

## The Use of Multisensory Methods to Improve Beginning Writing Skills for Second Grade Students with Mild Intellectual Disabilities

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### **Keywords**

Multisensory Methods;  
Writing Skills; Students  
with Mild Intellectual  
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### **Abstract**

*This study aims to enhance the beginning writing skills of students with mild intellectual disabilities through a multisensory approach. Based on observations at SKh Negeri 01 in Serang City, it was found that students experienced difficulties in writing words containing double consonants, which were reflected in errors such as omission, addition, and substitution of letters. This research uses an experimental approach with a Single Subject Research (SSR) design, model A-B-A. The multisensory method, involving visual, auditory, and kinesthetic modalities, was used to help the student overcome these obstacles. The results indicate a significant improvement in writing skills, from 44.4% in the baseline phase A1 to 91.06% in the intervention phase, and 66.6% in the baseline phase A2. The conclusion of the study shows that the multisensory method is effective in improving the beginning writing skills of students with mild intellectual disabilities. The implications of this study suggest that the use of multisensory methods can be applied in teaching to support students with special needs.*

### **Kata Kunci**

Metode Multisensori;  
Keterampilan Menulis;  
Siswa dengan  
Gangguan Intelektual  
Ringan

### **Abstrak**

Penelitian ini bertujuan untuk meningkatkan kemampuan menulis permulaan siswa dengan tunagrahita ringan melalui pendekatan multisensori. Berdasarkan observasi di SKh Negeri 01 Kota Serang, ditemukan bahwa siswa mengalami kesulitan dalam menulis kata yang mengandung konsonan rangkap, yang tercermin dalam kesalahan seperti omisi, adisi, dan substitusi huruf. Penelitian ini menggunakan pendekatan eksperimen dengan desain Single Subject Research (SSR) model A-B-A. Metode multisensori, yang melibatkan modalitas visual, auditorial, dan kinestetik, digunakan untuk membantu siswa mengatasi hambatan tersebut. Hasil penelitian menunjukkan peningkatan signifikan dalam kemampuan menulis, dari 44,4% pada fase baseline A1 menjadi 91,06% pada fase intervensi, dan 66,6% pada fase baseline A2. Kesimpulan penelitian menunjukkan bahwa metode multisensori efektif dalam meningkatkan kemampuan menulis permulaan siswa dengan tunagrahita ringan. Implikasi dari penelitian ini menyarankan bahwa penggunaan metode multisensori dapat diterapkan dalam pengajaran untuk mendukung siswa berkebutuhan khusus.

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## INTRODUCTION

In both school and family environments, every child has differences in thinking, learning, and social interaction abilities. Some children can quickly grasp lessons, while others require more time and support throughout the learning process. Children who face challenges in understanding concepts, adapting to their environment, and communicating socially are often categorized as children with special needs, one of which is children with intellectual disabilities.

Intellectual disability refers to a condition in which a child has an intelligence level below average, accompanied by limitations in thinking and adaptive abilities. According to Atmaja (2018, p. 97), intellectual disability is characterized by intellectual and social limitations that affect academic abilities and adaptive behavior. This aligns with Faisah et al. (2023, p. 35), who emphasize that children with intellectual disabilities often face challenges in adapting to their social environment. According to Kemis in Maulidiyah (2020, p. 94), individuals are categorized as having intellectual disabilities if they have an IQ below 70 based on the Wechsler Intelligence Scale for Children (WISC). Meanwhile, Sari et al. (2017, p. 218) note that the primary challenge in education for children with intellectual disabilities is the lack of understanding among teachers regarding their characteristics and special needs, including in writing instruction.

Writing is a fundamental skill that plays a vital role in language development. Through writing, children can express ideas, feelings, and experiences. However, for children with intellectual disabilities, this skill often becomes a significant obstacle. Nurfadhillah et al. (2022, p. 598) state that children with intellectual disabilities face difficulties in recognizing letters, spelling, and constructing words and sentences correctly. Mustikowati et al. (2016, p. 40) explain that beginning writing aims to train students to write words with correct spelling. Still, students with intellectual disabilities often make mistakes such as omission (missing letters), addition (adding letters), substitution (replacing letters), and simplification (simplifying word forms).

