models.

METHOD

This study uses a qualitative approach with a descriptive evaluative type, which is directed to evaluate the development of adaptive Arabic language teaching materials within an inclusive learning framework at MTs Miftahul Afkar Kediri. This type of research was chosen because it is able to capture phenomena in depth, understanding the process and context of teaching material use in the learning reality involving students with diverse learning needs. The evaluation model used is CIPP (Context, Input, Process, Product), which allows for a comprehensive analysis starting from the background of development needs to the results of teaching material implementation in the classroom.

The primary instrument in this study was the researcher herself (human instrument), as is customary in qualitative research. The researcher acted as the primary instrument, actively and reflectively designing, directing, and interpreting the data collection process. To support the accuracy and regularity of the process, the researcher also used supporting instruments, including:

1. Semi-structured interview guidelines, which were used to gather information from teachers, madrasah principals, and students with special needs regarding their perceptions and experiences of the developed teaching materials.
2. Participatory observation sheets, designed to record learning activities, use of teaching materials, teacher-student interactions, and class dynamics during the process.
3. Documentation study checklist, to analyze documents such as lesson plans, syllabi, printed and digital teaching materials, teacher notes, and reports on the implementation of inclusive learning.

The initial step in this research procedure was to identify the context through a preliminary study of inclusive policies in madrasahs and the general conditions of students with special needs. Afterward, the researchers developed a data collection plan that included purposive selection of informants, namely those relevant to the field and those with direct experience in the development and implementation of adaptive teaching materials.

The stages of research implementation include:

1. Initial observations were carried out to understand the inclusive learning situation and environment and to identify the general characteristics of the teaching materials used.
2. In-depth interviews were conducted face-to-face with teachers, madrasah principals, and students with special needs to obtain reflective, narrative, and contextual information.
3. Class observations were conducted over several meetings, focusing on interactions in the use of teaching materials and active participation of students, especially those with special needs.
4. Collection of documents, including teaching materials used, teacher notes, and internal reports related to the implementation of inclusive learning.
5. Data triangulation, as a form of cross-verification between data from interviews, observations, and documents to increase the validity of findings.

The entire process takes place in a naturalistic manner, without disrupting the students' learning rhythm, and is based on ethical principles, including informant consent and protection of personal data.

Data analysis in this study was carried out interactively and continuously using the Miles and Huberman model, which includes three main steps:

1. Data Reduction

Data from interviews, observations, and documents were analyzed thematically and sorted based on their relevance to the research focus. Irrelevant data was eliminated, while relevant data was categorized according to the CIPP evaluation components.

2. Data Presentation

After data reduction, the data was organized into narratives, tables, and simple matrices to clarify the relationships between findings. This presentation facilitates the identification of patterns, trends, and deviations that emerge in the field.

3. Conclusion Drawing and Verification

Initial conclusions drawn during the process were tested through triangulation of sources and techniques, as well as member checking with informants to ensure accuracy of meaning. Verification was carried out continuously to ensure that the conclusions drawn accurately represented the empirical reality in the field.

RESULTS AND DISCUSSION

Implementation of Inclusive Learning at MTS Miftahul Afkar

The implementation of inclusive learning at MTs Miftahul Afkar Kediri represents a concrete effort to accommodate the diversity of students, especially those with special needs. For the past two years, the school has officially accepted students with varying learning needs, whether cognitive, social emotional, or physical. Although the system is not yet fully established, teachers have consistently strived to provide an equal learning environment for all students. Direct observations during the two-month research period revealed that teachers were striving to implement a more responsive learning approach to students' learning needs. In Arabic classes, for example, teachers appeared to be adapting teaching methods and materials to accommodate students with varying learning speeds and styles. This included the addition of images, audio, and simple contextual dialogues to facilitate understanding of basic language structures.

This practice stems from teachers' awareness of the importance of humanistic and non-uniform learning. One Arabic teacher, Ms. Nur Khasanah, explained that she began designing adaptive teaching materials after discovering that some students with learning disabilities were having difficulty following Arabic language materials delivered conventionally. She implemented simple innovations by inserting supporting images, creating pronunciation audio, and providing worksheets with more explicit instructions.

The strategy implemented by this teacher is actually in line with the Universal Design for Learning (UDL) principles developed by CAST (Center for Applied Special Technology). UDL emphasizes the importance of providing multiple pathways for information representation so that all students, without exception, can access and understand the subject matter (Baldwin, 2021). The teacher's practice at MTs Miftahul Afkar, even though it does not fully refer to UDL formally, has shown a similar direction of thinking: providing alternative media and ways to understand Arabic. The use of adaptive teaching materials also has a positive effect on the learning process. Students with verbal comprehension difficulties, for example, find it easier to recognize vocabulary through images and audio pronunciation (Bharathi et al., 2024). This is reinforced by the findings of interviews with two inclusive students who admitted that they felt more "connected" when learning using visual and audio aids, compared to just reading text from a book.

