Adaptive Assessment in Islamic Religious Education for Promoting Inclusive Learning in Junior High Schools for Students with Special Needs

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Abstract:

Assessment in Islamic Religious Education (Pendidikan Agama Islam/PAI) plays a pivotal role in supporting inclusive education for students with special needs in Special Junior High Schools (Sekolah Menengah Pertama Luar Biasa/SMP LB). Beyond measuring cognitive, affective, and psychomotor domains, PAI assessment functions as a foundational mechanism for designing and implementing individualized learning programs that accommodate diverse learner characteristics. Nevertheless, its implementation continues to face several challenges, including the limited availability of tactile learning media, the heterogeneity of students' disabilities and learning needs, and the lack of systematic and comprehensive assessment documentation. This study aims to examine adaptive assessment practices in PAI from teachers' perspectives, with particular attention to assessment planning, implementation strategies, and the utilization of assessment outcomes. Employing a qualitative descriptive approach with a case study design, data were collected through in-depth interviews, classroom observations, and document analysis, and analyzed using triangulation techniques to ensure data credibility. The research participants consisted of three PAI teachers from two Special Junior High Schools, anonymized as School A and School B. Teacher 1 teaches at School A, while Teachers 2 and 3 are affiliated with School B. The findings indicate that teachers implement adaptive assessment practices through a variety of methods, including oral questioning, systematic observation, practical worship activities, and the use of both simple instructional tools and digital media. Assessment results are subsequently utilized for instructional evaluation, remedial planning, collaborative reflection among teachers, and communication with parents or guardians. These findings underscore the importance of enhancing access to appropriate tactile media, strengthening systematic assessment documentation, and providing continuous professional development for teachers. Such efforts are essential to ensure that PAI assessment effectively contributes to equitable, meaningful, and inclusive educational practices in special school contexts.

Abstrak:

Asesmen Pendidikan Agama Islam (PAI) memiliki peran penting dalam mendukung pendidikan inklusif bagi peserta didik berkebutuhan khusus di Sekolah Menengah Pertama Luar Biasa (SMP LB). Asesmen tidak hanya berfungsi menilai aspek kognitif, afektif, dan psikomotor, tetapi juga menjadi dasar dalam penyusunan program pembelajaran individual. Namun, implementasinya masih menghadapi berbagai kendala, antara lain keterbatasan media taktil, keragaman kondisi peserta didik, serta minimnya dokumentasi formal. Penelitian ini bertujuan menganalisis praktik *adaptive assessment* PAI dari perspektif guru, dengan fokus pada

perencanaan, strategi asesmen, dan pemanfaatan hasil asesmen. Penelitian menggunakan pendekatan deskriptif kualitatif dengan desain studi kasus melalui wawancara, observasi, dan analisis dokumentasi, serta pengolahan data dengan teknik triangulasi sumber. Subjek penelitian ini adalah tiga guru PAI dari dua SMP LB yang disamarkan sebagai Sekolah A dan Sekolah B. Guru 1 mengajar di Sekolah A, sedangkan Guru 2 dan Guru 3 di Sekolah B. Penelitian ini mengkaji praktik asesmen adaptif PAI, mencakup perencanaan, pelaksanaan, dan pemanfaatan hasil bagi peserta didik berkebutuhan khusus. Hasil penelitian menunjukkan bahwa guru menerapkan asesmen adaptif melalui tanya jawab, observasi, praktik ibadah, serta pemanfaatan media sederhana maupun digital. Hasil asesmen dimanfaatkan untuk evaluasi, remedial, kolaborasi antarguru, dan komunikasi dengan orang tua. Temuan ini menegaskan pentingnya penyediaan media taktil yang memadai, dokumentasi yang sistematis, serta pengembangan profesional guru secara berkelanjutan agar asesmen PAI dapat berkontribusi secara efektif terhadap pendidikan inklusif yang adil dan bermakna di sekolah luar biasa.

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Introduction

Islamic Religious Education (Pendidikan Agama Islam/PAI) plays a strategic role in shaping students' personality, moral character, and spiritual awareness, enabling them to internalize Islamic values in their daily lives. PAI instruction must therefore be inclusive and accessible to Children with Special Needs (*Anak Berkebutuhan Khusus*/ABK), encompassing learners with physical, intellectual, social, or emotional barriers who require individualized educational services tailored to their specific conditions (Widiastuti, 2019). In this regard, Sumarna, Parhan, Abdurrahman, Jenuri, Subakti, and Zubir (2022) emphasize that religious education for persons with disabilities is instrumental in fostering spiritual awareness, strengthening religious identity, and enhancing social participation within educational contexts. Within this framework, it is important to recognize that conventional assessment approaches are no longer sufficient to accommodate the diverse learning needs of students with special needs. Consequently, adaptive assessment emerges as an essential prerequisite for the realization of genuinely inclusive instructional practices. However, in practice, PAI assessment in special schools

continues to rely heavily on conventional procedures that are not fully aligned with the complex and varied characteristics of students with disabilities. As a result, such assessment practices may fail to accurately represent students' actual competencies and, in turn, hinder the achievement of inclusive Islamic education objectives.

One of the principal theoretical foundations underpinning educational assessment is Bloom's Taxonomy, which classifies learning objectives into three domains: cognitive, affective, and psychomotor (Shaikh, Daudpotta, & Imran, 2021). In the context of Islamic Religious Education, this taxonomy provides a conceptual framework for teachers to assess students' religious knowledge, attitudes, and practical skills in a comprehensive manner (Anderson & Krathwohl, 2001). Within special education settings, assessment serves not only to measure learners' competencies but also to identify, monitor, and evaluate the types of instructional support required to facilitate meaningful learning (Frey, 2019). The information generated through such assessments forms the basis for developing Individualized Learning Programs that respond to each student's unique barriers and educational needs. Alongside the evolving paradigm of inclusive education in Indonesia, assessment practices have increasingly shifted toward adaptive models that are responsive to learners' individual characteristics, particularly those of students with special needs.