Preliminary observations at SKh Negeri 01 in Serang City revealed that second-grade students with mild intellectual disabilities encountered difficulties in initiating writing. The errors included writing the word "sarapan" as "serapan" (substitution), "membeli" as "mebeli" (omission), and "memakai baju" as "memakian baju" (addition). These errors indicate the students' weak ability to connect sounds, letters, and word meanings. According to interviews with teachers, it was found that students were stronger in oral skills than in writing. Teachers also mentioned that there was no specific method used to improve students' writing skills, other than copying provided texts.

This condition highlights the gap between the ideal and the reality in the field. Ideally, second-grade students should be able to write sentences with proper structure and spelling, as Fitrah & Khairia (2024, p. 2) state that at the junior high school level, students should be able to write texts with structured ideas and correct spelling according to Indonesian language rules. However, in reality, students with mild intellectual disabilities at SKh Negeri 01 in Serang are still at the stage of writing simple words with many spelling errors. This gap highlights the need for innovative teaching methods that can enhance students' multisensory abilities, making the writing learning process more effective.

One approach considered suitable is the multisensory method. This method, developed by Orton and Gillingham, is known as the VAKT method (Visual, Auditory, Kinesthetic, and Tactile). Albarqi & Ainin (2019, p. 3) explain that the multisensory approach combines various learning modalities, allowing students to understand information through sight, hearing, movement, and touch. According to Nihayatun (2020, p. 9), the multisensory method has been proven to help students with special needs improve their understanding of concepts through concrete learning experiences. Furthermore, Rahmat (2022, p. 89) notes that this method is particularly relevant for children with mild intellectual disabilities, as it enables them to optimize their sensory functions through an interactive and meaningful learning process.

Several previous studies have shown the effectiveness of the multisensory method in improving reading skills. However, studies specifically focusing on the application of the multisensory method to

enhance beginning writing skills for children with mild intellectual disabilities are still minimal. Therefore, this study offers novelty by applying the multisensory method not only for reading but also for beginning writing, with the hope of becoming an alternative learning solution for special education teachers.

This study aims to analyze the application of the multisensory method in improving the beginning writing skills of second-grade students with mild intellectual disabilities at SKh Negeri 01 in Serang City. The results of this study are expected to contribute to the development of innovative teaching methods in special education and serve as a practical reference for teachers in addressing the difficulties of beginning writing.

## METHOD

The research method used in this study is the experimental method. According to Sugiyono (2019, p. 72), the experimental research method is a research method aimed at testing the impact of a treatment on other variables in a controlled situation. Sudarmayanti in Istikomah (2017, p. 47) states that experimental research is a type of research aimed at identifying the effect of a certain variable on another variable with strict control.

The experimental design used in this study is a single-subject research design, known as Single Subject Research (SSR). According to Cakiroglu in Widodo et al. (2021, p. 80), single-subject research is a method frequently used in the field of special education, especially to address the needs of students with special needs. According to Prahmana in Widodo et al. (2021, p. 80), Single Subject Research (SSR) is an experimental research method aimed at observing behavior and evaluating interventions or treatments on a single subject's behavior, with assessments conducted repeatedly over a specific period.

The researcher has chosen the experimental research method with a single-subject research design, considering the aim of this study is to determine the impact of the multisensory method on improving beginning writing skills for second-grade students with mild intellectual disabilities at SKh Negeri 01 in Serang City. The goal is to observe this impact through the implementation of the multisensory method. The SSR design implemented in this study is the A-B-A design, where A1 is the first baseline phase, B is the intervention phase, and A2 is the second baseline phase. The experimental results are presented and analyzed based on the individual subject.

This study was conducted at SKh Negeri 01 in Serang City, located at Jl. Bhayangkara No. 045 Rt. 001 Rw 024, Kel. Sumur Pecung Serang - Banten 42118. The subject of the study is a second-grade student at SKh Negeri 01 in Serang City who faces difficulties in learning beginning writing. The research instrument used is an achievement test to measure the subject's progress in writing, administered at each meeting with a total of 9 questions. The test is given gradually, both before the intervention, during the intervention using the multisensory method, and after the intervention.