This approach not only benefits students with special needs but also benefits regular students. In group discussions, several students stated that learning became more engaging and easier to understand. In other words, inclusive learning complemented by adaptive teaching materials actually improves the overall quality of learning, not just compensatory learning (Demchenko et al., 2021). This finding is in line with research conducted by (Prayitno et al., 2024), which showed that integrating visual-audio-based learning media significantly improved students' understanding of foreign language material. Their research found that the use of images and audio recordings stimulated two main cognitive processing pathways: visual and auditory, contributing to improved student retention and comprehension.

However, the implementation of inclusive learning at MTs Miftahul Afkar is not entirely without obstacles. One of the main obstacles teachers face is limited resources, including technological devices, time, and specialized training. Teachers develop teaching materials independently outside of class hours, using whatever tools are available, and without formal support from the institution. On the other hand, the absence of a written policy from the madrasah regarding standards for implementing inclusive learning makes teachers' efforts appear to be individual initiatives. This presents a weakness that, if left unchecked, could undermine the program's sustainability. An explicit and comprehensive madrasah policy is essential to support and reinforce good practices already implemented in the classroom. In terms of evaluation, teachers use a flexible and non-rigid assessment approach. Assessment focuses more on students' ability to understand the core material rather than simply answering written questions. This demonstrates that inclusive learning also requires innovation in assessment methods (Shutaleva et al., 2023). However, the lack of a specific assessment rubric tailored to the needs of inclusive students is an aspect that needs further development.

The implication of these findings for educational practice is that effective inclusive learning requires more than simply providing physical access for students with special needs. Adapting materials, methods, media, and assessments is also necessary to ensure learning is truly meaningful for all students (Molina Roldán et al., 2021). Adaptive teaching material innovation is one of the important keys that can bridge the diversity of learning needs in the classroom (Morze et al., 2021).

Furthermore, these findings underscore the importance of teacher training in inclusive education. Teachers need more than just empathy or intuition; they also need to be equipped with structured pedagogical knowledge (Hasim et al., 2025). A targeted, sustainable, and practice-based training program will greatly help improve teachers' competency in designing and implementing inclusive and adaptive learning (Baihaqi et al., 2025).

From a policy perspective, it is crucial for madrasas and related institutions to issue technical guidelines on inclusive learning, including the development of adaptive teaching materials. These guidelines should not only explain general principles but also provide concrete examples of their implementation in the classroom. The availability of such documents will provide direction and legitimacy for teachers seeking innovation. Furthermore, a dedicated budget allocation to support the development of adaptive teaching materials is also an urgent need. Currently, teachers still rely on personal resources to print, duplicate, or create learning materials. If madrasas truly want to create an inclusive environment, logistical support must be part of a sustainable strategic policy.

Ultimately, these findings demonstrate that Arabic language learning can be an effective practice for implementing inclusive education. Language, often considered a difficult subject, can actually be a vehicle for fostering togetherness and empowerment when delivered through an appropriate and humane approach. Thus, the inclusive learning practices at MTs Miftahul Afkar, while not yet perfect, have shown a positive direction for transformation. This experience can serve as a starting point for other madrasas seeking to develop similar strategies. However, to establish a robust and sustainable system, broader structural support is needed, ranging from madrasah policies to the active involvement of local governments.

Adaptation Patterns for Arabic Language Teaching Materials

In the context of inclusive learning, teaching materials are a crucial component in determining the extent to which the learning process is equally enjoyed by all students. Research conducted at MTs Miftahul Afkar found that the process of adapting Arabic teaching materials is both creative and responsive to heterogeneous classroom dynamics. Arabic language teachers at the madrasah developed teaching materials based on the principles of flexibility and accessibility, considering the presence of several students with learning disabilities. Adaptations were made not only to the content but also to the presentation methods, supporting media, and practice activities provided. The teachers visibly strived to ensure that the teaching materials met the needs of students with varying ability levels. One of the most prominent forms of adaptation is the simplification of sentence structure in teaching materials. Teachers deliberately choose familiar vocabulary, avoiding overly technical or rarely used terms. The goal is to enable students to understand the main message of Arabic texts without being overly overwhelmed by the complexity of linguistic structures.

In addition to simplifying the text, the teacher also added a simple glossary at the bottom of the page containing Indonesian equivalents. This was intended to help students with limited memory, eliminating the need to consult a dictionary constantly. This approach has proven effective in increasing student engagement during the learning process, as evidenced by observations and interviews. Adaptation of teaching materials also includes the use of visual illustrations to support vocabulary understanding (Birinci & Saricoban, 2021). For example, when introducing vocabulary about daily activities, teachers might include pictures of children eating, sleeping, or playing. These pictures serve not only as decoration but also as important aids to understanding for students who struggle with abstract thinking.