Several prior studies have underscored the urgency of implementing adaptive assessment in Islamic Religious Education (PAI) for students with special needs in Special Schools (*Sekolah Luar Biasa/SLB*). Sumarni, Salman, Priwicaksono, and Triana (2024) report that although many madrasahs have begun admitting students with special needs, curriculum development and the preparation of Individualized Education Programs (IEPs) remain insufficient and inconsistent in quality. Similarly, Davies, Stock, King, Wehmeyer, and Shogren (2017) highlight that students with intellectual disabilities often encounter significant barriers in assessment participation due to limited literacy skills, thereby necessitating the use of technological support and assessment approaches that are more responsive to their cognitive characteristics. In this regard, the application of Photovoice in inclusive education illustrates how evaluation processes can be adapted to the abilities and needs of learners with disabilities (Bonati & Andriana, 2021).

Beyond the specific context of special education, Insani, Anwar, and Supriadi (2020) demonstrate that systematically implemented remedial programs can effectively enhance student learning outcomes in PAI and Character Education when guided by clear instructional standards. Furthermore, Rahayu, Surahman, and Sumarna (2025) emphasize the importance of comprehensive evaluation in Islamic education that extends beyond the cognitive domain to include affective and psychomotor dimensions in order to foster the development of students' moral character. Despite these contributions, existing studies have largely focused on policy analysis, curriculum design, or assessment instruments in general education settings, leaving limited empirical insight into how adaptive PAI assessment is enacted in practice within Special Junior High Schools. This condition reveals a clear research gap concerning the actual implementation of adaptive assessment strategies for students with special needs in SMP LB contexts.

The novelty of the present study lies in its explicit focus on the implementation of adaptive PAI assessment for students with special needs at the Special Junior High School level. Unlike previous research that predominantly emphasizes the development of assessment instruments in regular schools, this study examines teachers' perspectives on assessment planning, implementation, and the utilization of assessment results, while also identifying the challenges and adaptive strategies employed to address students' cognitive, affective, and psychomotor characteristics. The primary objective of this research is to analyze the implementation of PAI assessment from teachers' viewpoints, encompassing the stages of planning, execution, and the use of assessment outcomes to enhance instructional quality and inform the development of Individualized Education Programs.

This study is particularly significant in light of the increasing number of students with special needs in Indonesia (Abubakar, Yuliani, & Ashar, 2024). In several Special Schools, the delivery of Islamic Religious Education faces additional challenges related to teacher qualifications. Nur'aini, Junaidi, Januar, and Nurhasnah (2023), for example, found that at SLB Muftia Rahma, PAI is not taught by teachers with formal educational backgrounds in Islamic Religious Education, but rather by homeroom teachers who assume additional teaching responsibilities. Moreover, empirical research specifically addressing PAI assessment practices in Special Schools remains relatively scarce. Therefore, this study is expected to contribute to the development of a comprehensive adaptive assessment framework that aligns with the mandate of Law Number 20 of 2003 on the National Education System. Based on this rationale, the present study, entitled "Adaptive Assessment of Islamic Religious Education to Support Inclusive Learning in Special Needs Junior High Schools," aims to analyze the implementation of adaptive assessment in PAI instruction for students with special needs at Special Junior High Schools (SMP LB).

Research Method

This study employed a qualitative descriptive approach using a collective case study design (Yin, 2014). This design was selected because it enables an in-depth and contextual examination of a single phenomenon across multiple cases, thereby facilitating comparative analysis while preserving the uniqueness of each setting. The research focused on the implementation of assessment in Islamic Religious Education (PAI) at Special Junior High Schools (SMP LB), encompassing assessment planning, assessment strategies, and the utilization of assessment results within authentic school contexts. The study was conducted in two Special Schools in Bandung City, which were purposively selected based on their institutional reputation and their relevance as representative cases in the context of special education.

The research participants consisted of three PAI teachers from the two selected Special Junior High Schools, anonymized as School A and School B to protect institutional confidentiality. Teacher 1 was affiliated with School A, while Teachers 2 and 3 were affiliated with School B. All participants were directly involved in the planning, implementation, and utilization of PAI assessment results. Participants were selected

through purposive sampling based on their strategic roles in PAI assessment practices, including responsibility for designing and adapting assessment instruments for students with special needs and for using assessment outcomes to inform instructional decisions such as remediation, enrichment, and the development of Individualized Learning Programs (ILPs). Research ethics were strictly upheld through the use of pseudonyms for both participants and institutions, and informed consent was obtained from all participants prior to data collection.

Data were collected using three complementary techniques, interviews, observations, and documentation, each guided by a specific data collection instrument, in accordance with Syafi'I, Akmal, and Bulan (2023). The data sources comprised both primary and secondary data. Primary data were obtained from PAI teachers through: (1) semi-structured interviews aimed at exploring teachers' experiences, perspectives, strategies, and challenges in designing and implementing PAI assessment; (2) classroom observations of teaching and assessment practices to capture authentic instructional interactions; and (3) documentation analysis, including the examination of teaching modules, assessment instruments, and related instructional materials. Secondary data were drawn from relevant academic literature and peer-reviewed journals to strengthen the analytical framework and provide theoretical support for the interpretation of findings.

Data analysis followed the interactive model proposed by Miles, Huberman, and Saldaña (2014), which involves three interrelated stages: data reduction, data display, and conclusion drawing and verification (Jannah & Inayati, 2025). To ensure the trustworthiness of the findings, methodological triangulation was employed by systematically comparing data obtained from interviews, observations, and documentation (Kelle, Kühberger, & Bernhard, 2019). In addition, data credibility was enhanced through member checking, whereby interview transcripts and preliminary interpretations were returned to participants for confirmation and clarification, thereby ensuring that the findings accurately reflected participants' perspectives (Birt, Scott, Cavers, Campbell, & Walter, 2016).

