



## **Inclusive Education Model with Montessori Method and SAVI Approach in Early-Age Children with Special Needs**

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### **ABSTRACT**

*Inclusive education provides children with special needs and children in general may interact with each other naturally by the demands of daily life in society. In addition, their educational needs can be fulfilled according to their respective potential. This research aims to develop an Inclusive Education Empowerment-based inclusive education model using the Montessori method with the SAVI (Somatic, Auditory, Visual, Intellectual) approach. This research is using R & D method which was conducted in an early childhood education institution with special needs students and teachers in Hamburg, Germany. Primary data were collected directly at school through questionnaires distributed to parents, interviews and observation sheets to observe the activities and development of learners. Secondary data were collected through literature studies related to the focus of this research. Data were analyzed through reduction, data presentation and conclusion drawing. The research findings revealed that the inclusive education model developed could improve the involvement and developmental progress of learners with special needs and strengthen the involvement and support of parents and teachers in supporting students' development. This inclusive education model is expected to be applied in other educational environments to improve access and equality for children with special needs.*

**Keywords:** *Inclusive Education, Montessori, SAVI*

## INTRODUCTION

Inclusive education is a fundamental concept in the world of education today. The aim is to ensure that all students, including children with special needs, have equal opportunities with children in general to learn and develop. However, in reality there are still many challenges faced in implementing inclusive education, including in western countries such as Germany. As one of Germany's second most populous cities, Hamburg is experiencing significant growth in its population of children with special needs. This situation indicates an increasing need to introduce effective and innovative inclusive education programs. The number of students with special educational needs in the 2022/23 academic year in Hamburg, both in state and private schools without adult education, was recorded at 13,145 (Hamburg.de, 2023).

Inclusive early childhood education is a topic that is gaining widespread attention throughout the world. All exceptional children must get exceptional education services under the inclusive education system, which mandates that they attend the closest schools and participate in regular classrooms with peers their own age (Akrim & Harfiani, 2019). Governments and educational institutions in various countries strive to create an inclusive educational environment for children with various special needs. Through inclusive education, children with special needs and children in general may interact with each other naturally by the demands of daily life in society, and their educational needs can be fulfilled according to their respective potential. Therefore, inclusive education requires schools to adapt to the demands of individual students' needs rather than students who adapt to the school system.

In Germany, the practice of special education institutions use the term Evidence-based Practice (EbP). The term is used in connection with special education status, its concepts, and approaches (Blumenthal et al., 2019). The German government has adopted several international conventions regarding the rights of persons with disabilities and human rights, including education for children with special needs. These conventions include the Convention on the Rights of Persons with Disabilities (CPRD) and the Salamanca Declaration. In response to the results of this international convention, the German government has issued several laws and regulations governing the education of children with special needs, which is Gesetz zur Förderung von Menschen mit Behinderungen (Law on Improving the Welfare of People with Disabilities) or better known by the abbreviation Behindertengleichstellungsgesetz (BGG). Article 2, Paragraph 4 of this law specifically regulates that children and teenagers with special needs have the right to receive the same and equal education as other children and teenagers in general.

Research conducted by Dewi & Subanda (2017) suggests that inclusive education programs in early-childhood education provide positive benefits for

children with special needs and children without special needs. Early-age children with disabilities shall be given the same opportunities as children in general during their development period. Providing equal opportunities to children with disabilities ensure that children with disabilities have the same opportunities as all children to achieve their developmental potential and participate actively at home, school, and community (Octarra et al., 2022). Inclusive education provides equal opportunities for children with special needs to receive education in the same schools as other normal children but does require slightly different interventions or programs from other typical children but still receive learning in the same class (Anastasiou et al., 2015; Haug, 2017). One approach considered effective in inclusive education is the Montessori method combined with the SAVI (Somatic Auditory Visual Intellectual) approach. In Hamburg, developing the Montessori method with the SAVI approach to inclusive early childhood education is essential, considering the growing population of children with special needs in there.