In addition to visuals, teachers also use audio recordings of Arabic pronunciations and short dialogues. These audio recordings are played before reading practice begins to provide students with a model for correct pronunciation. This approach is particularly helpful for students with reading difficulties and those with concentration problems, as they find it easier to follow audio than written text. The adaptation patterns carried out by teachers reflect the principles of differential learning design suggested in inclusive education studies. According to (Gheysens et al., 2022) Differential learning requires teachers to modify content, processes, and learning products to suit students' learning needs. Practices at MTs Miftahul Afkar demonstrate that teachers have applied this principle intuitively and contextually. Teachers also developed two versions of the learning materials, each with varying levels of difficulty. Students with faster comprehension were given a version containing longer texts and exercises based on

sentence structure analysis. Meanwhile, students with special learning needs were given a simpler version focusing on mastering basic vocabulary and sentence patterns. While different, both were aimed at achieving the same core competencies.

Adjustments were also made to the assignment format. Teachers not only assigned multiple-choice questions but also included drawing assignments, vocabulary flashcards, and interactive language games. This provided space for students with kinesthetic and visual-spatial learning styles to actively engage in learning. Collaborative assignments were also facilitated to encourage interaction between students, including inclusive students. In terms of time, adaptation is also evident in the policy of flexible assignment times. Students who require more time are tolerated without pressure. Teachers avoid creating a highly competitive atmosphere to ensure students feel comfortable and confident. This aligns with the principle of inclusivity, which emphasizes that each child learns at their own pace and in their own way.

This adaptation process is not yet standardized in an official guide, but it arises from teachers' awareness of the real-world conditions they face. Although not systematically designed with an explicit theoretical framework, teachers appear to have implemented what is known in the literature as responsive teaching. That is, learning is adjusted based on direct observation of students' needs and responses (D. Lee & Yeo, 2022). Research by Bashir et al. (2020) supports the importance of this approach. They found that adaptive learning materials designed based on students' learning profiles contributed to increased learning engagement and motivation, particularly in the context of foreign language learning (Rashov, 2024). This shows that teacher practice at MTs Miftahul Afkar has strong theoretical relevance. However, the process of adapting these teaching materials still faces challenges. Teachers often struggle to balance their time between teaching and preparing adapted materials. The lack of a support team or cross-subject collaboration also means the burden of innovation is borne solely by individuals. This, of course, risks compromising the program's sustainability if institutional intervention is not addressed.

The implication of these findings is the need for school policies that specifically regulate and support the development of adaptive teaching materials. Schools can form teaching materials development teams comprised of teachers tasked with developing, evaluating, and periodically revising teaching materials. This will ease the burden on teachers while ensuring inclusive standardization. Furthermore, madrasas need to provide specialized training on teaching material adaptation techniques, including the use of simple technology to create visual and audio learning media. With this training, teachers can optimize their potential and create more engaging and effective teaching materials. At a higher level, these findings can serve as reference material for developing national guidelines on the development of inclusive Arabic language teaching materials. Currently, curriculum documents tend to be general and lack concrete examples of how learning materials should be adapted for students with special needs. By developing a model for adapting field-tested teaching materials, such as at MTs Miftahul Afkar, other madrasas will have a baseline that can serve as inspiration for implementing similar policies. This will pave the way for a more inclusive, equitable, and humane education ecosystem.

Finally, the success of this teaching material adaptation pattern is not only measured by quantitative student learning outcomes, but also by changes in the classroom atmosphere to become more positive and participatory (Flores et al., 2022). Students feel

valued, heard, and involved in the learning process. This is an important foundation for developing healthy long-term learning attitudes (Y.-F. Lee et al., 2022). Thus, the adaptation of Arabic language teaching materials at MTs Miftahul Afkar represents an innovative practice that stems from a sensitivity to diversity. This practice holds strategic value for further development as a contextual and applicable inclusive learning model.

Student Engagement and Perception

Student engagement in the learning process is a crucial indicator for measuring the effectiveness of an inclusive curriculum. In the context of Arabic language learning at MTs Miftahul Afkar, student engagement appears to increase with the implementation of adaptive teaching materials tailored to the needs and abilities of each individual. Based on observations and in-depth interviews with students from various learning backgrounds, it was found that the majority of students responded positively to the teacher's learning approach. One indicator of student engagement is active participation in class activities, both verbally and non-verbally. During observations, it was apparent that students with special needs, who previously tended to be passive and isolated in regular learning, were now beginning to demonstrate active participation, especially when the material was presented using engaging visual and audio media. This demonstrates that the success of adaptive learning materials lies not only in the content but also in how it is communicated through multisensory means.