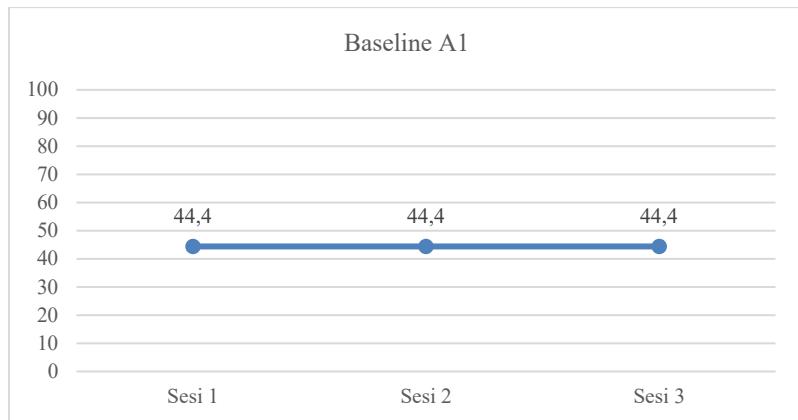
## RESULTS AND DISCUSSION

### Result

This study employs a quantitative experimental design with a single-subject method, also known as Single Subject Research (SSR), to address the research problem. The design used is A1-B-A2.

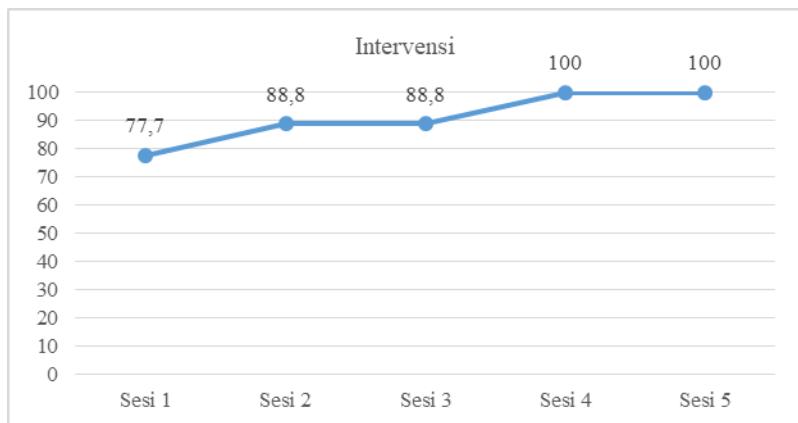
Based on the implementation of the research at SKh Negeri 01 in Serang City, the dictation writing activity using the multisensory method proved to play a significant role in improving the beginning writing skills of second-grade students with mild intellectual disabilities. The experimental approach, utilizing the SSR A1-B-A2 pattern, was employed to systematically observe changes in students' abilities during the intervention process.

This study consisted of 11 sessions, including three sessions in the initial baseline phase (A1), five sessions in the intervention phase (B), and three sessions in the final baseline phase (A2). The results of the entire process are presented in the following graph.



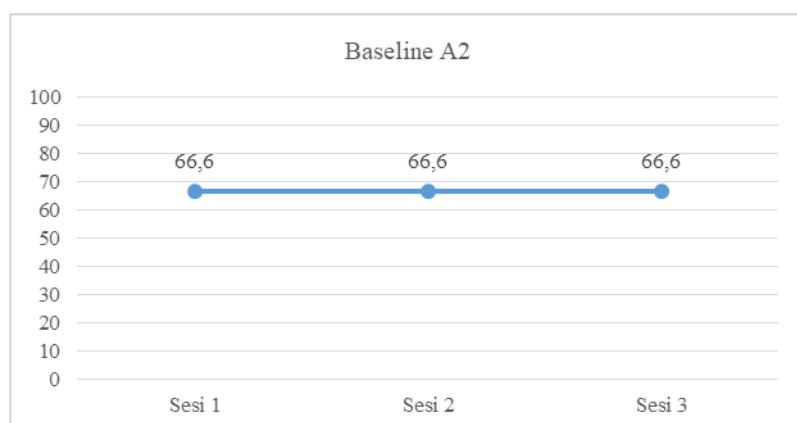
Graph 1. Research Results Phase Baseline-1

Based on the graph above, phase baseline-1 (A1) aims to assess the subjects' initial writing ability before the intervention (treatment) is given. Graph 1 shows that the initial writing ability score remained stable (no change) in sessions 1, 2, and 3, with a percentage of 44.4%.