Results and Discussion

Planning of Islamic Religious Education Assessment in Special Junior High Schools

Based on in-depth interviews with three teachers of Islamic Religious Education (PAI) in Special Junior High Schools (SMP LB), notable variations were identified in the design and planning of assessment practices. These variations reflect differences in pedagogical approaches, institutional contexts, and responses to the diverse needs of students with special educational needs.

Despite these differences, several commonalities were observed across the three teachers' assessment planning processes. Generally, all participants designed assessment plans that were aligned with PAI learning objectives and the applicable curriculum, and systematically integrated assessment components into their lesson plans. Furthermore, the teachers employed a range of assessment techniques to evaluate students' learning

across the cognitive, affective, and psychomotor domains, while carefully considering the individual characteristics, abilities, and limitations of students with special needs. Table 1 summarizes the key differences in assessment strategies and techniques adopted by the three teachers, highlighting how each teacher adapts assessment planning to their specific instructional context.

Table 1. Differences in Assessment Strategies and Techniques among the Three PAI Teachers

Aspects of Assessment Planning	Teacher 1	Teacher 2	Teacher 3	Suitability/Alignment among Teachers 1, 2, and 3
Initial Assessment Approach	Conducts oral questioning to identify students' initial abilities; informally involves parents to understand students' needs.	Initiates assessment during student admission (PPDB) in collaboration with a psychologist; students are classified according to disability type (visual impairment, intellectual disability, autism, and MDVI).	Relies on internal classroom-based adjustment with minimal parental involvement; focuses on verbal, reading, and basic practical assessments.	All teachers conduct initial assessments; however, Teacher 2 employs a more systematic and formalized procedure, whereas Teachers 1 and 3 rely on more informal and classroom-based approaches.
Involvement of External Stakeholders	Actively involves parents in identifying learning needs and providing moral and emotional support.	Involves multiple stakeholders, including a psychologist, dormitory supervisor, and parents, in assessment planning.	Shows minimal involvement of external stakeholders and relies primarily on personal observation and professional judgment.	Teachers 1 and 2 demonstrate stronger stakeholder engagement, while Teacher 3 shows limited collaboration, indicating partial alignment across cases.
Focus of Assessment	Adapts assessment instruments for students with visual impairments and regular students,	Prioritizes diagnostic assessment to map students' initial abilities and to design	Emphasizes repetition and habituation strategies to support comprehension and retention among	All teachers aim to accommodate learner diversity; however, their primary emphases differ: accessibility (Teacher 1), diagnostic mapping (Teacher 2), and

emphasizing equitable access to learning.	differentiated instructional strategies.	students with severe disabilities.	intensive support for severe disabilities (Teacher 3).

Based on Table 1, the three PAI teachers exhibited notable variation in their assessment planning processes, reflecting different interpretations of inclusive assessment practices. From an inclusivity-oriented perspective, Teacher 1 placed strong emphasis on the early identification of students' learning needs by conducting initial oral questioning to explore students' abilities and by informally involving parents to obtain a more comprehensive understanding of each child's condition. As stated by Teacher 1, "*initial oral questioning is used to recognize students' abilities, while parents are informally involved to better understand children's needs*" (Teacher 1, personal communication, June 4, 2025). This approach enhances the inclusiveness of assessment practices by positioning parents as strategic partners in identifying and responding to students' learning needs. Such findings are consistent with Izzatunnisa and Mutiawati (2024), who emphasize that parental involvement through religious education and role modeling plays a significant role in shaping children's religious character and supporting their learning development.

In contrast, Teacher 2 implemented a more formal and systematic assessment process beginning at the student admission stage (PPDB), conducted in collaboration with a psychologist. This process included grouping students according to their type of disability and actively involving dormitory supervisors as well as parents in assessment planning. As articulated by Teacher 2, "*assessment is conducted from the admission stage through PPDB in collaboration with a psychologist, with students grouped by disability type, and parents and dormitory supervisors involved in planning*" (Teacher 2, personal communication, August 1, 2025). This approach aligns with Bley (2017), who underscores the importance of diagnostic assessment in identifying students' baseline conditions and in designing differentiated instructional strategies that are responsive to individual learning needs.

Meanwhile, Teacher 3 prioritized internal instructional adjustments with limited parental involvement, focusing primarily on reading, verbal, and simple practical assessments tailored to students' levels of ability. As explained by Teacher 3, *"assessment is adjusted to the child's ability; if students cannot read, verbal or practical assessments are used, with minimal parental involvement and greater reliance on internal adjustment*" (Teacher 3, personal communication, August 4, 2025). While this approach demonstrates flexibility in responding to students' functional capacities, it contrasts with the findings of Sholeh, Haris, 'Azah, Shobirin, Sahri, Wahruddin, Muzakki, Ismail, and Ali (2024), who highlight that active parental involvement through sustained communication and guidance contributes significantly to increased motivation and learning achievement in Qur'anic instruction.

Beyond differences in external stakeholder involvement, variations were also evident in the substantive focus of the assessment strategies employed by the three teachers. Teacher 1 developed a set of 45 multiple-choice and short-answer items covering

core PAI topics, including halal–haram principles, Islamic ethics (*akhlak*), Islamic history, and worship practices. Importantly, these assessment instruments were also provided in Braille format for students with visual impairments. This practice aligns with Rismawati, Mustakim, Mahmudah, and Kamal (2024), who emphasize the necessity of inclusive and accessible Islamic education policies, particularly in assessment systems, to ensure that students with disabilities are afforded equitable learning opportunities. In this context, the provision of Braille-based assessment materials represents an adaptive strategy that enhances accessibility and fairness for students with visual impairments.

