

Implementing Multisensory Pedagogy to Strengthen Teachers' Role in Addressing Early Reading Challenges

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ABSTRACT

The objectives in the implementation of multisensory techniques to overcome the difficulties of early reading for first graders are also to determine supporting and inhibiting factors of learning, with outcomes described by employing a qualitative descriptive method at SD NU Tanwirul Qulub Kudus. The data were collected through observation, interview, and documentation. Triangulation was used to test the validity of the data and was analyzed through reduction, presentation, and drawing a conclusion. The results showed that a multisensory approach-phonics cards, writing exercises, interactive feedback, and special assistance to the students diagnosed with dyslexia-has satisfactorily improved the learners' abilities in early reading. Average ability increased from 58% before implementation to 84% after using the multisensory strategy. Factors supporting the success of the implementation were interesting media, gradual delivery of materials, active teacher-student interaction, and timely feedback on students' work. The inhibiting factors were the limited time and students' varying abilities. Results imply that the practical and effective model multisensory innovative approach to developing emergent literacy, can be used as a real Indonesian language program in elementary schools.

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1. INTRODUCTION

Reading ability is an essential skill for every individual, because through the understanding and interpretation of written text, a person can not only access a variety of knowledge, but also use it as an important means of communication in human life. Through reading, we can acquire new information, develop critical thinking, and forge better social relationships. Furthermore, reading skills are also the foundation for academic and career success. Reading enhances critical thinking and boosts problem-solving abilities

As Allah SWT says in Q.S. Al-Alaq Verses 1-5 as follows:

أَفْرَأَ بِأَسْمِ رَبِّكَ الَّذِي خَلَقَ الْإِنْسَانَ مِنْ عَلَقٍ أَفْرَأَ رَبُّكَ الْأَكْرَمُ الَّذِي عَلَّمَ بِالْقَلَمِ عَلَّمَ الْإِنْسَانَ مَا لَمْ يَعْلَمْ

Meaning: "Recite in (stating) the name of your Lord Who brought forth creation; He fashioned humans from a drop of blood. Read, and your Lord is the Most Merciful, Who instructs (people) through the pen; He imparts knowledge to humans about what they are unaware of." (QS. Al-Alaq: 1-5).

The skills of early reading become the main foundation for literacy development in children and success in their academics. Holopainen et al. and Frans et al., emphasized in their findings on the impacts of early difficulties in reading on long-term effects toward achievements among children, self-confidence, and cognitive development that early difficulties in reading have long-term effects on children's academic achievement, self-confidence, and cognitive development (Holopainen et al. 2018; Frans, Ani, dan Wijaya 2023). In explaining the context of learning the Indonesian language, Egah Linggasari & Rochaendi further stated that 'reading ability' is a prerequisite to mastering other language abilities—writing and speaking. Hence, an appropriate learning strategy should urgently foster such abilities from early childhood (Egah Linggasari, & Rochaendi 2022).

Conventional learning approaches are based on lectures, written assignments, or repetition of letter symbols. It fails to meet the different learning needs of children, especially at the elementary school level. Due to minimum variations in methods that deeply integrate students' multisensory experiences within the characteristics of early childhood students who are dependent mostly on visual, auditory, kinesthetic and tactile stimulations for comprehending abstract concepts Kusmayanti found this situation as an impediment; therefore applying traditional, and remedial approaches in language learning contexts that still emphasize a single cognitive aspect, such as phonological ability or vocabulary mastery, without considering the sensorimotor and affective aspects, impacts the reading process (Prodi, Guru, dan Dasar n.d.). The students improved their reading skills through visual, auditory, tactile, and kinesthetic modalities. Such skills included speed in reading, alphabet memorization, spelling and word formation as well as recognition of symbols. The multisensory approach to learning guided by the teacher built confidence in the learners and motivated them to actively participate in the process of acquiring reading skills (Mitak.Marsilana, Fitriah 2023). Multisensory experiential activities (visual, auditory, kinesthetic, and tactile) better adapt to the learning needs of students in the lower elementary grades because conventional methods are monovariate and ineffective. Conventional methods involve only one cognitive aspect (for example, remembering symbols) and do not meet the multisensory needs of students adequately (Zulhendri, 2021; Syerlyana et al., 2025).

Research on reading instruction is still mostly confined to the development of teaching materials, phonetic models, or traditional literacy-based strategies. For example, in early reading instruction, past studies have highlighted the drill-mechanistic aspect with no consideration for differences in student learning styles and neuropsychological barriers that result in variation of reading ability within the same class. There is, therefore, an empirical gap in studies of the application of a multisensory approach (Visual-Auditory-Kinesthetic-Tactile) to early reading instruction of Indonesian at the elementary school level for students having mild difficulties in reading.

Preliminary observation at SD NU Tanwirul Qulub Kudus found very high heterogeneity in reading ability, with six out of thirty students experiencing difficulties in reading, indicated by spelling mistakes, inability to recognize letters, and poor reading comprehension. This initial finding provides evidence that difficulty in reading is not only limited to the mastery of linguistic symbols but also further underlies sensorimotor integration and working memory, which has never become a big concern in Indonesian language learning. Hence, the learning model optimizes more than just cognitive aspects of students but also fully senses their potential.