Students feel more confident because the assignments no longer make them feel left behind. The use of images, colors, and audio in the textbooks makes it easier to understand the meaning of Arabic words, although he still struggles with writing Arabic letters correctly. The collaborative approach in Arabic class made them feel more motivated to learn. Study group consisted of students with diverse abilities, and in each assignment, each member was assigned a role based on their individual strengths. This model encouraged mutual support among students, without making anyone feel inferior or superior. Overall, students' perceptions of adaptive learning materials were very positive. They felt that the Arabic textbooks they used were not only user-friendly for those experiencing difficulties but also remained challenging for those with higher abilities. This reinforces the importance of the principle of universal design for learning (UDL), which emphasizes the need to design learning materials that are flexible and accessible to all students without the need for major modifications (Levey, 2023).

Student engagement can also be seen in the enthusiasm with which they participate in interactive exercises. Exercises such as matching pictures and words, role-playing using Arabic dialogues, and playing vocabulary cards are highly popular. Observations have shown that even students who were previously considered "problematic" academically have become more active when these methods are used. However, not all students demonstrated the same level of engagement. In an interview with a teacher, it was explained that some students were still having difficulty adapting to the new, more open-ended and reflective format of assignments. Some of them, especially those accustomed to standard lectures and written assignments, felt confused and needed more time to understand the new expectations. These differences indicate that student engagement is influenced by prior learning background and their ability to adapt to changing learning methods. Therefore, teachers need to patiently guide this transition, provide additional explanations, and consistently build students' confidence in their own abilities.

From a motivational perspective, the use of adaptive teaching materials has been shown to increase student interest in learning Arabic. Most students feel that Arabic lessons have become more "lively" and less intimidating. They attribute this change to the more communicative and contextual presentation of the material, making Arabic less of a foreign or exclusive subject. Students' affective engagement also increased. This was evident in their emotional responses to teacher feedback. Students felt valued when teachers commented positively on their participation in discussions or group work. According to an interview with a student named Zahra, this feedback made her feel that her efforts were being recognized, even if the results were not yet perfect. High student engagement is closely related to increased academic achievement and learning satisfaction (Levey, 2023). Thus, the pattern of student engagement found at MTs Miftahul Afkar shows that the adaptive approach to teaching materials has an impact that is not only pedagogical, but also psychosocial.

From these findings, it can be concluded that student engagement and perceptions of adaptive Arabic language learning materials are important indicators of the success of inclusive learning. This also demonstrates that a teaching approach that respects students' diverse backgrounds can build a healthy learning environment and encourage active participation from all students (Aderibigbe et al., 2023). The implication for educational practice is the need for ongoing evaluation of student perceptions in every curriculum intervention. Student perceptions are not merely supplementary data, but rather a crucial source of information for adapting learning methods, media, and evaluations in a more humane and meaningful way.

Teacher Role and Implementation Strategy

In the process of developing and implementing adaptive teaching materials for inclusive Arabic language learning at MTs Miftahul Afkar, the role of teachers is central. They act not only as learning facilitators but also as strategy designers who adapt the material to the individual abilities, needs, and characteristics of students. Interviews with several Arabic language teachers revealed that awareness of the importance of inclusivity has encouraged them to transform their traditional one-way approach into a more participatory and responsive one. One Arabic teacher, Ustadzah Kholifah, stated that she no longer uses one textbook for all her students. She now divides students into several learning categories based on initial assessments of their reading, writing, and vocabulary comprehension skills. Each group is given modified teaching materials, both in terms of complexity, visual presentation, and activity options. This strategy is known in the pedagogical approach as differentiated instruction, which adapts teaching to the diversity of students (Gheysens et al., 2022).

Teachers also play a role as mediators who bridge the gap between the learning objectives that have been set and the reality of students' limitations (Leow et al., 2022). This is demonstrated through the adaptation of teaching techniques such as the use of visual storytelling, game-based learning, and the integration of simple technologies like interactive videos. These strategies have proven effective in increasing student attention and strengthening their understanding of Arabic vocabulary previously considered abstract and difficult for students with special needs to access. Furthermore, teachers play an active role in creating a socially and emotionally inclusive classroom environment (Ibarra, 2022). They structure their classes to allow for collaboration between more capable students and those who need support, through the formation of learning pairs or

small groups. This practice is based on Vygotsky's theory of the zone of proximal development, where students can reach their learning potential through the assistance of others who are more competent (Hamdani & Yousif, 2025).

However, implementing this strategy is not without challenges. Teachers face obstacles such as increased workloads, a lack of specific training on inclusive education, and limited time to develop comprehensively tailored teaching materials. Despite this, teachers demonstrate a strong desire to continue innovating, recognizing that this more humane approach to learning positively impacts students' learning motivation. To address these challenges, collective strategies were developed. One concrete effort was the initiative to form small teams of Arabic language teachers to share learning resources, discuss student needs, and collaboratively develop adaptive teaching materials. This type of collaboration supports the professional learning community (PLC) model, which has been proven to increase learning effectiveness across various educational contexts (Johnson & Voelkel, 2021).