Teacher 2, by contrast, initiated the assessment process by mapping students' Braille literacy skills, thereby aligning instructional content with students' foundational tactile abilities. Assessment and instruction were subsequently focused on the recognition of Arabic letters (*huruf hijaiyah*) and diacritical marks (harakat). This approach is consistent with Martiniello and Wittich (2022), who underscore the importance of developing tactile readiness prior to and during Braille instruction in order to facilitate more effective letter recognition and literacy development among learners with visual impairments. Meanwhile, Teacher 3 designed highly simplified assessment instruments for students with severe intellectual disabilities (IQ range 30–35), concentrating on fundamental religious concepts such as the pillars of faith (*rukun iman*). Instruction and assessment were implemented through repetition- and habituation-based approaches. This strategy corresponds with the findings of Petitpierre, Dind, and De Blasio (2023), who describe habituation as a basic learning process that occurs through repeated exposure to stimuli and can be effectively employed to support gradual internalization of learning content among students with intellectual disabilities.

Overall, PAI assessment planning in SMP LB is grounded in the principle of individualized assessment, with diverse strategies tailored to students' specific abilities and learning needs. The involvement of external stakeholders, the use of adaptive instruments such as Braille-based assessments, and the application of simplified and habituation-oriented approaches for students with severe disabilities collectively demonstrate the practical implementation of inclusive education principles. Consequently, responsive and flexible assessment planning constitutes a critical foundation for fair, meaningful, and character-oriented evaluation in Islamic Religious Education.

Strategies and Techniques of Islamic Religious Education Assessment in Special Junior High Schools

Based on the interview data, the assessment strategies and techniques employed by the three Islamic Religious Education (PAI) teachers demonstrated considerable variation, reflecting differences in instructional contexts, student characteristics, and teachers' adaptive responses to diverse learning needs. These variations highlight the flexible and context-sensitive nature of PAI assessment practices in Special Junior High Schools (SMP LB). Table 2 presents a comparative overview of the assessment strategies and techniques adopted by Teacher 1, Teacher 2, and Teacher 3 in the implementation of PAI assessment at SMP LB, illustrating both shared practices and distinct adaptive approaches across the three cases.

Table 2. Comparison of Assessment Strategies and Techniques among the Three Teachers

Aspects of Assessment Strategies and Techniques	Teacher 1	Teacher 2	Teacher 3	Suitability/Alignment among Teachers 1, 2, and 3
Cognitive Domain	Employs spontaneous oral questioning, written tests read aloud and answered in Braille or regular writing, and behavioural observation.	Utilizes oral questioning, reading tasks, and Braille writing assignments.	Applies short lectures, written tests, and repetition, with emphasis on students' responses (e.g., active, passive, or tantrum behaviours).	All teachers assess cognitive learning through questioning and written tasks; Teachers 1 and 2 demonstrate stronger alignment through Braille-based adaptations, while Teacher 3 emphasizes behavioural responsiveness.
Affective Domain	Assesses affective aspects through spontaneous questioning, written tests read aloud and answered in Braille or regular writing, and general behavioural observation.	Conducts daily observation of students' attitudes and worship compliance, supported by parental communication and the use of the *Diriku* rubric.	Observes social interaction and affective behaviour using the *Diriku* rubric.	All teachers assess affective development; however, Teachers 2 and 3 show closer alignment through continuous observation and rubric-based assessment, whereas Teacher 1 relies more heavily on questioning and general observation.
Psychomotor Domain	Evaluates psychomotor skills through worship practices (prayer, ablution, Qur'anic reading) and assigned tasks or homework.	Assesses worship practices and motor skills (e.g., use of reglet and *pantule*), *huruf hijaiyah* reading, and the use of digital tools.	Focuses on ablution, prayer, memorization, *tajwid*, and calligraphy, supported by video, PDF, and online form-based media.	All teachers demonstrate strong alignment by emphasizing practical worship activities in the psychomotor domain, with differences primarily in the range of skills emphasized and the media employed.

Based on Table 2, each PAI teacher demonstrated distinct assessment strategies and techniques, particularly in the cognitive domain. Teacher 1 primarily relied on spontaneous discussion and oral questioning as the main assessment approach. As stated by Teacher 1, "*the most effective method for assessing students' cognitive abilities is through discussion and questioning, because these processes are spontaneous; through observation of discussion and questioning, it becomes evident which students truly understand the material*" (Teacher 1, personal communication, June 4, 2025). This approach aligns with the findings of Steenkamp and Brink (2024), who argue that discussion-based assessment enhances cognitive engagement by enabling students to articulate, negotiate, and refine their understanding. Classroom observations further revealed that spontaneous discussions promoted active interaction among students and allowed the teacher to directly gauge comprehension through students' verbal responses, reasoning, and expressions. This practice is also consistent with Arlianty, Febriana, Diniaty, and Fauzi'ah (2018), who conceptualize cognitive assessment as encompassing a continuum from lower-order processes, such as remembering and understanding, to higher-order processes, including analyzing, evaluating, and creating.

In contrast, Teacher 2 emphasized reading and Braille writing assignments as primary cognitive assessment techniques. As explained by Teacher 2, "*in the cognitive domain, I usually use questioning and assign students to read and write in Braille*" (Teacher 2, personal communication, August 1, 2025). This strategy reflects inclusive education principles that require the adaptation of content and assessment methods to learners' specific needs and sensory modalities. The findings are consistent with Nkoom and Jnr (2023), who emphasize that inclusive assessment practices must accommodate diverse learner characteristics through varied and accessible assessment formats. Observational data indicated that students actively engaged in Braille writing tasks with teacher assistance, while document analysis revealed the use of dual-format assessment instruments (Braille and standard print) tailored to students' tactile literacy levels.

Meanwhile, Teacher 3 employed a more structured approach that combined short lectures, written tests, and oral questioning. As noted by Teacher 3, "*for the cognitive domain, I usually use short lectures, written tests, and questioning*" (Teacher 3, personal communication, August 4, 2025). This approach is consistent with Budiyanti, Komariah, Hermawan, Januri, and Hyengsewu (2024), who report that structured instructional models accompanied by systematic evaluation can positively influence students' cognitive, affective, and psychomotor learning outcomes. Classroom observations supported this finding, as students were actively involved in responding to teacher-led questions, while document analysis showed the use of simplified worksheets designed to assess students' comprehension and emerging critical thinking skills.