Birsh & Carreker have highlighted the effectiveness of a multisensory approach based on the

overlapping activation of different neurological pathways in the learning process, as a pathway to improving reading skills among children with learning difficulties (Birsh 2011). In the Indonesian context, the application of this method has never been systematically observed in terms of pedagogical effectiveness under adaptation to the Indonesian language curriculum or student readiness and engagement that could be instigated by it.

That is why this research becomes very important since it tries to connect the contextual practice of a multisensory approach-applied early reading instruction-with the existing theoretical gap between the two in Indonesian elementary classes. This can be oriented toward methodological innovation that may bridge and feed into Indonesian language learning models, theoretically developing them toward students' sensorimotor needs. Practically, it will help teachers design more inclusive, interactive, effective learning activities aimed at sharpening children's reading abilities from an early age.

The following at least can be identified as research gaps emerging from this study: a) Contextual studies on the application of a multisensory approach to early Indonesian reading instruction in elementary schools, particularly those integrating cognitive, affective, and sensorimotor aspects, remain limited. b) Empirical exploration into how effective multisensory methods are at enhancing the reading abilities of students with reading difficulties within heterogeneous classes appears lacking. and c) Pedagogical studies based on local contexts that adapt Western multisensory theory to the characteristics of Indonesian students, including aspects of learning culture, mother tongue, and the Indonesian phonetic system, remain limited.

The primary foundation for developing children's basic literacy is to hone their beginning reading skills. Reading ability is not limited to recognizing letters and phonemes but also involves the integration of neurological processes between visual, auditory, kinesthetic, and cognitive systems. Information that passes through more than one sensory pathway into the brain is easier to store long long-term memory and is better understood. This can be seen from dual coding theory Paivio, (2014) and multisensory integration theory (Ismail et al. 2024). In the context of Indonesian language learning, reading ability covers two aspects: a) the mechanical aspect, namely the ability to recognize letters, spell out words, and pronounce them correctly. b) comprehension aspect, namely the ability to understand the meaning, main idea, and structure of simple texts.

A multisensory approach remains practical by involving visual (seeing letters), auditory (hearing sounds), kinesthetic (body movement), and tactile (feeling letter shapes) aspects. In this way, full meaning construction is ensured since sensorimotor and cognitive functions are engaged simultaneously. This aims to do away with traditional learning methods that usually focus only on the mechanical aspect, enabling children to read without comprehending the content. Constructivism theory is an active process of forming knowledge by experience, direct or personal (Alismaiel et al., 2022; (Alismaiel, Cifuentes-Faura, dan Al-Rahmi 2022). According to Suryaratri, (2019), teachers play a crucial role in organizing multisensory experiences as a form of pedagogical scaffolding, which aligns with a sociocultural approach. This is undoubtedly effective in improving learning outcomes in elementary grades. Therefore, in this respect, the multisensory approach can be viewed as a practical execution of constructivism since it places students as active subjects who acquire knowledge through multi-channel learning experiences.

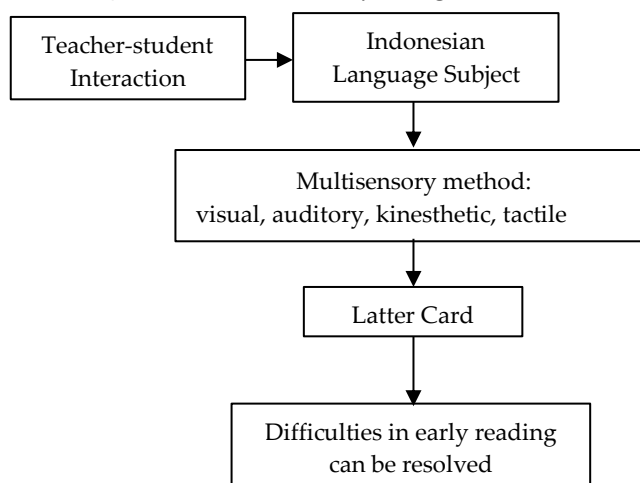
Conceptually, this research demonstrates that the main problem is some early grade students experience reading difficulties, characterized by weak phonetics, spelling, and reading comprehension skills. This is due to: 1) learning that is still one-way, verbal, and does not accommodate students' learning styles; and 2) the limitations of multisensory-based pedagogical interventions in the Indonesian language context. Therefore, the solution is to implement a multisensory approach (VAKT: Visual, Auditory, Kinesthetic, and Tactile) in early Indonesian reading instruction.

This is based on the belief that it will create strong neuronal connections in the child's brain through simultaneous activation of several senses, accelerating recognition of letters, improving memory, and ensuring deep reading comprehension. Therefore, such an approach will make students interested in the class and provide them with a meaningful learning experience. The envisaged outcome

comprises significant improvement in early reading abilities (letters, words, simple sentences), student readiness to learn, concentration and motivation, and enhancement of the teacher's role as a facilitator of active multisensory learning.

Based on that background, this research aims to close the empirical gap regarding the effectiveness and actual relevance of the multisensory approach in the context of Indonesian language learning at elementary schools. Specifically, this study explores and describes the implementation of a multisensory approach in the early reading instruction of the Indonesian language in first grade. An analysis has also been made on barriers to the implementation of this approach in the learning process and solutions thereof. The significance of this research is: first, theoretically, it expands the study of early literacy by integrating cognitive and neuroeducational theories in the context of the Indonesian language. Second, empirically, it provides contextual data on the effectiveness of multisensory methods in Indonesian elementary schools. Third, practically, providing a learning model that can be used as a reference by teachers in overcoming students' reading difficulties through multisensory-based strategies. And fourth, policy can support the direction of strengthening national literacy and independent learning with an adaptive approach to the characteristics of students.