Graph 2. Research Results of the Intervention Phase

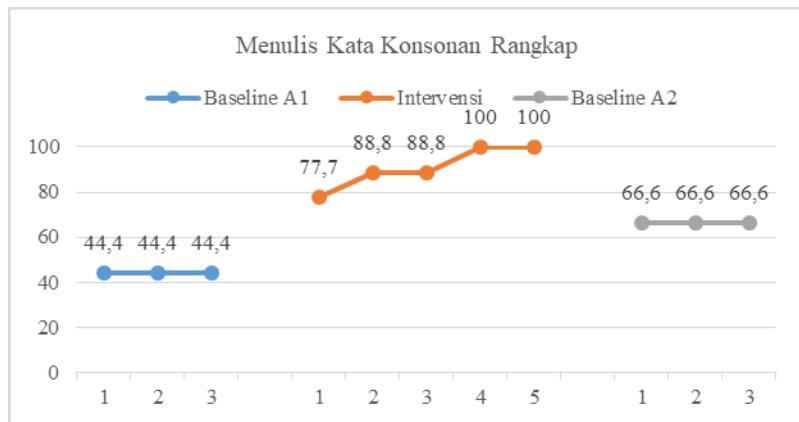
Based on the graph above, during the intervention phase (B), the subject's initial writing ability improved as the treatment was administered. Graph 1.2 shows a score increase (indicating a change), with a percentage of 77.7% in session 1, 88.8% in session 2, 88.8% in session 3, and 100% in sessions 4 and 5.



### Graph 3 Research Results from Baseline-2 Phase

Based on Graph 3 above, during the second baseline phase (A2), the subject's initial writing ability showed an increase in scores (improvement compared to the first baseline). Graph 1.3 shows that in Session 1, the percentage achieved was 66.6%; in Session 2, it was also 66.6%; and in Session 3, it was 66.6%.

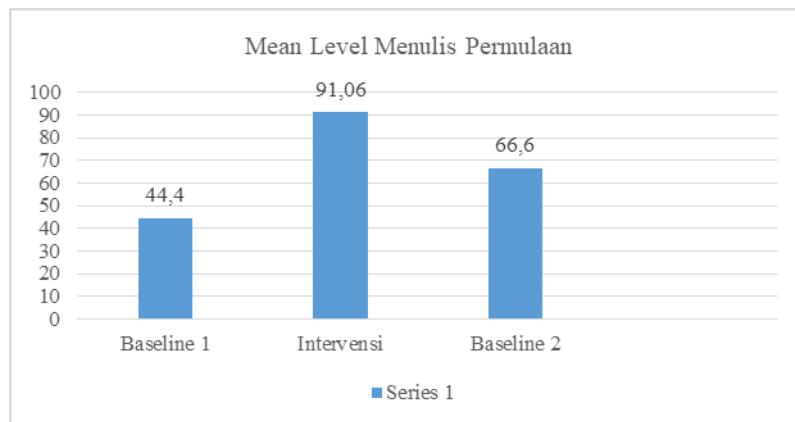
Based on the data from the baseline-1 phase (A1), intervention phase (B), and baseline-2 phase (A2), all of these results were then combined and presented in the following overall graph:



Graph 4. Research Results from Baseline-1, Intervention, Baseline-2 Phases.

The combination of Graphs 1, 2, and 3 is presented in Graph 1.4, which provides a visual analysis of the target behavior, specifically the initial writing ability of second-grade students with mild intellectual disabilities. This graph includes three phases: the first baseline phase (A1), the intervention phase (B), and the second baseline phase (A2).

The merging of these three graphs aims to provide a more comprehensive and detailed overview of the research results, which consists of 11 sessions: 3 sessions in the A1 phase, five sessions in the B phase, and three sessions in the A2 phase. The integrated graph presentation is intended to facilitate the analysis of changes in initial writing ability that occurred across all three phases.



Graph 5 Mean Level of Initial Writing in Baseline-1, Intervention, and Baseline-2 Phases.

Based on Graph 5, it is observed that the average in the first baseline phase (A1) was 44.4%. This percentage indicates that the students' initial writing ability was still at a very low level before the intervention was applied. After entering the intervention phase (B), the average score significantly

increased to 91.06%, indicating that the treatment or intervention provided was highly effective in improving the students' initial writing ability. This consistent increase shows that the students responded well to the intervention.

Meanwhile, in the second baseline phase (A2), the average score obtained was 66.6%. After the intervention was discontinued, the students' initial writing ability remained at a high level, although there was a slight decline compared to the intervention phase. This suggests that the effects of the intervention persisted, although they were not fully stable without follow-up or continued support.