In the affective domain, all three teachers consistently assessed students' daily attitudes, including greetings, social interactions, and religious observance, primarily through systematic observation that was subsequently confirmed with parents. Teacher 1 explained, "*For the affective domain, I observe students' daily attitudes and then confirm them with parents to obtain more accurate information*" (Teacher 1, personal

communication, June 4, 2025). Similarly, Teacher 2 stated, "*I assess affective aspects through students' habits of greeting, worship practices, and daily communication, and I coordinate with parents to gain a more comprehensive understanding*" (Teacher 2, personal communication, August 1, 2025). Teacher 3 likewise emphasized observation of students' attitudes, particularly in relation to greetings and social interactions with teachers and peers (Teacher 3, personal communication, August 4, 2025).

These findings indicate that affective assessment in SMP LB is conducted through continuous observation of students' daily behaviors, supported by parental confirmation to enhance data accuracy. This practice is consistent with Hidayah, Mu'awanah, Zamhari, Munardji, and Naqiyah (2021), who argue that observation-based assessment is particularly effective for evaluating religious attitudes and behaviors, as it allows teachers to monitor students' worship practices and social conduct in authentic contexts. Field observations further revealed that teachers systematically documented students' behaviors in attitude assessment journals and cross-checked their findings with parental reports. Analysis of affective assessment rubrics showed that indicators such as politeness, discipline, responsibility, and empathy were assessed and adapted to each student's individual characteristics. These results demonstrate that affective assessment in SMP LB is not merely subjective but is grounded in structured and documented observational evidence.

In the psychomotor domain, all three teachers emphasized direct assessment of worship-related practices. Teacher 1 noted, "*I assess psychomotor skills through direct practices such as prayer, ablution, and Qur'an recitation, and I also use digital media such as Google Classroom and Google Forms for assessment*" (Teacher 1, personal communication, June 4, 2025). Teacher 2 similarly stated, "*I assess worship practices as well as motor activities, such as using the reglet and pantule, supported by simple technologies like Google Forms, mobile phones, and computers*" (Teacher 2, personal communication, August 1, 2025). Meanwhile, Teacher 3 explained that psychomotor assessment focused on ablution, prayer, surah memorization, and tajwid, supplemented by digital media such as YouTube videos, PDF-based questions, and Google Forms for students who were able to read (Teacher 3, personal communication, August 4, 2025).

Overall, psychomotor assessment in SMP LB emphasizes direct practice of religious rituals, including ablution, prayer, Qur'anic recitation, and memorization, supported by the selective use of digital technologies. In this context, digital tools function as adaptive assessment media that enable teachers to adjust assessment processes to students' functional abilities and learning characteristics. This finding aligns with Wartinah, Febriani, and Suwadi (2025), who highlight that the integration of digital media can enhance both the effectiveness and objectivity of psychomotor assessment in Islamic Religious Education, particularly in inclusive and special education settings.

In the psychomotor domain, digital platforms have been employed adaptively to accommodate the diverse needs of students with disabilities. Google Classroom functions as an adaptive tool by allowing students to demonstrate practical skills, such as prayer or ablution, through photos and videos recorded at their own pace within familiar

environments. This approach reduces performance anxiety, accommodates motor limitations, and enables teachers to provide individualized feedback tailored to each student's abilities. Similarly, Google Forms serves as an adaptive assessment instrument when used as a structured checklist completed by teachers or parents to document students' performance in practical activities. The inclusion of simple response options and visual prompts increases accessibility for students with intellectual or literacy challenges, while digital data storage facilitates longitudinal monitoring of psychomotor development.

YouTube also functions as an adaptive medium for psychomotor assessment when teachers employ video modeling of worship practices, subsequently asking students to imitate the movements under observation or through recorded submissions. Features such as pause, replay, and slow-motion playback allow students with cognitive or motor difficulties to process information at an individualized pace, supporting gradual mastery of religious practices. Field observations indicated that practice activities were repeated under direct teacher guidance to ensure full participation aligned with each student's abilities. Documentation of worship practice assessments and skill score lists revealed consistency between psychomotor indicators and the learning objectives specified in lesson plans (RPP) or modules. These findings align with performance-based assessment principles, as proposed by Aulia, Shaleh, Bariyah, and Suprobo (2024), which emphasize evaluating psychomotor skills through direct observation of authentic skill execution and movement accuracy.

Differences in assessment strategies became more pronounced when adapted to the specific characteristics of students. Teacher 1 employed written tests read aloud by the teacher, with responses recorded by students in Braille. This approach aligns with the findings of Kana and Hagos (2025), who emphasize that instruction and assessment for students with visual impairments must be adapted to match each student's needs and readiness level. In addition, Teacher 1 supplemented assessments with behavioral observations, focusing on aspects such as honesty and independence. This practice is consistent with Jalwis (2023), who demonstrates that student engagement in daily worship activities, including ablution and congregational prayer, contributes significantly to the development of religious character and discipline. While Teacher 1 prioritized varied assessment instruments, Teacher 2 emphasized repeated practice. Teacher 2's approach combined lectures, questioning, and repetitive Braille reading exercises, highlighting direct practice and observation of students' actual performance. This strategy reflects Suharjo, Hanani, and Jasmienti (2020), who note that Islamic Religious Education for children with special needs often employs lectures, memorization, question-and-answer sessions, and repetitive demonstrations, which function as drill-based instructional methods. In contrast, Teacher 3 adopted a highly individualized approach, engaging each student directly through short lectures, questioning, and intensive repetition. Special attention was given to the range of student responses, whether active, passive, or disruptive. This approach aligns with Egelandsdal and Krumsvik (2017), who assert that questioning, whether through discussion or direct interaction, enhances student engagement and supports the achievement of intended learning outcomes.