Figure 1.1 Framework of thought



2. METHODS

A qualitative descriptive approach was employed in presenting deeply enriched details on how multisensory methods are applied to the teaching and learning of Indonesian language lessons for young primary school learners. Waruwu states that qualitative descriptive research aims to understand and describe a social or educational phenomenon based on the reality experienced by the research subject (Waruwu 2024). The choice of approach is guided by the fact that research more interested in understanding processes and meanings rather than testing any hypothesis or relationship between variables. It enabled a clear elucidation of teacher strategies, student responses, and factors that promote or militate against the effectiveness of early literacy learning.

This research was a field study at SD NU Tanwirul Qulub Kudus. The research subjects were first-grade teachers, the principal, and first-grade students. Researchers were also primary instruments in the direct involvement of the data collection process and applied three main techniques for collecting data: participant observation, in-depth interviews, and documentation. Observations monitor classroom learning practices while interviews explore informants' perceptions and experiences; documentation contains materials about lessons as well as results achieved by students. The data analysis process was carried out interactively and simultaneously from the data collection stage up to the stage of conclusion.

Referring to the model developed by (Miles dan Huberman 1992), analysis includes three main steps: (1) reducing the data, which is in the process of selection and simplification of the data according

to the research focus; (2) presenting the data, which contains grouping information into thematic categories such as teaching strategies, reading difficulties, and the impact of method implementation; and (3) concluding while verifying the data by interpretation of meaning on the categorized data. Triangulation of sources, methods, and time has been used to ensure the validity of data (Sugiyono, 2016).

Source triangulation was conducted by comparing information among teachers, students, and the headmaster. Method triangulation was conducted by combining observation, interview, and documentation. Besides that, time triangulation was also conducted by collecting data at different times to find out whether there was any change or evolution of information. The qualitative descriptive approach best suits because it lets methods be deeply explored multisensory regarding the process of implementation and effects on students. Besides giving contextual richness, this approach allows researchers to report learning practices instinctively, realistically, and genuinely parallel to the actual situation in primary schools.

3. FINDINGS AND DISCUSSION

Indonesian Language Learning in First Grade

The instructional process is systematically organized into three major phases: planning, implementation, and evaluation. It begins with lesson planning, where the teacher prepares instructional modules based on the curriculum and student needs and characteristics. The first-grade Indonesian language classes are held every Tuesday and Wednesday between 07.00-11.15. Activities for developing students' reading skills are multisensory. In the planning stage, teachers formulate Competency Points (CPs) and Target Points (TPs) based on the curriculum. The objectives of learning Indonesian aim at the development of students' abilities in grammar, sociolinguistics, discourse, and strategy (Linggasari, & Rochaendi, 2022). The SD NU Tanwirul Qulub Kudus completely reflects this in the structuring of objectives that keep language development elements within them.



Figure 2. preliminary activities

During the implementation phase, the teachers practice multisensory methods in teaching phonetics such as 'ga, gi, gu, ge, go.' The students observed, read aloud, and wrote on letter cards to match with pictures. This finding is in line with Khairi and Kaana et al, who found that early reading success largely depends on the teacher's creativity in creating a student-centered, fun, and interesting classroom environment. She was a facilitator monitoring student attendance while leading the students' opening prayer thus providing students with new insight related to their prior knowledge (apperception). (Khairinal, Kohar, dan Fitmilina 2020; Kaana et al. 2023). Nursalim emphasized that teachers play a social role in addition to their cognitive role (Armia, ..., dan 2019 2019).



Figure 3. Card media

During the assessment phase, oral tests were administered in which students spell words, and written tests in which students also spelled related words. Based on teacher interviews, 6 out of 30 students still struggled with reading fluency and word recognition. This finding supported Tomlinson's theory (Kurniawati et al. 2022) that each student has a preferred way of learning something; thus, instruction must eventually reach the many and varied cognitive and affective paths to children's minds. Consequently, personalized instruction and adaptive teaching are crucial for promoting learning equity. Formative assessments play a very effective role in developing reading literacy but several studies have proven that the effectiveness lies mostly when it is accompanied by personalized learning. Therefore, explicitly and implicitly learning strategies should be applied to individual needs and characteristics to overcome reading difficulties, improve engagement in learning, and make classes more inclusive and better centered on literacy (Vea, 2019; Rohmatin et al., 2025; Putri, 2025; Viantho & Nirmala, 2024).

Results of the research show that the teaching of Bahasa Indonesia in that particular school is conducted through an approach that integrates balanced curriculum objectives-applying student characteristics and multisensory engagements in line with national standard education, emphasizing literacy-oriented goals.