Other findings indicate that implementation strategies also impact the realm of learning evaluation. Teachers are beginning to implement more flexible formative assessments, such as portfolios, reflective journals, and project-based assessments, replacing the dominance of conventional written tests. This is intended to ensure that assessments better reflect students' learning processes, rather than merely static end results. Furthermore, the teaching approach used by teachers tends toward contextual methods, where Arabic language material is linked to students' daily activities. For example, in vocabulary material about food, students are encouraged to identify the names of foods they consume at home and then write them in Arabic. This type of activity is not only linguistically relevant but also fosters emotional engagement with the material.

The teacher's role in assisting students individually is also a crucial aspect of the implementation strategy. Teachers provide dedicated time for students who need additional support, both outside of class hours and through informal communication. This demonstrates that the implementation strategy extends beyond the classroom to more intimate and supportive interpersonal spaces. Regarding school policies, teachers also play a role in voicing the need for a stronger support system. They actively submit regular reports to the principal regarding student progress and suggestions for improving learning facilities, including the need for reprinting adaptive teaching materials, procuring visual aids, and regular teacher training.

This finding is in line with the research results from (Lübke et al., 2021), which emphasizes that the success of inclusive education depends heavily on teachers' readiness and flexibility in responding to students' needs. Therefore, the implementation strategies employed by teachers at MTs Miftahul Afkar demonstrate significant progress in realizing equitable and dignified learning. From these findings, it can be concluded that teachers are not merely curriculum implementers but also agents of change who actively design adaptive learning strategies to ensure that every student, without exception, can learn optimally. The implications for education policy are the need for systemic support in the form of training, supervision, and adequate resources to ensure these strategies can be maintained and enhanced.

Process Evaluation and Reflection

Evaluation of the development and implementation of adaptive teaching materials for inclusive learning at MTs Miftahul Afkar is a crucial part of this process, not only

capturing the final results but also highlighting the dynamics, challenges, and lessons learned throughout the process. In the context of inclusive education, this type of evaluation is highly relevant, given that an inclusive approach demands high flexibility in responding to diverse student characteristics.

Based on data collected through classroom observations, teacher interviews, and analysis of learning documents, the process of adapting teaching materials has experienced ups and downs in its implementation. On the one hand, teachers are committed to developing materials that better suit the abilities and needs of students with special needs. However, on the other hand, limited time, resources, and technical training have prevented this effort from being carried out systematically and sustainably. Initial evaluations indicate that the teaching materials planning process has not fully included a comprehensive analysis of students' learning needs. Some teachers developed teaching materials based on intuition or personal experience without an adequate diagnostic approach. This resulted in a lack of alignment between the teaching materials design and the actual conditions of students in inclusive classrooms. As emphasized by (Graham et al., 2021), effective learning differentiation can only occur if the planning process is based on a deep understanding of student characteristics.

Reflections on this process demonstrate the need for stronger institutional support in establishing a continuous evaluation system. Currently, there is no formal mechanism for routinely assessing the effectiveness of adaptive teaching materials. Evaluations tend to be conducted informally and individually by individual teachers. However, a structured evaluation system can provide important feedback for continuous improvement and inform school policy development.

During the evaluation process, teachers reported difficulty determining indicators of success for the use of adaptive teaching materials. Some relied on daily test results or observations of student learning behavior as benchmarks, but no specific instrument was available to measure the impact of teaching materials on student engagement, conceptual understanding, or holistic improvement of Arabic language skills. This aligns with the findings of the study (DeMatthews et al., 2021), which states that one of the challenges in inclusive education is the absence of a measuring tool that truly describes inclusive success. This process evaluation also reflected the need for closer collaboration between teachers, students, and parents in providing feedback on the usefulness of the teaching materials used. In several interviews, students expressed that they found the use of more visual and simpler teaching materials helpful, but they also mentioned still having difficulty understanding content that was too dense or not sufficiently contextualized. This type of feedback, when collected systematically, can be a valuable source of reflection. Furthermore, reflection on teaching materials development practices shows that success depends not only on the quality of the material, but also on the teacher's delivery method and a classroom atmosphere that supports active participation. In the case of MTs Miftahul Afkar, teachers who actively innovate also tend to have a more democratic and communicative classroom approach. This suggests that adaptive teaching materials must be complemented by inclusive pedagogy to achieve maximum learning impact.