Even though implementing inclusive education has been supported by the stakeholders, the actual implementation in the field still encounters many obstacles, especially concerning limited resources and a school environment that needs to be fully responsive. Thus, children with disabilities in inclusive schools do not fully receive treatments and services that meet their needs (Efendi, 2018). Other facts in the field suggest that implementation of inclusive programs still facing issues such as different treatment based on race, ethnicity, special needs, and socio-economics. Educational opportunities and equality have yet to fully reach and facilitate all children's needs (Mulyadi et al., 2019). This situation suggests that inclusive education has yet to receive support from its' surrounding environment.

On the other hand, several teachers require more time to prepare for handling children with different characteristics in their classrooms. As a result, teachers who work directly with children who have special needs in the classroom frequently complain and need help teaching the same method with the same treatment. Thus, learning objectives are not achieved optimally (Atmaja, 2018). The pedagogical competency of inclusive school teachers is a crucial element in the efficient operation and successful outcome of inclusive education. Teachers must possess abilities and skills that are directly related to the pedagogical competences that are required of them in order to facilitate learning in the classroom (Kurniasih, 2017). In inclusive education, teachers are required to be more sensitive, creative and develop several specific skills to educate their students through varied activities, be able to stimulate students' interest in learning, and help students develop their potential to the fullest.

This competency also needs to be seen as a component that cannot be separated from the existence of teachers in carrying out their duties. The job of a teacher is not easy, and not everyone can do it. As a teacher, there are several requirements that must be fulfilled to support the implementation of the profession. If a teacher does not have the competencies that are made a requirement, it is

impossible to realize the implementation of good and directed educational process activities. These competencies are the fundamental capital for teachers in educating students, so as to achieve the quality of education that would result in students with good knowledge, attitudes and skills (Rachmawati et al., 2013).

A good education cannot be separated from the role of the teacher as the main figure in the success of education. As one of the instrumental input sub-components, teachers are part of the system that will determine the success of education. The success of education depends on the quality of teaching, where the quality of teaching also depends on the quality of a teacher. The high quality and experienced teacher will provide the excellent teaching process for their students (Siagian & Artha, 2023). The core of educational activities is the teaching and learning interaction process. The teaching-learning interaction process is an effort to achieve educational goals. The role of the teacher is necessary to create a conducive teaching and learning interaction. Therefore, the quality of teachers in the educational environment should always be considered (Atmaja, 2018).

In several countries such as Germany, teachers are also required to possess good pedagogical competencies to support the implementation of inclusive education. Therefore, teachers are required to participate in practical pedagogical training, usually organized by universities, in order to prepare themselves to serve and educate students in schools. This training may take a long time to complete, depending on the level of the school where the teacher teaches. Primary school teachers require approximately 3.5 years of educational training, junior high school teachers approximately 3.5-4.5 years, senior high school teachers approximately 4.5 years at university with an additional 1.5-2 years of practical training at school (Education, 2023).

Given the background materials provided above, the researchers expressed an interest in doing research regarding the development of an early inclusive education model in Hamburg for children with special needs at an early age. Therefore, This research aims to develop an Inclusive Education Empowerment-based inclusive education model using the Montessori method with the SAVI (Somatic, Auditory, Visual, Intellectual) approach. This research is necessary to conduct since it may provide a broad description of developing and implementing educational models and services, especially inclusive schools for children with special needs at an early age in Hamburg.