2. Application: Multisensory methods for overcoming reading difficulties

A multisensory approach integrating all elements of visual, auditory, kinesthetic, and tactile (VAKT) is essential in enhancing the reading abilities of students. Teachers employ letter cards that contain pictures and words to practice pronunciation, offer feedback to the students, as well as personalized assistance in forming a firm association between recognition of letters, sounds, objects, and improved recognition as well as memory. This result is similar to what (Langille 2021) found, which shows that learning is better when more senses are used during the process. implementation of a multisensory phonics program (including the use of tactile/visual aids and repetitive phonematic practice) improves word recognition and early reading abilities. The fact that multisensory, particularly active, learning invokes interest and motivation, which enhances reading fluency (Basam dan Sulfasyah 2018). Therefore, the most effective way of acquiring reading involves the active participation of different senses. Multisensory phonics application combining visual and tactile aids with repeated phonetic exercises enhances vocabulary as well as emergent reading skills. Hence, such an approach to learning can make students interested in and motivated toward gaining fluency that has a positive impact on their reading,

A multisensory approach engages more senses actively, thereby arousing interest and motivation among the students. Sensory inputs into learning activities and the involvement of learners contribute to an increase in reading fluency, such as can be considered a direct outcome of increased participative modes of learning. Basically, in implementing a multisensory approach, it is necessary to know and analyze the aspects that influence reading skills. Several things need to be taken into consideration, as contained in the following table:

Table 1
Indicators of reading difficulties and actions taken by teachersto overcome students' reading difficulties (Daniel et al. 2023)

Aspect	Indicators
Reading Difficulties	Not fluent in reading
	Limited memory skills
	Difficulty in spelling
	Problems in recognizing letters
	Errors in substituting letters
	Lack of attention to punctuation marks
	Difficulty in understanding the content of reading
Actions taken by teachers to overcome reading difficulties in students	Employing engaging and efficient educational materials
	Boosting self-confidence and providing Encouragement
	Never cornering students regarding the circumstances they face
	Providing additional reading learning programs

The data from SD NU Tanwirul Qulub Kudus support the theory above in that students who were previously reluctant to identify letters have now significantly improved not only in what they can comprehend when reading but also in their engagement. This supports Atuna et al.'s argument that the VAKT method connects abstract symbols with sensory experience and also makes the lesson interesting and motor and cognitive development, a process which resulted in meaningful learning (Atuna et al. 2024). However, they also pointed out some weaknesses or shortcomings in their implementation: long preparation time and making students tired. Such a finding is exactly as Suryani found her constraints in the effective application of multisensory strategies (D. Suryani 2019). The results showed that 58% and 84% of students had achieved and improved their reading skills, respectively, before and after applying the multisensory learning approach. This can be seen from the real learning gains obtained, in line with previous research on developing literacy learning.

In essence, the implementation of the multisensory approach (VAKT) at SD NU Tanwirul Qulub Kudus is very effective in developing students' reading skills and also creating their engagement in the learning process. This occurs because the approach connects language symbols with students' concrete experiences through visual, auditory, kinesthetic, and tactile activities. Despite the constraints of preparation time and the resulting fatigue, learning outcomes showed significant improvement, indicating that the multisensory approach can be a relevant and meaningful strategy in developing basic literacy in elementary schools.

3. Factors Supporting and Inhibiting Multisensory Learning

The educational process is consistently shaped by factors that support or hinder it, stemming from educators, learners, and their surroundings (Tinggi et al. 2020). Based on interviews with the first-grade homeroom teacher, the implementation of the multisensory method at SD NU Tanwirul Qulub Kudus uses picture cards and relevant words accompanied by teacher explanations, pronunciation exercises, and the use of Student Worksheets (LKPD) to string words together. Prominent supporting factors include the use of simple yet engaging media, a gradual and structured approach, and direct teacher-student interaction that can increase motivation and understanding. However, there are also inhibiting factors such as time constraints, differences in student understanding levels, and challenges in managing large classes that make some students feel bored or stressed. Therefore, the successful

implementation of the multisensory method is highly dependent on learning management strategies that can maximize supporting factors while minimizing existing obstacles.

Success factors promote success, not inhibit it. Supporting factors:

- a) Use of fun and simple media, such as alphabet cards and pictures;
- b) Presenting materials in a structured, step-by-step manner suitable to the level of students' maturity, and
- c) Direct teacher-student interaction, which motivates and provides a better understanding.

This result is in line with Rahmawati and Pandjaitan, and Samsudin, who found that interactive and varied learning media proved more effective in keeping students interested and attentive to lessons (Rahmawati dan Pandjaitan 2020; Tinggi et al. 2020). The recognition of sounds, reading fluency, and motivation would be developed more effectively if all senses are fully engaged continuously within learning activities (Vaughn et al. 2019). Thus, Interactive and varied learning media are very effective in keeping students' interest and attention to learning. The continuous involvement of all senses supports the improvement of sound recognition, reading fluency, and motivation in learning. Therefore, multisensory and interactive learning as an effective strategy in enhancing the development of literacy skills can be considered.

However, there were also inhibiting factors found, such as lack of time, varying abilities of students, and classroom management that echoed the views of Suryani, (2019), and Hulme & Snowling, (2016), who argue that class size and student heterogeneity can undermine the effectiveness of personalized instruction. Despite these obstacles, teachers provided small-group instruction to overcome the difficulties and emphasized encouragement through feedback. It also raised practical challenges in carrying out a theoretically and empirically sound approach as a model for initial reading acquisition in Indonesian reading. Theoretically, it translated cognitive, linguistic, and affective activities into measurable reading skills, bridging theory and practice.

In summary, despite several challenges in the implementation of the multisensory approach, such as time constraints in completing all student tasks and activities within a single meeting session, differences in student abilities to accept and understand learning, and complexity in classroom management, teachers optimally resolved these constraints through small group instruction involving students and providing motivational feedback. Practically relevant to applied theory, this is a multisensory approach bridging cognitive processes with linguistic input and affective output into observable literacy achievement, hence potentially effective as a model of initial reading acquisition in Indonesian language learning.