From an institutional perspective, the reflection also underscored the importance of the principal's role as a policy director and innovation facilitator. In several evaluation activities, principals had not actively engaged teachers in structured, collaborative reflection forums. Yet, such forums have the potential to accelerate the sharing of good

practices and serve as a platform for formulating internal standards for adaptive teaching materials. The implications of these evaluative findings are clear: without a system of reflection integrated into educational routines, the development of adaptive teaching materials will be situational and will lack systemic impact. Therefore, it is necessary to design a school-based monitoring and evaluation system that regularly involves all stakeholders, with mutually agreed-upon indicators aligned with the principles of inclusive education.

The reflection also emphasized the need to build a culture of evaluation that is non-judgmental but encourages improvement. The teachers interviewed stated that they were more motivated to innovate when evaluation was viewed as a learning experience, not simply as an assessment. This reinforces the view (Haiyan & and Allan, 2021) that a conducive and collaborative learning environment will encourage healthier and more sustainable professional development. Thus, the evaluation and reflection on the process of developing adaptive Arabic language teaching materials at MTs Miftahul Afkar not only identified shortcomings but also built a foundation for collective awareness of the importance of transforming toward truly inclusive education. This process paved the way for the development of more mature practices, both in terms of pedagogy, learning management, and policy development that benefits all students.

CONCLUSION

Based on the findings and analysis in this study, it can be concluded that the development of adaptive Arabic language teaching materials at MTs Miftahul Afkar Kediri has demonstrated a progressive effort in supporting the implementation of inclusive learning, although it still faces a number of conceptual and practical obstacles. The process of adapting teaching materials tends to be carried out intuitively by teachers, particularly in the form of content simplification and visual enrichment, but is not yet fully based on an assessment of individual student learning needs. Student engagement and perceptions of the adaptive materials are quite positive, especially when the teaching materials are linked to everyday contexts and delivered interactively. On the other hand, teachers play a key role in successful implementation, but they still require systematic support in the form of professional training, inclusive policies, and access to adequate learning resources. Evaluation of the effectiveness of teaching materials is also still informal and not systematically documented, so that reflection and continuous improvement are less than optimal. Therefore, the development of adaptive teaching materials in madrasas needs to be designed collaboratively and sustainably, with structural support from educational institutions and policymakers, so that inclusive Arabic language learning is not merely symbolic but truly able to meet the needs of all students in a fair and meaningful manner.

REFERENCES

- Aderibigbe, S. A., Idriz, M., Alzouebi, K., AlOthman, H., Hamdi, W. B., & Companioni, A. A. (2023). Fostering Tolerance and Respect for Diversity through the Fundamentals of Islamic Education. *Religions*, 14(2), Article 2. <https://doi.org/10.3390/rel14020212>
- Ahmad, D. S. W., & Setiawan, H. R. (2024). Implementasi Metode Pembelajaran Aktif Index Card Match dalam Peningkatan Prestasi Belajar Bahasa Arab Siswa Kelas

- IV SD Maitreechit Wittayathan School Thailand. *Jurnal Dirosah Islamiyah*, 6(1), Article 1. <https://doi.org/10.47467/jdi.v6i1.6127>
- Baihaqi, M., Syarifah, A., & Arif, M. (2025). Enhancing Arabic Translation Competency In Higher Education: An Evaluation Of The Becoming A Translation Practitioner' Program. *Ijaz Arabi Journal of Arabic Learning*, 8(1), Article 1. <https://doi.org/10.18860/ijazarabi.v8i1.31642>
- Baldwin, C. A. (2021). Universal Design for Learning. *Reference & User Services Quarterly*, 59(3/4), 173–176.
- Bharathi, G. P., Chandra, I., Sanagana, D. P. R., Tummalachervu, C. K., Rao, V. S., & Neelima, S. (2024). AI-driven adaptive learning for enhancing business intelligence simulation games. *Entertainment Computing*, 50, 100699. <https://doi.org/10.1016/j.entcom.2024.100699>
- Birinci, F. G., & Saricoban, A. (2021). The effectiveness of visual materials in teaching vocabulary to deaf students of EFL. *Journal of Language and Linguistic Studies*, 17(1), 628–645. <https://doi.org/10.3316/informit.221335398012476>
- Boysen, G. A. (2024). A critical analysis of the research evidence behind CAST's universal design for learning guidelines. *Policy Futures in Education*, 22(7), 1219–1238. <https://doi.org/10.1177/14782103241255428>
- Craig, S. L., Smith, Sean J., & Frey, B. B. (2022). Professional development with universal design for learning: Supporting teachers as learners to increase the implementation of UDL. *Professional Development in Education*, 48(1), 22–37. <https://doi.org/10.1080/19415257.2019.1685563>
- DeMatthews, D. E., Serafini, A., & Watson, T. N. (2021). Leading Inclusive Schools: Principal Perceptions, Practices, and Challenges to Meaningful Change. *Educational Administration Quarterly*, 57(1), 3–48. <https://doi.org/10.1177/0013161X20913897>
- Demchenko, I., Maksymchuk, B., Bilan, V., Maksymchuk, I., & Kalynovska, I. (2021). Training Future Physical Education Teachers for Professional Activities under the Conditions of Inclusive Education. *BRAIN. Broad Research in Artificial Intelligence and Neuroscience*, 12(3), Article 3.
- Devine, P. G., & Ash, T. L. (2022). Diversity Training Goals, Limitations, and Promise: A Review of the Multidisciplinary Literature. *Annual Review of Psychology*, 73(Volume 73, 2022), 403–429. <https://doi.org/10.1146/annurev-psych-060221-122215>
- El-Sabagh, H. A. (2021). Adaptive e-learning environment based on learning styles and its impact on development students' engagement. *International Journal of Educational Technology in Higher Education*, 18(1), 53. <https://doi.org/10.1186/s41239-021-00289-4>
- Flores, M. A., Barros, A., Simão, A. M. V., Pereira, D., Flores, P., Fernandes, E., Costa, L., & Ferreira, P. C. (2022). Portuguese higher education students' adaptation to online teaching and learning in times of the COVID-19 pandemic: Personal and contextual factors. *Higher Education*, 83(6), 1389–1408. <https://doi.org/10.1007/s10734-021-00748-x>
- Gheysens, E., Coubergs, Catherine, Griful-Freixenet, Júlia, Engels, Nadine, & Struyven, K. (2022). Differentiated instruction: The diversity of teachers' philosophy and praxis to adapt teaching to students' interests, readiness and