## **RESEARCH METHODOLOGY**

The type of this research is a Research and Development (R&D). The R&D method is a scientific approach used in various fields, including education. In educational research, the R&D method is used to generate models for better educational practices, with researchers adjusting the usage and implementation of the method based on the research context and their characteristics (Gustiani, 2019). This research was conducted in an early childhood education institution with special

needs students in Hamburg, Germany. The subjects of the research included special needs students from an early childhood education institution in Hamburg, as well as the teachers who work with a number of special needs students at the educational institution. The teachers served as information providers regarding the state of inclusive education implementation and the pedagogical competency of the teachers. This research data was collected from two types of data, which are primary data and secondary data. Primary data in this research comes from the results of questionnaires, interviews and observations that were obtained directly at the school. Questionnaires were given to parents to determine the extent of parental involvement in their children's inclusive education. Interviews were conducted with teachers to identify the pedagogical competence of inclusive education teachers. Meanwhile, observations were undertaken to observe the process of developing students' cognitive and social-emotional skills. On the other hand, secondary data in this research was obtained through literature studies. The obtained data were analyzed through data reduction, data presentation, and then drawing the conclusions.

## **RESULT AND DISCUSSION**

### **Effectiveness of Inclusive Education Empowerment Based Model Development with Montessori Method and SAVI Approach in Improving Participation, Independence, and Ability of Early Age Children with Special Needs in Germany**

One of the objectives of this research is to identify the effectiveness of developing a model based on inclusive education with the Montessori method and the SAVI approach in early childhood with special needs in Germany. This effectiveness is an indicator to assess the success of the developed educational model based on children's participation, independence and ability. The participants in this study consisted of three special needs students aged 3 and 4 years. The research data was collected directly through observation sheets regarding the learning process of the three participants, within a period of time before and after the application of the Montessori method and SAVI approach to the learning process. From the observation results, it is known that:

1. Before the application of the Montessori method and SAVI approach, it was identified that the first student requires support and assistance to improve his communication skills. After the application of the Montessori method and SAVI approach, it was observed that in learning through play activities, there was a significant improvement of the first student, especially in his social emotional competence. However, this first student still needs support in his language and cognitive development. This support can be achieved by implementing a model that stimulates children's sensory and fosters children's independence. In addition, this first student can also be assisted with a therapy support

system, such as speech therapy, to enable him to create complete sentences and improve his vocabulary.

2. The results of observations before the application of the Montessori method and SAVI approach to the second student revealed that there were some competencies on her that needed to be further improved. In general, the second student had quite good interaction skills. However, the communication and self-management skills of the second student still needed to be improved. With the presence of other students in the class with different ages and abilities, it is expected that the second student will be more encouraged to develop her social-emotional and communication skills. If necessary, the second student can also be referred for speech therapy or other therapies that suit her needs. After the application of the Montessori method and the SAVI approach, there was a slight improvement in the language and emotional development of the second student, although not particularly significant. This can be observed concretely where the second student seems to be more confident in playing, interacting, and speaking although still not so subtle.
3. The results of observations before the application of the Montessori method and SAVI approach suggest that the third student needs intensive support and assistance to be able to develop the six aspects of early childhood development (religious and moral values development, physical-motor development, cognitive development, language development, social-emotional development, art development). By being in an inclusive classroom, it is expected that the development aspects of the third student can be achieved. These efforts can also be supported by a learning model based on an inclusive culture, activities that involve the third student's sensory experience, and treatment from a therapist so that the third student can improve her abilities. After applying the Montessori method and SAVI approach, it is revealed that there is an increase in competence in the third student, although not significantly. It can be seen that the third student has a sense of comfort and trust in the people around her, which she feels can understand her. This attitude is shown by the third student by always approaching the person. It is recommended that teachers be actively involved in establishing communication with the parents of the third student and encourage the third student to immediately receive extra-intensive treatment from a therapist.
4. Observations suggest that the fourth student needs intensive support, assistance and attention because her communication and interaction skills are quite weak. To overcome this condition, intensive communication between teachers and parents is needed. Parents are also expected to be open and cooperative, so that feedback from teachers can

be well received by parents. This is necessary so that the development of student competence can be monitored on an ongoing basis. Observation of progress will continue with a note of the possibility of referral to obtain external assistance from therapists to support the fourth student's development of competence. After applying the Montessori method and SAVI approach to the learning process, it is known that the fourth student has progressed in her emotional competence. The fourth student had begun to want to play with her friends. However, the fourth student's cognitive competence and language development had not made any progress. This situation implies that the fourth student needs help and support from external parties, such as therapy that is personalized to the needs of her competence development.