Results show that the multisensory approach proved very effective in reinforcing students' abilities to recognize, pronounce, and comprehend words. Average reading competency increased dramatically-from 58% to 84%-and more motivation, better concentration, and happiness in learning were noted. It therefore has huge potential as a literacy model grounded on the differentiated and inclusive learning principles being promoted at Indonesian primary schools through mainstreaming strategies recommended for use in literacy instruction. The following diagram illustrates the increase in students' reading ability from 58% to 84% after implementing the multisensory approach. This can be seen from the diagram below:

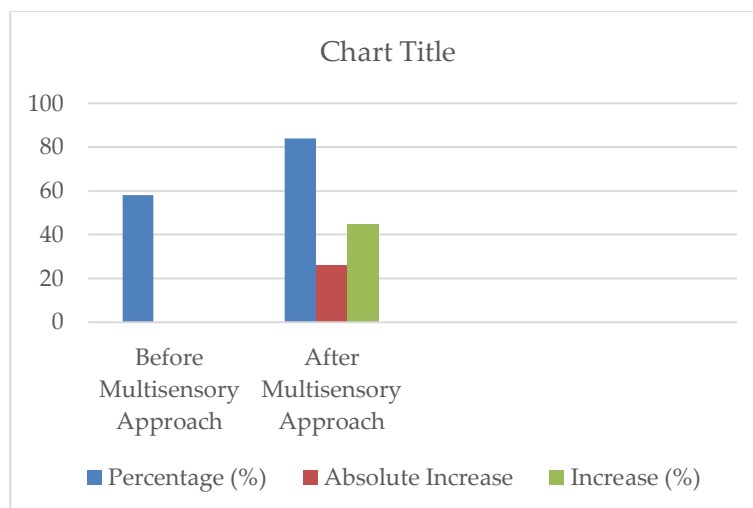


Figure 3. Diagram implementation of the multisensory approach

Early Literacy and Its Impact on Multisensory Indonesian Language Teaching

The Indonesian language learning in elementary schools plays a crucial role in fostering early literacy skills that become the foundation for developing thinking, communication, and creativity. Early literacy is not only related to technical skills of reading and writing but also includes understanding meaning and the use of language in a socio-cultural context. In the Indonesian context, literacy becomes a means of forming national identity and character building, as students who speak politely, creatively, and communicatively. Research supports the effectiveness of a multisensory approach to reading in the achievement of emergent literacy among students and, more significantly, for those experiencing difficulty with reading. Multisensory activities help learners recognize letters, sounds, and meanings through concrete and fun ways that involve visual, auditory, kinesthetic, and tactile paths. This is in line with the principle of differentiated instruction that highlights the significance of various learning styles and individual needs.

A multisensory approach provides support at the practical level to Vygotsky's sociocultural theory, which places social interaction and teacher mediation as key elements of a successful learning process (Bahri, Nurani, dan Hartati 2024). Conceptually, this approach bears implications for the development of curricula and practical activities of Indonesian language learning. Creative contextual activities and multisensory learning approaches should be used in reading classes to foster students' interest and motivation. Gori, M reviews theoretical and empirical evidence on how different sensory channels mediate learning and how multisensory pedagogical designs enhance learning processes. This is based on the argument that teachers' use of multiple modalities as practical tools to mediate learning experiences is in keeping with Vygotsky's focus on instructional mediation (Gori et al. 2022). Multisensory approaches that combine visual, auditory, kinesthetic, and tactile learning and discuss multisensory learning techniques guided by structured instruction and teacher mediation. Empirical evidence suggests that engaging multiple modalities can support meaning-making rather than simply the mechanics of reading (Stevens et al. 2021). The multisensory approach in learning to read Indonesian emphasizes the use of various senses through contextual and creative activities. With this method, teachers can develop students' interest and motivation towards reading and can improve understanding and make reading more mechanical and meaningful.

At the level of elementary school/MI curricula, multisensory strategies have to be structurally included in the process of achieving early literacy education, particularly emphasized in lower grades. Learning assessment should be carried out in a formative manner by paying attention to the student's learning process and progress, not just the final result. The integration of early literacy theory and multisensory pedagogical practices births a more humanistic and meaningful learning paradigm. Learning Indonesian is not only oriented toward the mastery of language skills but also toward the

development of language awareness and the formation of a literate character. The multisensory approach makes the learning process more inclusive, fun, and appropriate to the characteristics of Indonesian children while supporting the spirit of the Independent Curriculum, which places students at the center of learning.

Early literacy learning in lower elementary grades needs to be systematically designed through the integration of multisensory strategies, as they have been proven effective in improving early reading skills, learning engagement, and student motivation (Kucirkova, N&Roadriguez-Leon, 2023; Novitasari et al., 2022). This approach needs to be supported by formative assessments oriented towards students' learning processes and development, in line with the principles of assessment for learning to support literacy differentiation and sustainability (Black & Wiliam, 2018; Gustafson et al., 2019). The integration of early literacy theory and multisensory pedagogy results in Indonesian language learning that is humanistic and inclusive, learner-centered, and relevant to the spirit of the Independent Curriculum (Rompas 2021).