Further variations were observed in the assessment instruments employed by the three PAI teachers. Teacher 1 utilized spiritual and social observation rubrics, multiple-choice and essay questions, and skill-based tasks such as worship practice and concept mapping, employing strategies including discovery learning, questioning, and demonstration. This approach aligns with Ames (2016), who found that discovery learning enhances student engagement and active participation. Teacher 2 implemented attitude rubrics, multiple-choice and essay questions, and skill assessments focused on Qur'anic reading (letters and diacritical marks) through intensive drills, group discussions, and discovery learning. These practices are consistent with Sholikhah, Hastuti, and Indriyanti (2020), who demonstrated that a combination of drill exercises, cooperative learning, and concept-discovery approaches such as the Learning Cycle effectively improves both knowledge acquisition and skill development. In contrast, Teacher 3 developed assessments encompassing attitudes, knowledge of the Qur'an and Hadith, and practical skills such as memorization, tajwid recitation, Arabic writing, and mind mapping, utilizing peer tutoring, inquiry-based learning, and direct practice. This approach corresponds with Sesmiarni, Darmawati, Yuspita, Yeri, and Ikhsan (2023), who emphasize the significance of collaborative strategies and intensive practice for enhancing Qur'anic skills among students with special needs.

Despite these differences, a common pattern emerged across all three teachers: the integration of cognitive, affective, and psychomotor domains in assessment. Teacher 1 emphasized diverse instruments and discussion, Teacher 2 prioritized repetitive practice and Braille exercises, and Teacher 3 focused on individualized approaches through direct lectures and questioning. These findings indicate that practice-based, hands-on assessment remains the primary and most effective approach for students in special schools. Consequently, assessment strategies and techniques in PAI instruction at SMP LB serve not only to evaluate academic achievement but also to foster students' religious values, independence, and socio-emotional development through contextualized and inclusive practices.

Utilization of Islamic Education Assessment Results in Special Junior High Schools

Based on interview data, Table 3 presents the variations in how the three PAI teachers at Special Junior High Schools (SMP LB) utilized their assessment results.

Table 3. Differences in the Utilization of Assessment Results Among the Three Teachers

Aspect of Assessment Utilization	Teacher 1	Teacher 2	Teacher 3	Suitability/Alignment among Teachers 1, 2, and 3
Reporting & Feedback	Results are reported to the classroom teacher and assessment team;	Used to monitor progress across grade levels; parents are provided	Used to adjust instruction; parents are informed during practice	All three report results and provide feedback to parents; Teachers 1 and 2 employ more structured reporting, whereas

	parents receive oral feedback.	feedback related to worship practices.	sessions or meetings.	Teacher 3 relies on informal communication during practice.
Documentation & Collaboration	Serves as a guide for subsequent lessons; stored by the assessment team; forms the basis for evaluating student achievement.	Stored by both the assessment team and teachers; utilized for teacher collaboration.	Documented jointly with the classroom teacher; collaboration occurs during practice and mentoring.	All three document assessment results and collaborate with colleagues, with Teachers 1 and 2 showing greater alignment through formal storage systems, while Teacher 3 emphasizes collaborative guidance in practical mentoring contexts.
Formative/Diagnostic Function	Assesses understanding and moral attitudes; serves as a basis for differentiating instruction for visually impaired and regular students.	Identifies students' Braille proficiency and informs improvements in Qur'an reading and remedial planning.	Evaluates Qur'an–Hadith skill development; supports differentiated approaches for passive or tantrum-prone students.	All three utilize assessment results formatively and diagnostically, with specific emphases: visual differentiation (Teacher 1), Braille and remedial planning (Teacher 2), and Qur'an–Hadith skills with behavioural support (Teacher 3).

Based on Table 3, the three PAI teachers demonstrated distinct yet complementary approaches in utilizing assessment results within the context of inclusive education. These differences reflect each teacher's orientation toward the multifaceted function of assessment, as a tool for monitoring student progress, informing instructional adjustments, and fostering the development of students' religious character. Teacher 1 reported assessment results to the school's assessment team while providing informal feedback to parents: "Results are reported to the homeroom teacher and the school assessment team… Parents are directly informed about students' progress" (Teacher 1, Personal Communication, June 4, 2025). This practice aligns with Adarkwah (2021), who asserts that both formative and summative feedback should be delivered in a timely, specific, and constructive manner to enhance the quality of the learning process.

Teacher 2 employed assessment results to continuously monitor student progress across grade levels, particularly from Grade 7 to Grade 9, maintaining personal records and facilitating collaboration with other teachers: "This data is used to track progress across grade levels. The assessment team stores it, while teachers also keep personal notes that can be shared during collaboration with other teachers" (Teacher 2, Personal Communication, August 1, 2025). This approach is consistent with Gross, Hankeln, Rösike, and Prediger (2024), who highlight that technology-enabled assessments enable teachers to systematically track student learning, generate analytic reports, and make evidence-based instructional decisions while coordinating with colleagues.

Meanwhile, Teacher 3 focused on using assessment results to adjust subsequent instruction and maintain ongoing communication with parents: "Assessment results are used to adjust the next lesson... Parents are informed during practice sessions or meetings" (Teacher 3, Personal Communication, August 4, 2025). This finding corresponds with Ozmen, Akuzum, Zincirli, and Selcuk (2016), who emphasize that planned teacher–parent communication, whether through meetings or informal channels, is crucial for understanding students' challenges and enhancing parental support in the learning process. Collectively, these practices illustrate how adaptive assessment in PAI contributes to inclusive education by providing actionable feedback, promoting collaboration, and supporting individualized learning tailored to the needs of students with special educational needs.

Furthermore, the utilization of assessment results extended beyond summative purposes to encompass formative and diagnostic functions. Teacher 1 employed assessment outcomes to evaluate students' cognitive understanding and moral attitudes, using them as a foundation for differentiating instructional strategies to meet individual needs. This approach aligns with Widiyarto and Inayati (2023), who emphasize that PAI assessment should holistically integrate cognitive, affective, and psychomotor domains. Teacher 2 focused on mapping students' Braille literacy skills, thereby enabling immediate remedial interventions for identified weaknesses. This practice is consistent with Schmitterer and Brod (2021), who highlight that literacy mapping is a critical initial step in designing effective interventions. Teacher 3 utilized assessment results to monitor individual response levels, using the information to implement differentiated approaches for students who were passive or exhibited disruptive behaviors. This is in line with Chauvin, Wehby, and Kern (2024), who demonstrate that adaptive interventions informed by assessment data can effectively address behavioral and engagement barriers.