- learning profiles. *International Journal of Inclusive Education*, 26(14), 1383–1400. <https://doi.org/10.1080/13603116.2020.1812739>
- Graham, L. J., de Bruin, K., Lassig, C., & Spandagou, I. (2021). A scoping review of 20 years of research on differentiation: Investigating conceptualisation, characteristics, and methods used. *Review of Education*, 9(1), 161–198. <https://doi.org/10.1002/rev3.3238>
- Haiyan, Q., & and Allan, W. (2021). Creating conditions for professional learning communities (PLCs) in schools in China: The role of school principals. *Professional Development in Education*, 47(4), 586–598. <https://doi.org/10.1080/19415257.2020.1770839>
- Hamdani, D. A., & Yousif, J. H. (2025). Artificial Intelligence Revolution for Enhancing Modern Education Using Zone of Proximal Development Approach. *Applied Computing Journal*, 386–398. <https://doi.org/10.52098/acj.20255239>
- Hasim, M. F., Taufiq, M. A., Baihaqi, M., Amaliyah, N., & Rachmawati, E. (2025). Psychological Impact Of UIN Sunan Ampel Surabaya Students On Academic Arabic Language Mastery. *Al Mi'yar: Jurnal Ilmiah Pembelajaran Bahasa Arab Dan Kebahasaaraban*, 8(1), Article 1. <https://doi.org/10.35931/am.v8i1.4337>
- Hikam, F. S., & Baihaqi, M. (2024). Arabic Language Learning Strategies and Systems in Islamic Boarding Schools. *PROSIDING KONIPBSA: Konferensi Nasional Inovasi Pembelajaran Bahasa Dan Sastra Arab*, 4(1), Article 1. <https://conference.uin-suka.ac.id/index.php/konipbsa/article/view/1564>
- Ibarra, B. N. (2022). Understanding SEL to Create a Sense of Belonging: The Role Teachers Play in Addressing Students' Social and Emotional Well-Being. *Current Issues in Education*, 23(2), Article 2. <https://doi.org/10.14507/cie.vol23iss2.2049>
- Isaeva, R., Karasartova, N., Dznunusnalieva, K., Mirzoeva, K., & Mokliuk, M. (2025). Enhancing Learning Effectiveness Through Adaptive Learning Platforms And Emerging Computer Technologies In Education. *Jurnal Ilmiah Ilmu Terapan Universitas Jambi*, 9(1), Article 1. <https://doi.org/10.22437/jiituj.v9i1.37967>
- Issa, I. (2023). Morphological Complexity in Arabic Spelling and Its Implication for Cognitive Processing. *Journal of Psycholinguistic Research*, 52(1), 331–357. <https://doi.org/10.1007/s10936-022-09896-2>
- 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.
- Johnson, C. W., & and Voelkel, R. H. (2021). Developing increased leader capacity to support effective professional learning community teams. *International Journal of Leadership in Education*, 24(3), 313–332. <https://doi.org/10.1080/13603124.2019.1600039>
- Lee, D., & Yeo, S. (2022). Developing an AI-based chatbot for practicing responsive teaching in mathematics. *Computers & Education*, 191, 104646. <https://doi.org/10.1016/j.compedu.2022.104646>
- Lee, Y.-F., Hwang, G.-J., & Chen, P.-Y. (2022). Impacts of an AI-based chabot on college students' after-class review, academic performance, self-efficacy, learning attitude, and motivation. *Educational Technology Research and Development*, 70(5), 1843–1865. <https://doi.org/10.1007/s11423-022-10142-8>