Therefore, based on the results of this study, the multisensory approach is highly relevant in overcoming early reading difficulties. A multisensory approach (which includes students with special needs or those struggling to learn in the regular classroom). Substantially increases reading fluency among all elementary school students, empirically demonstrating that this strategy is not simply a mechanical remedial tool but supports a more in-depth and inclusive literacy process (Soliha, 2025; Feliana et al., 2025). The following is the process flow for implementing the multisensory approach in Indonesian language learning in first grade:

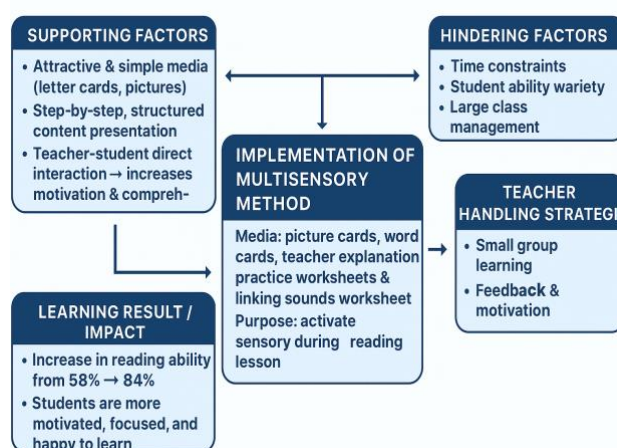


Figure 4. Implementing The Multisensory Approach

4. CONCLUSION

The results found in this study prove that with the application of multisensory (VAKT) methods, the students' reading ability and their activeness in Indonesian language learning for first graders can be improved. Visual, auditory, kinesthetic, and tactile involve forming experiences to associate abstract linguistic symbols with real objects; hence, better recognition of letters, pronunciation of words, meaning of words, and reading fluency. Reading competence increased from 58% to 84%, an increase very indicative of the success of multisensory methods found in the intervention.

The findings of the research indicate factors supporting the effective implementation of the initiative, which include the use of interesting and simple media, organized learning sequences, and interactive relationships between teachers and students that create motivation and make understanding easy. On the other hand, there were also inhibiting factors, which include time constraints, students' varying abilities, and large class management. To overcome such obstacles, they applied small group instruction with constant motivational feedback from them.

The multisensory approach conceptually supports Vygotsky's sociocultural theory that places

social interaction and teacher mediation in the development of literacy. Practically, it aligns with differentiated and inclusive learning, principles of the Independent Curriculum of Indonesia, advocating literacy as a process involving both cognitive and socio-cultural dimensions. Thus, the multisensory model functions not only as an effective teaching strategy for acquiring initial reading but also as a theoretical basis for fostering students to be creative, communicative, and literate learners in the Indonesian educational context.

REFERENCES

- Alismaiel, O. A, Cifuentes-Faura, dan W. M Al-Rahmi. 2022. "Online Learning, Mobile Learning, and Social Media Technologies: An Empirical Study on Constructivism Theory during the COVID-19 Pandemic." *Sustainability* 14 (18). <https://doi.org/https://doi.org/10.3390/su141811134>.
- Armia, A, ... N Nursalim - Ilmiah Pendidikan Bahasa dan Sastra, dan undefined 2019. 2019. "Pengajaran dan Pembelajaran Bahasa Indonesia." *e-jurnal.unisda.ac.id* A Armia, N Nursalim PENTAS: Jurnal Ilmiah Pendidikan Bahasa dan Sastra Indonesia, 2019•e-jurnal.unisda.ac.id 5 (2). <https://e-jurnal.unisda.ac.id/index.php/pentas/article/view/1518>.
- Atuna, Nur Yusriyyah, Nonoh Hery Yoenanto, Wiwin Hendriani, Pramesti Pradna Paramita, dan Universitas Airlangga. 2024. "Penerapan Metode Multisensori Dalam Peningkatan Kemampuan Membaca Pada Anak ABK di Sekolah Inklusi." *Jurnal Ortopedagogia* 10 (2): 93. <https://doi.org/http://journal2.um.ac.id/index.php/jo>.
- Bahri, Sukrina Saida, Yuliani Nurani, dan Sofia Hartati. 2024. "Teachers' perspectives on multisensory learning in early childhood education: Balancing opportunities and challenges." *Linguistic and Philosophical Investigations* 23 (1): 344–58.
- Basam, Fajri, dan Sulfasyah Sulfasyah. 2018. "Metode Pembelajaran Multisensori Vakt Sebagai Upaya Meningkatkan Kemampuan Membaca Lancar Siswa Kelas II." *JRPD (Jurnal Riset Pendidikan Dasar)* 1 (1): 18–24. <https://doi.org/10.26618/JRPD.V1I1.1235>.
- Birsh, JR. 2011. "Multisensory teaching of basic language skills." <https://eric.ed.gov/?id=ED529098>.
- Black, Paul, dan Dylan Wiliam. 2018. "Classroom assessment and pedagogy." *Assessment in Education: Principles, Policy & Practice* 25 (6): 1–25. <https://doi.org/10.1080/0969594X.2018.1441807>.
- Daniel, J, A Barth, E Ankrum - The Reading Teacher, dan undefined 2024. 2023. "Multicomponent reading intervention: a practitioner's guide." *Wiley Online Library* J Daniel, A Barth, E Ankrum The Reading Teacher, 2024•Wiley Online Library 77 (4): 473–84. <https://doi.org/10.1002/trtr.2265>.
- Egah Linggasari, & Rochaendi, E. 2022. "Pembelajaran Bahasa Indonesia di Sekolah Dasar melalui Model ... Literasi." *Literasi* Vol. XIII(1): 42–46.
- Feliana, Hana, Intan Nova Putri A, Gracia Zeeanya Imaniar T, Alya Zahratun Nisa, dan Siti Maufiroh. 2025. "Fonem Bahasa Indonesia Pada Siswa Sekolah Dasar" 6 (6): 10227–35.
- Frans, Sarah Adelheit, Yubali Ani, dan Yesaya Adhi Wijaya. 2023. "Kemampuan Membaca Pemahaman Siswa Sekolah Dasar [Reading Comprehension Skills of Elementary School Students]." *Diligentia: Journal of Theology and Christian Education* 5 (1): 54. <https://doi.org/10.19166/DIL.V5I1.6567>.
- Gori, Monica, Sara Price, Fiona N Newell, dan Nadia Berthouze. 2022. *Multisensory Perception and Learning: Linking Pedagogy, Psychophysics, and Human – Computer Interaction*. Vol. 35. <https://doi.org/10.1163/22134808-bja10072>.
- Gustafson, Stefan, Thomas Nordström, Ulrika B Andersson, Linda Fälth, dan Stefan Gustafson. 2019. "Effects of a formative assessment system on early reading development reading development" 40: 17–27.
- Holopainen, Leena K., Noona H. Kiuru, Minna K. Mäkihönko, dan Marja Kristiina Lerkkanen. 2018. "The role of part-time special education supporting students with reading and spelling difficulties from grade 1 to grade 2 in Finland." *European Journal of Special Needs Education* 33 (3): 316–33. <https://doi.org/10.1080/08856257.2017.1312798>.
- Hulme, Charles, dan Margaret J. Snowling. 2016. "Reading disorders and dyslexia." *Current Opinion in Pediatrics* 28 (6): 731–35. <https://doi.org/10.1097/MOP.0000000000000411>.