All three teachers also emphasized the role of assessment in guiding remedial, enrichment, and reflective practices. Teacher 1 leveraged assessment outcomes to inform remedial activities and ongoing reflection, consistent with Fauzi and Inayati (2023), who argue that PAI evaluation should serve not only as a measurement tool but also as a mechanism for continuous pedagogical reflection. Teacher 2 employed assessment to enhance Qur'anic recitation, providing enrichment for students who demonstrated mastery and remedial guidance for those who had not yet achieved proficiency. This approach is supported by Hayden, Gubbins, Cody, and Boldt (2024), who stress that

differentiated instruction requires tailoring activities to students' abilities while offering additional support or challenge as needed. Teacher 3 utilized assessment data to evaluate Qur'an and Hadith skills, integrating findings into reflection on students' moral and religious development. This is consistent with Mulyani, Mazid, Farikah, Riyanti, and Wulansari (2025), who highlight that skill-based assessment in Islamic Religious Education should be closely linked with spiritual values and reflective learning to strengthen character formation.

In conclusion, the use of assessment results in PAI instruction at SMP LB extends beyond administrative or evaluative purposes, functioning as a strategic instrument for fostering an adaptive, reflective, and inclusive learning environment. Through this process, assessment not only supports academic achievement but also promotes religious character development, independence, and the spiritual and social competencies of students with special needs.

Barriers and Challenges in Islamic Education Assessment at Special Junior High Schools

Based on interviews with Teacher 1, Teacher 2, and Teacher 3, Table 4 presents a summary of the key barriers and challenges encountered in implementing Islamic Religious Education (PAI) assessments at Special Junior High Schools (SMP LB).

Table 4. Differences in Assessment Barriers and Challenges Among the Three Teachers

Aspect of Barriers & Challenges	Teacher 1	Teacher 2	Teacher 3	Suitability/Alignment among Teachers 1, 2, and 3
Main Challenges	Differences in students' abilities (regular–MDVI); transfer students require assessment adaptation; limited parental involvement.	Lack of instructional aids (for funeral rites, Hajj, Umrah); students struggle with practice and require close supervision; limited resources for visually impaired students.	Students are easily moody and reluctant to respond; wide variation in needs (mild–severe) affects assessment; worship practices require frequent repetition.	All three face complex classroom conditions and constraints—ranging from diverse abilities and limited parental involvement (Teacher 1), to inadequate resources (Teacher 2), and behavioural and variability challenges (Teacher 3)—indicating shared structural barriers with different dominant emphases.
Specific Challenges	Adapting assessments for visually impaired and transfer students; maintaining fairness and	Weak retention among visually impaired students; requires intensive	Severe cognitive limitations, short attention spans, passive or tantrum-	All three require adaptation and individualized strategies, with Teacher 1 focusing on fair and equitable assessment adaptation, Teacher 2 on strengthening retention

equity in results.	repetition and supporting media.	prone behaviour; requires personalized guidance.	through repetition and media, and Teacher 3 on intensive, personalized guidance for students with severe limitations.

Based on Table 4, the three PAI teachers experienced varied challenges that were closely linked to students' characteristics and the conditions of their respective schools. Teacher 1 confronted differences in students' abilities, particularly among those with visual impairments, and faced the additional need to adapt assessments for transfer students. Emphasizing the importance of equity in assessment, Teacher 1 stated: *"The challenge I face is the difference in students' abilities; some are regular, and some are MDVI. Transfer students often require time to adapt to new assessments. Sometimes parents are less involved, so I have to find a middle ground to ensure that assessments remain fair and equitable"* (Teacher 1, Personal Communication, June 4, 2025). This finding aligns with Douglas, McLinden, Robertson, Travers, and Smith (2015), who highlight the significance of inclusive assessment frameworks that accommodate all learners with special educational needs and disabilities. Such frameworks ensure that assessments are accessible, responsive to the diversity of students' abilities, and uphold the principle of equity.

Teacher 2, meanwhile, faced difficulties in maintaining memory retention among students with visual impairments, as these students often experienced cognitive decline despite regular Braille practice. Teacher 2 also underscored the scarcity of specialized instructional media, particularly for teaching worship practices: "*The biggest difficulty is the lack of specialized teaching aids. When explaining worship practices such as funeral rites, Hajj, or Umrah, visually impaired students require tactile media, but the school has limited resources. Their memory retention often fades quickly even after practicing Braille, so repeated practice and intensive guidance are necessary*" (Teacher 2, Personal Communication, August 1, 2025). This observation indicates a critical need for more diverse and adaptive instructional media. Consistent with this, Nasrum and Herlina (2019) demonstrate that audiovisual-based learning tools can enhance students' engagement and learning outcomes, thereby strengthening their comprehension and retention of instructional content.

Meanwhile, Teacher 3 faced more complex challenges, including severe cognitive limitations, short attention spans, and passive or disruptive behaviors. Teacher 3 explained: *"In my case, the challenge is that students are often moody. Sometimes they want to answer, sometimes they remain silent. For students with severe intellectual disabilities, their concentration is short, and some are passive or have tantrums. Therefore, assessment is more about personal guidance rather than academic targets. Worship practices such as ablution or prayer also require repeated practice. It would be better if there were special replicas, for example of the Ka'bah or Hajar Aswad, so they could touch them directly. As a result, assessment is directed more toward personal guidance than formal academic achievement"* (Teacher 3, Personal Communication, August 4, 2025). This finding aligns with Zhao, Wang, and Liu (2022), who emphasize the importance of remedial programs in

supporting students with learning difficulties. Such programs provide additional guidance outside regular instructional hours, ensuring that students who have not yet achieved mastery receive targeted support, while those who have achieved mastery benefit from enrichment activities that deepen understanding and sustain engagement.