## Discussion

The research findings indicate that the application of the multisensory method is effective in improving the initial writing skills of second-grade students at SKH Negeri 01 Kota Serang who face difficulties in writing dictation. The primary issue identified was that the students struggled to understand and reproduce correct spelling, particularly with double consonants, affixes, and sentence structure. Mustikowati et al. (2016, p. 40) explain that the goal of initial writing is to help students write words correctly. At this stage, students are expected to be able to produce writing, starting with writing based on spelling.

To address this, the researcher applied the multisensory method in teaching writing words with double consonants. According to Albarqi & Ainin (2019, p. 3), the multisensory method, also known as the VAKT method (Visual, Auditory, Kinesthetic, and Tactile), was developed by Orton-Gillingham and involves all the senses in learning. Nihayatun (2020, p. 9) also states that this approach is believed to be effective because the material is delivered through multiple modalities simultaneously to support the learning process optimally.

Based on direct observations in the field, it was found that students with intellectual disabilities require repeated learning sessions to better understand the material. This was evident from the tendency of students to struggle with recalling previously taught information and requiring more time to grasp new concepts. Repetition became an important strategy because it helps strengthen memory, enhance understanding, and provide students with the opportunity to feel more confident in completing assigned tasks. According to Salsabila & Sulistiowati (2024, p. 18), learning for students with mild intellectual disabilities needs to be conducted repetitively because their limitations cause them to have weak memory and require more time to understand material, so the learning process must be repeated several times for effective absorption.

In the context of teaching initial writing skills, repetition plays a key role in building basic writing skills such as recognizing letters, spelling, and copying words. Therefore, the learning process cannot be conducted in just one or two sessions but must be consistently practiced with reinforcement and repeated exposure to the same material. The application of the multisensory method in this study indirectly supports this need for repetition. Through an approach that engages visual, auditory, kinesthetic, and tactile modalities, students are given the opportunity to receive information through various sensory channels repeatedly within a single learning activity. This helps strengthen the students' memory and understanding of the material taught.

The research findings show that the application of the multisensory method improved initial writing skills in second-grade students with mild intellectual disabilities. In the baseline-1 phase (A1), when the subject had not yet received the intervention, the average initial writing ability was 44.4%. After the multisensory method intervention in the intervention phase (B), a significant improvement was observed, with the average score rising to 91.06%. Meanwhile, in the baseline-2 phase (A2), after the intervention was stopped, the percentage decreased but still showed an improvement compared to the initial phase, reaching 66.6%.

In the baseline-2 phase (A2), the results were indeed lower than in the intervention phase (B), but still showed improvement compared to the baseline-1 phase (A1). These findings suggest that the

multisensory intervention had a positive impact on improving initial writing skills with double consonants in second-grade students with mild intellectual disabilities at SKH Negeri 01 Kota Serang.

This result is supported by Sandjaja's (2022, p. 17) research, which concluded that the multisensory Fernald method is effective in improving initial reading and writing skills. This is also backed by Esterina et al. (2020, p. 103), whose study demonstrated the effectiveness of this method in improving the ability to recognize and write numbers in subjects with developmental delays.

The research highlights that the strength of the multisensory method lies in its ability to help improve initial writing skills, particularly with words containing double consonants, in students who struggle with writing dictation. Based on the findings, it can be concluded that the application of the multisensory method is effective in enhancing the initial writing ability of second-grade students with mild intellectual disabilities at SKH Negeri 01 Kota Serang.

## CONCLUSION

Based on the research findings, it can be concluded that the multisensory method is efficacious in improving the initial writing ability of second-grade students with mild intellectual disabilities at SKH Negeri 01 Kota Serang. Before the intervention, the students' initial writing skills were still low, as evidenced by numerous errors in word writing, such as omissions, substitutions, and additions of letters. During the application of the multisensory method, students showed increased participation and a deeper understanding of the shapes and arrangement of letters in words. Through an approach that engages various senses (sight, hearing, touch, and movement), the students found it easier to understand and remember the word patterns they were learning. After the intervention was completed, an improvement in the students' initial writing ability was observed, both in terms of letter accuracy, word arrangement, and confidence in writing. Thus, the multisensory method has proven to have a positive impact on the initial writing learning process for students with mild intellectual disabilities.

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