- Ismail, Fatimah Sham, Nurul Adilla Mohd Subha, Nurzal Effiyana Ghazali, Zaharuddin Mohamed, Shahdan Sudin, Fazilah Hassan, Norhaliza Abdul Wahab, dan Herman Wahid. 2024. "Crafting a Real-World Problem Project-Based Learning Based on Gantry Crane System." *Journal of Advanced Research in Applied Sciences and Engineering Technology* 34 (1): 228–37. <https://doi.org/10.37934/ARASET.34.1.228237>.
- Kaana, Kwagala, Nampijja Florence Kirabo, Wamaungo Juma Abdu, dan Muwaga Musa. 2023. "Enhancing Reading Abilities In A Learning Environment: Insights From Uganda's Elementary Schools." *e-journal.stkipsiliwangi.ac.id* K Kaana, NF Kirabo, AJ Wamaungo, M Musa Empowerment: Jurnal Ilmiah Program Studi Pendidikan Luar, 2023 • *e-journal.stkipsiliwangi.ac.id* 12. <https://e-journal.stkipsiliwangi.ac.id/index.php/empowerment/article/view/4132>.
- Karger; Kucirkova, N; Roadriguez-Leon. 2023. "Multisensory Reading in Early Childhood: Systematic Review with Theoretical Guidance for Human Development Studies." *Human Development* 67 (4): 193–210. <https://doi.org/https://doi.org/10.1159/000531633>.
- Khairinal, Khairinal, Farida Kohar, dan Dina Fitmilina. 2020. "Pengaruh Motivasi Belajar, Disiplin Belajar, Dan Lingkungan Teman Sebaya Terhadap Hasil Belajar Ekonomi Siswa Kelas Xi Ips Sman Titian Teras." *Jurnal Manajemen Pendidikan Dan Ilmu Sosial* 1 (2): 379–87. <https://doi.org/10.38035/jmpis.v1i2.276>.
- Kurniawati, Estetika Mutiaranisa, Risca Dwi Jayanti, Nur Chayati, dan Saktiana Rizki Endiramurti. 2022. "Apakah Pembelajaran Online Meningkatkan Preferensi Mahasiswa dalam Melakukan Kecurangan Akademik? Dimensi Fraud Pentagon." *E-Jurnal Akuntansi* 32 (8): 2214. <https://doi.org/10.24843/EJA.2022.v32.i08.p19>.
- Langille, James. 2021. "The Impact of Multi-Sensory Phonics Programs in Teaching English as an Additional Language" 44 (4): 1024–50. <https://doi.org/https://doi.org/10.53967/cje-rce.v44i4.4723>.
- Miles, Matthew B., dan Michael Huberman. 1992. *Analisis Data Kualitatif*. Jakarta: Universitas Indonesia Press.
- Mitak.Marsilana, Fitriah, Mastoh Chesoh. 2023. "Implementing Multisensory Approach to Overcome Reading Difficulties in 4th Grade Students" 2 (02): 55–60. <https://doi.org/10.56741/bei.v2i02.184>.
- Novitasari, Khikmah, Novianti Retno Utami, Herdi Handoko, dan Yulian Agus Suminar. 2022. "JPPM (Jurnal Pendidikan dan Pemberdayaan Masyarakat) The Effectiveness of STEAM-Based Multisensory Model Implementation Training for Strengthening Teachers ' Competence" 9 (1): 83–93.
- Prodi, Siska Kusmayanti, Pendidikan Guru, dan Sekolah Dasar. n.d. "Membaca permulaan dengan metode multisensori." *journal.uniga.ac.id* S Kusmayanti Jurnal Pendidikan UNIGA, 2019 • *journal.uniga.ac.id*. Diakses 31 Desember 2025. <https://journal.uniga.ac.id/index.php/JJP/article/view/832>.
- Putri, Kharisma. 2025. "Implementing a Differentiation Approach in Teaching to Accommodate Diverse Learning Styles Of Primary School Students : A Systematic Literature Review" 8 (1): 119–28. <https://doi.org/https://doi.org/10.23887/jlls.v8i1.89659>.
- Rahmawati, Nurushshiyam, dan Lena N. Pandjaitan. 2020. "Penerapan Metode Multisensori untuk Kemampuan Membaca Permulaan pada Siswa Kelas I di SD X Bangkalan." *Insight: Jurnal Pemikiran dan Penelitian Psikologi* 16 (2): 373–92. <https://doi.org/10.32528/INS.V16I2.2117>.
- Rohmatin, Hafizah Nailly, Roni Amrullah, Hadiatul Rodiyah, dan Yuniar Lestari. 2025. "Pengaruh Model Pembelajaran Personalized Learning Terhadap Kemampuan Literasi Siswa Mata Pelajaran Bahasa Indonesia SD Negeri 1 Songak 1" 4 (2): 934–44.
- Rompas, Novia Theresia. 2021. "Applying Multisensory Approach To Promote" 5 (2): 105–19. <https://doi.org/https://doi.org/10.37147/eltr.v5i2.118>.
- Soliha, Jumanova. 2025. "International Journal Of Artificial Intelligence" 05 (05): 139–42.
- Stevens, Elizabeth A, Christy Austin, Clint Moore, Nancy Scammacca, Alexis N Boucher, dan Sharon Vaughn. 2021. "Current State of the Evidence : Examining the Effects of Orton- Gillingham Reading Interventions for Students With or at Risk for Word-Level Reading Disabilities." *Sage*