This situation underscores the distinctive nature of assessment in SMP LB, which necessitates differentiated approaches tailored to the diverse needs of students with special needs. Teacher 1 emphasized habituation of humility and gratitude through worship practices, consistent with Fadlillah and Kusaeri (2024), who argue that diagnostic assessment functions not only to map cognitive abilities but also to cultivate religious values. Teacher 2 prioritized the reinforcement of basic Qur'anic literacy skills, in line with Zulkifli, Rashid, Mohamed, Toran, Raus, and Suratman (2022), who highlight that Qur'anic instruction for students with learning difficulties is challenged by limited instructional time and inconsistent parental support, making foundational Qur'an reading practice essential to ensuring equitable access to Islamic education. Teacher 3 focused on the application of tajwid and the practice of Qur'an–Hadith in daily life, consistent with Sesmiarni, Darmawati, Yuspita, Yeri, and Ikhsan (2023), who demonstrate that systematic tajwid instruction, combining theoretical explanation with guided reading practice, enhances both comprehension and student engagement.

Overall, although each teacher encountered distinct challenges, a common pattern emerged across the three cases. Teacher 1 emphasized the impact of limited parental involvement, Teacher 2 faced constraints related to insufficient resources for visually impaired students, and Teacher 3 contended with students' fluctuating emotional and behavioral conditions. These challenges highlight that assessment in SMP LB is considerably more complex than in mainstream schools, as it must accommodate a high degree of variability in individual student needs while navigating environmental and resource limitations. The convergence and divergence in adaptive assessment practices and the associated challenges are summarized in Table 5.

Table 5. Comparison of Adaptive Assessment Practices and Challenges among the Three Teachers in Special Junior High Schools

Aspect of Adaptive Assessment	School A (Teacher 1)	School B (Teachers 2 and 3)
Initial Assessment and Planning	Conducted through spontaneous oral questioning and informal input from parents; assessment adaptations evolve progressively throughout the learning process.	Conducted at student admission (PPDB) in collaboration with a psychologist; students are grouped according to type of disability, providing a systematic foundation for planning.
Focus of Adaptive Assessment	Emphasizes equitable access to learning by adapting assessment instruments for both visually impaired and regular students, with	Emphasizes diagnostic mapping and intensive support for students with severe disabilities, including learning and behavioural challenges.

	attention to fairness of results.	
Assessment Strategies (Cognitive–Affective–Psychomotor)	Utilizes spontaneous oral questioning, written tests (Braille/regular script), behavioural observation, and practice of worship supported by homework and assignments.	Employs oral questioning, short lectures, written tests, repetition, observation of attitudes and social interaction, Diriku rubric, practice of worship, motor activities, Qur'an–Hadith skills, and digital/audiovisual media.
Utilization of Assessment Results	Used to design subsequent lessons, differentiate methods for visually impaired and regular students, and reported to classroom teachers, the assessment team, and parents through oral feedback.	Used to monitor progress across grade levels, adjust instruction, design remedial programs, strengthen Qur'an reading, and provide feedback to parents during practice sessions or meetings.
Key Barriers and Adaptive Responses	Main barriers: differences in student abilities (regular–MDVI), the need to adapt assessments for transfer students, and limited parental involvement. Adaptive response: adjustments of assessment instruments while maintaining fairness and equity.	Main barriers: limited instructional aids and resources, weak retention, wide variation in student needs (mild–severe), and behavioural challenges. Adaptive response: intensive repetition, use of supportive media, and individualized guidance for students with more complex needs.

Conclusion

Based on the findings, it can be concluded that the implementation of adaptive Islamic Religious Education (PAI) assessment in Special Junior High Schools (SMP LB) is essential for supporting inclusive learning for students with special needs. Assessment planning emphasizes individualized approaches, implementation integrates the cognitive, affective, and psychomotor domains, and assessment results inform continuous instructional improvement. Key challenges include limited resources, diverse student abilities, and fluctuating emotional conditions, which require creative and responsive teacher adaptation. These findings confirm that PAI assessment functions not only as a tool for academic measurement but also as a formative and reflective instrument for shaping students' religious character.

The study's limitations include its narrow case scope and qualitative design, which do not allow for broad generalization or quantitative evaluation of assessment effectiveness. Based on the findings, it is recommended that PAI teachers enhance their competence in designing adaptive assessments through the use of simple technologies and differentiated instructional strategies. Schools should improve assessment facilities and foster collaboration among teachers, specialists, and parents. At the policy level, government support is needed to formulate comprehensive and sustainable frameworks

for inclusive PAI assessment. Future research should extend the scope to other educational levels, employ comparative or quantitative methodologies, and develop technology-based assessment models to improve validity and reliability in special schools. In summary, this study highlights the critical role of adaptive assessment in creating an inclusive, equitable, and character-oriented Islamic education system for students with special needs.

Acknowledgments

Ethical Statement

This study was conducted in full accordance with established ethical guidelines to ensure the protection, rights, and well-being of all participants. Prior to data collection, informed consent was obtained from all participants, and pseudonyms were used to maintain confidentiality and anonymity. Participation was entirely voluntary, and participants were informed of their right to withdraw at any time without penalty. The research procedures adhered to both institutional and international standards for ethical conduct in social science research, ensuring transparency, integrity, and respect for all individuals involved.

CRediT Authorship Contribution Statement

- **Author 1:** Conceptualization, Investigation, Review & Editing, and Project Administration
- **Author 2:** Methodology, Supervision,
- **Author 3:** Formal Analysis, Visualization, Review & Editing

Conflict of Interest

The authors declare that there are no competing financial interests or personal relationships that could have influenced the work reported in this article.

Data Availability

The datasets generated and analyzed during the current study are available upon reasonable reques.

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