Because of the implementation of Montessori method and the SAVI approach, it is proven that there are improvements in students' abilities, especially in their social-emotional competence. The observation findings in this research is in line with prior research conducted by Imamah (2019); Purnamasari & Rijali (2023); and Sibatuara (2022), which each reveals that there is an increase in student development, especially in their social skills where children are able to work together in groups or help other friends in completing assignments. The development of social skills in children certainly affects the sense of responsibility and the character of helping each other. The actual manifestation of social maturity in children can be observed from various attitudes or social abilities of a child who is able to show an attitude of cooperating in groups, has the courage to present themselves according to their interests, can show a sharing attitude, can behave according to environmental norms in a small scope, can show simple sympathy and empathy, can be friendly, not selfish, likes to imitate positive behavior around them, and can give affection to people around them.

### **The Impact of Implementing Inclusive Education Empowerment-Based Model Development with the Montessori Method and SAVI Approach on the Quality of Learning, Experiences, and Developmental Progress of Early Age Children with Special Needs in Germany**

The inclusive-based education model that was created and integrated with the Montessori method and the SAVI approach has generally had advantageous impacts. It is significant to point out that this model has the potential to make changes, particularly in the quality of learning, experiences, and progress in the language, social, and emotional development of children with special needs in Hamburg, Germany. This can be seen from the results before and after implementing the Montessori method and the SAVI approach that there is a meaningful progress in the development of children with special needs.

The Montessori method aims to instill discipline, encourage learning activities by having students experience material directly, and then foster social skills through cooperative learning in multi-age classrooms ensuring children may progress at their own pace and ability (Marshall, 2017). Meanwhile, SAVI is a learning approach which emphasizes that learning process should utilize all the sensory organs of the students (Istiqomah et al., 2020). In the SAVI approach, there are four distinctive components of Somatic, Auditory, Visual and Intellectual. The term SAVI itself is an abbreviation of these 4 components. The SAVI approach is supported by Accelerated Learning theory, left and right brain theory, multiple intelligence theory and holistic education (Fajriah et al., 2020).

The impact of the implementation of the development of inclusive-based learning models, especially in 4-year-old children, is seen in the improvement of language development. Some examples can be seen when children are able to use the word “I” to point and call themselves, are able to ask WH- Questions (what, when, where, who, whom, which, whose, why and how), and are able to distinguish and name the same objects with different sizes (e.g. big and small apples). Likewise, from the aspect of social competence, where children begin to be able to participate in the rules of play (playing cards, boards, circle movement games), willing to share, able to regulate their own emotions in daily activities, begin to feel certain feelings, tolerance, deal with sadness, disappointment, joy, anticipation, fear, and also stress.

There was an improvement in one of the students with special needs who participated in this research. Although not very significant, one of the students had good body motor skills after the application of the Montessori method and SAVI approach was applied to the learning process at school. The student had good balance control, could jump with both feet from lower steps, run while swinging arms, avoid obstacles, and could stop when needed. However, the student still needs help from both teachers and parents to improve his communication and interaction skills.

The development of an inclusive culture-based learning model using the Montessori method and the SAVI approach can be seen from the improvement of social-emotional and language competencies in early age children with special needs. There is a significant improvement in the learning process carried out with the SAVI approach. From the somatic aspect, these students actively moving around during learning activities, so they seem to be actively moving by making movements on their bodies in order to keep their minds active. With this somatic model, students who tend to be active will follow the learning process with enthusiasm. In addition, students who have tended to be passive during learning in class will feel more excited when they are involved in physical activities during the learning process. The somatic aspect in this SAVI approach plays a significant role in motivating students to follow the learning process properly. From the auditory aspect, students listen to what the teacher says in the learning process. Teachers

provide opportunities for students to give their opinions so that the learning process can proceed well with a pleasant atmosphere. The presence of props and media is also used to support the learning process. From the visual aspect, students may freely draw things on their mind or around them. Besides that, students also have to draw according to the teacher's direction on what objects to draw. From the intellectual aspect, students tend to use their experiential intelligence to do things, solve problems, create creative ideas, filter information, and formulate questions.