- Journal* 87 (4): 1–21. <https://doi.org/10.1177/0014402921993406>.
- Suryani, Ade Sophia. 2019. "Pendekatan Multisensori Dalam Menstimulasi Kemampuan Literasi Anak Usia Dini Kelompok B5 TK Islam Tunas Melati Yogyakarta." *Universitas Islam Negeri Sunan kalijaga Yogyakarta*, 84.
- Suryani, D. 2019. *Pendidikan multikultural: Modul pembelajaran toleransi agama dan budaya*. Jakarta: Kencana.
- Suryaratri, Ratna Dyah. 2019. "The Implementation of Multi-sensory Learning at Elementary Schools in Jakarta" 13 (April): 100–113. <https://doi.org/https://doi.org/10.21009/10.21009/JPUD.131>.
- Syerlyana, Allya, Resya Mutiara Islami, Frida Rizki Yanti, dan Suherli Kusmana. 2025. "Application of Multisensory Strategies in Differentiated Classroom Learning to Overcome Reading Delay in Elementary School Students." *Jurnal Teknologi Pendidikan* 27 (2): 487–99.
- Tinggi, Sekolah, Agama Islam, Nurul Iman, dan Parung Bogor. 2020. "Faktor-faktor yang memengaruhi belajar." *journal.lipi.bbc.ac.idM SamsudinEduprof: Islamic Education Journal*, 2020•*journal.lipi.bbc.ac.id* 2 (2): 162–86. <https://doi.org/10.47453/eduprof.v2i2.38>.
- Vaughn, Sharon, Greg Roberts, Philip Capin, Jeremy Miciak, Eunsoo Cho, dan Jack M. Fletcher. 2019. "How Initial Word Reading and Language Skills Affect Reading Comprehension Outcomes for Students With Reading Difficulties." *Exceptional Children* 85 (2): 180–96. <https://doi.org/10.1177/0014402918782618>.
- Vea, T. 2019. "The ethical sensations of im-mediacy: Embodiment and multiple literacies in animal rights activists' learning with media technologies." *British Journal of Educational Technology*. <https://doi.org/10.1111/bjet.12809>.
- Viantho, Indriana, dan Sri Dewi Nirmala. 2024. "Pengaruh Strategi Pembelajaran Berdiferensiasi Terhadap Literasi Membaca Peserta Didik Sekolah Dasar" 7 (2): 526–36. <https://doi.org/https://doi.org/10.30605/jsgp.7.2.2024.3732>.
- Waruwu, Marinu. 2024. "Pendekatan Penelitian Kualitatif: Konsep, Prosedur, Kelebihan dan Peran di Bidang Pendidikan." *Afeksi: Jurnal Penelitian dan Evaluasi Pendidikan* 5 (2): 198–211. <https://doi.org/10.59698/AFEKSI.V5I2.236>.
- Zulhendri, Warmansyah. Jhoni. 2021. "The Effectiveness of the Multisensory Method on Early Reading Ability in 6-7 Years Old Children." *Jurnal Obsesi : Jurnal Pendidikan Anak Usia Dini* 5 (1): 257–64. <https://doi.org/10.31004/obsesi.v5i1.541>.