- Leow, R. P., Thinglum, A., Havenne, M., & Tseng, R. (2022). Bridging the Gap Between Researchers and Teachers: A Curricular Perspective. *The Modern Language Journal*, 106(3), 564–582. <https://doi.org/10.1111/modl.12799>
- Levey, S. (2023). Universal Design for Learning. *Journal of Education*, 203(2), 479–487. <https://doi.org/10.1177/00220574211031954>
- Lübke, L., Pinquart, M., & Schwinger, M. (2021). The Role of Flexibility in the Realization of Inclusive Education. *Sustainability*, 13(8), Article 8. <https://doi.org/10.3390/su13084452>
- Molina Roldán, S., Marauri, J., Aubert, A., & Flecha, R. (2021). How Inclusive Interactive Learning Environments Benefit Students Without Special Needs. *Frontiers in Psychology*, 12. <https://doi.org/10.3389/fpsyg.2021.661427>
- Morze, N., Varchenko-Trotsenko, L., Terletska, T., & Smyrnova-Trybulska, E. (2021). Implementation of adaptive learning at higher education institutions by means of Moodle LMS. *Journal of Physics: Conference Series*, 1840(1), 012062. <https://doi.org/10.1088/1742-6596/1840/1/012062>
- Muhammadjonova, Z., & Akhmedova, M. (2025). The Transformation Of Education In The 21st Century: Innovations, Challenges, And Future Directions. *Общественные Науки в Современном Муре: Теоретические и Практические Исследования*, 4(10), Article 10.
- Nuridin, A., Hendra, Khozin, Haris, A., Zainab, N., & Yahaya, M. Z. (2024). Developing the Islamic Religious Education Curriculum in Inclusive Schools or Madrasah and Its Implementation: A Systematic Literature Review. *Jurnal Pendidikan Agama Islam*, 21(1), Article 1. <https://doi.org/10.14421/jpai.v21i1.6907>
- Nurfadillah, N., & Munawwir, A. (2023). Pengaruh penerapan model pembelajaran SAVI (Somatic, Auditory, Visualization, Intellectually) Terhadap Hasil Belajar Bahasa Arab Siswa Kelas X Madrasah Aliyah Pesantren Muhammadiyah Tana Toraja. *Jurnal Konsepsi*, 11(4), Article 4.
- Pinera, J. (2021). Adaptive Delivery as a Means to Increase Student Engagement and Learning Outcomes. *FIU Electronic Theses and Dissertations*. <https://doi.org/10.25148/etd.FIDC010255>
- Prayitno, H. J., Fitriany, D. N., Purnomo, E., Andayani, R. A., Adhantoro, M. S., Kurniaji, G. T., & Jufriansah, A. (2024). The Use of Audiovisual Learning Media to Enhance Digital Literacy Competence in Indonesian Language Learning Among Fifth-Grade Students at SDN 02 Baleharjo. *International Conference on Education for All*, 2(1), Article 1.
- Puspandari, K., & Sinaga, Y. (2023). Tanggung Jawab Negara Dalam Pemenuhan Hak Pendidikan Inklusif Di Indonesia. *Jurnal Ilmiah Publika*, 11(1), Article 1. <https://doi.org/10.33603/publika.v11i1.8269>
- Rashov, O. (2024). Modern Methods Of Teaching Foreign Languages. *International Scientific and Current Research Conferences*, 158–164.
- Shah, R., & Inamullah, P. D. H. M. (2025). The Role of Madrassa Education in Cultivating Moral Excellence: A Qualitative Analysis. *Review Journal of Social Psychology & Social Works*, 3(2), Article 2.
- 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), Article 4. <https://doi.org/10.3390/su15043011>

- Syaifudin, M. (2021). Implementasi Pendidikan Inklusif di Madrasah Ibtidaiyah di Jawa Timur. *EL-BANAT: Jurnal Pemikiran Dan Pendidikan Islam*, 11(2), Article 2. <https://doi.org/10.54180/elbanat.2021.11.2.184-200>
- Taufiq, M. A., Hasanah, D., Yumanto, M. I., & Elbaghdadi, Z. A. (2024). Curriculum Relevance Of Arabic Language Education With Job Opportunities For Graduates In Indonesia Ijaz Arabi Journal of Arabic Learning, 7(1). <https://doi.org/10.18860/IJAZARABI.V7I1.20432>
- Xiao, M., Tian, Z., & Xu, W. (2023). Impact of teacher-student interaction on students' classroom well-being under online education environment. *Education and Information Technologies*, 28(11), 14669–14691. <https://doi.org/10.1007/s10639-023-11681-0>