The objective of using the Montessori method in education is to attain a harmonious balance between social and biological development, implying that children ought to develop and grow in accordance with their developmental stage and be prepared to adapt to their surroundings (Montessori et al., 2015). In line with this statement, the results of interviews with teachers reveal that the application of the Montessori method is able to develop intellectual cognitive aspects in children, such as remembering lesson material, analyzing at the basic level, and identifying each tool or learning material. In addition, children are also able to recognize various kinds of teaching materials along with their functions. The use of the Montessori method is also able to develop children's affective aspects, such as children's acceptance of teacher instructions, emotional management during learning, as well as active communication with teachers and friends. In addition, psychomotor aspects are also stimulated in the application of the Montessori method by training children's motor and kinesthetic skills during learning practices.

### **Analyzing the Perceptions and Experiences of Parents, Teachers, and Professionals Regarding the Implementation of Inclusive Education Empowerment-Based Model Development with Montessori Method and SAVI Approach in Early Age Children with Special Needs in Germany**

The results of the research indicate that both parents, teachers, and professionals stated that the learning model developed based on inclusive culture was very helpful in the process of providing education for children with special needs in Hamburg, Germany. The implementation of the learning model using the Montessori method and the SAVI approach provides teachers with unique experiences in conducting learning process at school. This model is able to build close social-emotional relationships between teachers and students, especially in improving their cognitive abilities, allowing students with special needs to learn in inclusive classes to gain knowledge according to their abilities.

Parents' perceptions regarding the implementation of inclusive-based model development using the Montessori method and SAVI approach for early age children with special needs are quite good since most parents expected a learning model that may stimulate children's sensory, psychomotor skills, and social-emotional abilities. However, some parents still need deeper understanding of this learning model as they are still unfamiliar with it.

The social skills system trains the interaction of students with special needs when working in groups. All students collaborate in small learning groups, work together, use various creative ways to solve problems, and make decisions together on topics given by the class teacher. Every collaborative activity designed by the class teacher can at least be participated in by students with special needs. The teacher stated that the application of the Montessori method and the SAVI approach can help students with special needs to be actively involved in every learning activity with their own abilities, so that it can lead to their development.

When a child is with a teacher, learning according to the Montessori learning model is evaluated in an authentic way utilizing actual situations. Evaluations are conducted in order to examine various aspects of child development in an integrated and holistic manner. The results of interviews with classroom teachers indicate that evaluations of children's moral, religious, and social-emotional aspects—all of which pertain to the child's self-discipline—include the evaluation of children's discipline. Teachers are the ones who will teach their students consistency, habituation, and discipline. The teacher will evaluate the findings of their daily observations of the students in order to identify any aspects in which the children's development is deficient and to provide them with the necessary guidance or motivation to reach their full potential. For example, children are taught how to arrange their shoes neatly and organize their toys after playtime. However, the teacher will remind the students that learning will not proceed if they refuse to clean up.

The findings of the observations reveal that teachers are able to impart discipline to students by setting an ideal example and modeling consistency, habit, and behavior. Teachers teach children how to arrange things in order, control themselves, and distinguish between right and wrong. Children with special needs who practice the Montessori method develop strong self-awareness and discipline. Children will eventually be able to regulate themselves to adjust to their surroundings since they will grow up with such a strong awareness of what is right and wrong in their activities, as well as the discipline to manage their time and behave appropriately.

Meanwhile, it was discovered that applying the SAVI approach with children who had special needs could produce positive outcomes for their educational growth. This is because the SAVI approach was effective at teaching and students wanted to use it for learning both inside and outside of the classroom. This is evident from the students' excitement for the material and from the way they actively ask and respond to questions while they are learning. Indeed, a number of internal and external elements as well as learning strategies have an impact on these successes.

The majority of informants or respondents to the research indicated that they agreed with the idea of empowering inclusive education through the use of the Montessori method and SAVI approach. These approaches may help create an inclusive learning environment, enable students to reach their full potential, offer a

more engaging educational experience, foster the development of fine motor skills, stimulate various senses, and aid in the holistic understanding of learning content by students with special needs. In addition to feeling that they have gained enough knowledge and skills to successfully implement the inclusive education empowerment model, parents' involvement in their children's education has a positive developmental impact. Appropriate support and training are also critical for successfully implementing the inclusive education model in the special needs school environment.

Teachers are the driving force behind the implementation of learning. In addition to their titles, professional teachers must have the ability to effectively communicate who they are as educators. They also need to be skilled in processing information and creating educational materials such as models, methods, and strategies to ensure that teaching is executed correctly and that learning outcomes meet the established standards (Alfiani, 2016). Teachers have a responsibility to respect children, and this is represented in their position as educators by not forcing children to learn things quickly to ensure they grow in accordance with their own talents and developments (Kasmianti et al., 2022).

The goal of the Montessori method is to stimulate children's curiosity. Through the teacher's lessons, children benefit from the interests of their peers. Children do not merely memorize information to pass an exam or achieve a high grade; they learn because they are engaged in what they are learning. By fostering a sense of personal interest in the subject and leveraging students' passions to improve education, schools certainly help facilitate the application of this learning (Sibatuara, 2022).

### **Supporting and Hindering Factors in the Implementation of Inclusive Education Empowerment-Based Model Development with Montessori Method and SAVI Approaches in Early Age Children with Special Needs in Germany**

There are both supporting and hindering factors in implementing the inclusive-based learning model with Montessori method and the SAVI approach for early age children with special needs. The supporting factor was the full support of the school where the research was conducted by accepting the application of the Montessori method and SAVI approach, even though it was relatively new to the teachers at the school. This support was manifested in the provision of special Montessori teaching aids and props that were fully available at the school. The teachers, principal and other school staff also provided support by being open to collaboration. While the hindering factors are the parents who still do not accept that their children have special needs, the lack of intensive communication and meetings between parents and teachers, the lack of training for teachers regarding children with special needs, Montessori and SAVI and the lack of educational information from schools to parents regarding inclusive education. This is what then becomes an obstacle in implementing the development of an inclusive-based

learning model using the Montessori method and the SAVI approach. Therefore, it certainly needs more attention, willingness, and awareness from various parties to support efforts to improve the learning abilities of children or students with special needs.

In learning activities, there are always challenges and supports, as the aforementioned data explain. Infrastructure, facilities, environment, student, and educator elements are the sources of both enabling and impeding factors. In order to participate in and collaborate during teaching and learning activities, students and teachers must possess a sense of solidarity. In teaching and learning activities, the relationship between the two will determine whether or not they are successful.

Apart from having supporting factors, the learning process also has obstacles or inhibiting factors in the continuity of learning, which may come from the students. Many students pay close attention to the teacher's explanations of the subject matter during the learning process, are active, and have an intense motivation to learn. It is undeniable, nevertheless, that certain students are still inattentive, distracted, and lazy, therefore it is important for them to pay attention to what the teacher is explaining. This circumstance makes it difficult to apply the SAVI approach and the Montessori method as a learning model for early age kids with special needs in Hamburg, Germany. Thus, in the event that such an issue arises, the teacher may resolve it by unwinding the class and emphasizing that learning should not continue if the students are still busy or creating a disturbance.

In addition to obstacles coming from students, parents often refuse new learning models for their special needs children because they believe their kids are not ones. Teachers therefore face a difficulty in explaining the state of their student, which is connected to the state of the student's cognitive, social, and emotional capacities. In addition, one of the challenges in implementing inclusive-based learning models using the Montessori method and SAVI approach is the lack of training for teachers regarding children with special needs. As a result, sometimes they are still not at their best when it comes to providing materials or making the most of the existing classroom conditions to create a conducive environment.

This is in line with what Yuniarni & Amalia (2022), who stated that inclusive education services for early age children have complex problems, such as the availability of teachers, learning media, funding, and cooperation from all parties. Support for playing activities and facilities in the form of playing equipment also needs to be considered based on children's needs and interests to optimize their development (Ardini & Lestarinigrum, 2018; Cahyani et al., 2020). Appropriate playing materials are significant for the success of a child's development. For children with special needs, playing and learning require substantial support and attention, especially when the playing activities is used to improve developmental aspects (Abed & Shackelford, 2022). Mwathi, in Abed & Shackelford (2022), also noted that children with special needs are still often dependent on direct support and can only participate minimally inside and outside school, so they require

playing and learning materials that suit their needs. Other relevant research also states that it is vital for teachers to be able to develop learning through adaptive game activities for children with special needs and make efforts to modify a game as learning material (Adimayanti et al., 2019; Ramadhita, 2018). Modifications can be made to the infrastructure and learning activities (Widodo, 2016). All innovation and breakthrough processes in the learning process are supported by the teacher's ability to apply the principles of proper learning management (Cahyati et al., 2022). Teachers who still lack knowledge and skills in teaching children with special needs must continue to strive to provide maximum service through play activities that suit each child's specificity.

Montessori education is built based on children's experiences. Teachers are guided by principles to ensure that they become active in every learning activity. Children will be interested in activities that can make them active because they are the characteristics of active children who like to explore, thus bringing them to reconstruct their awareness. With this self-awareness, children can build their learning patterns, leading to self-development (Ningsih et al., 2021).

### **Validation of the Model Development**

A practical and inclusive learning approach for children with special needs can be provided by a learning model that combines the Montessori method, SAVI approach, and inclusive education, according to an analysis of the validation results. This model has the potential to establish a learning environment that considers the cultural values, beliefs, and practices of each individual, fosters the growth mindset, and promotes a continuous improvement culture within the learning process. The validation results indicate that this model is capable of overcoming geographical, financial, and physical barriers to access—especially when it is modified and implemented with the proper assistance.

This approach was developed in accordance with the Montessori principles, which place a strong emphasis on individual growth and independence. A comprehensive learning approach that takes consideration of different learning styles and activates various sensory and intellectual components is made possible by the integration of the SAVI approach. The effectiveness of this model in promoting the development of children with special needs depends on close collaboration between teachers, parents, and the community. It is expected that this strategy will be long-lasting and able to be incorporated into current educational policies and systems.

This method may be helpful in enhancing children's social and emotional wellbeing by encouraging their involvement, engagement, and motivation in the learning environment. This method takes consideration of the child's whole development in addition to academic aspects. In general, the success and sustainability of this model heavily rely on collaboration, adaptation, and ongoing support from a variety of stakeholders, including schools, parents, society, and the

government. However, this model can play a critical role in fostering an inclusive learning environment, promoting sustainable growth and development, and producing a quality and competitive generation.

## CONCLUSION

The implementation of the development of an inclusive education model with the Montessori method and the SAVI approach was declared effective in improving the cognitive and social-emotional abilities of early childhood students with special needs in Hamburg, Germany. The impact felt by the existence of this developed model for students with special needs in the age of 4 is evident from the significant development of language, cognitive, and social competencies. Meanwhile, for students with special needs aged 3, an increase in motor abilities can be seen. This inclusive education model builds social-emotional bond between teachers and students, especially in improving their cognitive abilities. Teachers can teach discipline to students through their example, habituation, and consistency carried out by teachers towards their students. Implementation of this model also increases students' enthusiasm in being active in asking questions, answering questions, and being enthusiastic during the learning process. Therefore, the holistic conclusion is that the development of this model can make changes in learning for early age students with special needs in Hamburg, Germany.

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