International Journal of Instruction
e-ISSN: 1308-1470 ● www.e-iji.net

July 2023 ● Vol.16, No.3
p-ISSN: 1694-609X
pp. 1095-1112

Article submission code: 20220915021131
Received: 15/09/2022
Revision: 26/02/2023
Accepted: 21/03/2023
OnlineFirst: 05/06/2023

Numerical Literacy and Math Self-Concept of Children with Special Needs in Inclusive Elementary Schools

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Numerical literacy is the knowledge and skill to use various numbers and basic mathematical symbols to solve life problems. Math self-concept is a student's assessment of their skills, abilities, enjoyment, and interest in mathematics. Both are essential elements that significantly affect the adjustment of one's knowledge and skills development. Children with special needs in inclusive elementary schools had not been facilitated by learning that accommodated literacy and math self-concept. Therefore, it is necessary to differentiate the learning process for students with special needs. The first objective of this study was to determine the level of numerical literacy and math self-concept in inclusive elementary schools. The second objective of this research was to identify the implementation of differentiated learning, and the third was to develop learning designs for children with special needs. Furthermore, this research used the qualitative research method because more in-depth data exploration was needed regarding children with special needs. The instruments used were tests, questionnaires, and interviews. The qualitative data were collected and analyzed through exploration, identification, and description. This research contribution consisted of (1) a Detailed description of achievement of numerical literacy and math self-concept; (2) Implementation of differentiated learning in inclusive primary schools; and (3) Learning design for children with special needs. The main findings of this study is that numerical literacy and math self-concept of children with special needs in inclusive elementary schools could be facilitated by differentiated learning designs.

Keywords: numerical literacy, math self-concept, differentiation learning, inclusive elementary school, learning

Citation: Danuri., Waluya, S. B., Sugiman., & Sukestiyarno, Y. L. (2023). Numerical literacy and math self-concept of children with special needs in inclusive elementary schools. *International Journal of Instruction*, *16*(3), 1095-1112. https://doi.org/10.29333/iji.2023.16358a

INTRODUCTION

Mastery of six basic literacy listed by the World Economic Forum in 2015 becomes very significant for students, parents, and the community. The six essential literacies include literacy (reading-writing), numerical literacy, scientific literacy, digital literacy, financial literacy, and cultural literacy (Konopko, 2015). Numerical literacy is the knowledge and skill to use various kinds of numbers and symbols related to basic mathematics to solve practical problems in multiple contexts of daily life and, analyze the information displayed in multiple forms of graphs or tables, then use the interpretation of the results of the analysis to predict and make decisions (Han, 2017). Students' mathematical literacy requires logical reasoning and numeracy at a high level (Ni'mah et al., 2017). Literacy for primary and secondary school students can help them learn and retain knowledge in the short term. Hence, learning mathematics by applying the literacy learning process will produce better results (Sumirattana et al., 2017). It's mean literacy can effectively contribute to creating better educational conditions (Genlott & Grönlund, 2016).

Math self-concept, which can be defined as students' assessment of their skills, abilities, enjoyment, and interest in mathematics, is vital in mathematics education (Erdogan & Sengul, 2014). Self-concept as a predictor of behavior and choices concerning mathematics predicts interest in mathematics in the long term and significantly predicts subsequent mathematics achievement (Kvedere, 2014)(Wong et al., 2019)(Lee & Kung, 2018). Self-concept greatly affects self-adjustment and is an essential factor in a person's self-development. Children need intelligence to succeed in mathematics and self-concept and competence in their mathematical abilities (Heyder et al., 2019). Furthermore, the math self-concept stimulates students' positive feelings and beliefs in their competence in mathematics, leading to better mathematic needs for children with special needs (Timmerman et al., 2017).

The four domains of inclusive schools consist of child development, a sense of peace, and fulfillment in life among caregivers, mental health support for caregivers, and broadening perspectives and visions of the future (Wells-Beede et al., 2020). Currently, there has been an education gap between students with and without disabilities (Luo et al., 2020). Students with disabilities do not have the opportunity to engage in cognitively challenging mathematics (Tan & Padilla, 2019). Additionally, there are low expectations and a lack of respect for or understanding of children's rights with special needs, discrimination, and exclusion, in the educational environment (MacKenzie et al., 2020). The results of preliminary observations by researchers revealed that children with special needs had not received appropriate learning, although they should have the same rights as typical children based on the same standard of an effective, and sustainable education. Children with disabilities are more likely to be formality when participating inclusive education regardless of the learning objectives achievement. On this basis, special education for students is needed to evaluate their performance (Gorges et al., 2018).

According to human rights and social models, inclusive education is a system that must be adapted to children, and in this context, child development can use a special assistant

teacher (Thomas & Bacon, 2013). In inclusive settings, students attend regular schools and are educated in the same classes as regular students. Children with disabilities are more likely to be formality when participating inclusive education regardless of the learning objectives achievement (Bose & Heymann, 2020). Future implementation in the classroom should involve students setting their own goals for academic achievement and success (Sides & Cuevas, 2020). Thus, it is crucial to successfully provide adequate learning designs to implement inclusive education (Schwab et al., 2020). Nonetheless, as a matter of fact, in the current learning process, children with special needs are often not facilitated according to their needs.

Researchers interested in conducting this research are researchers realizing that numeracy literacy and mathematical self-concept in elementary schools are very important. With this research it is hoped that it will be able to help find out the things that are hindering students in solving problems of numeracy literacy and mathematical self-concept for children with special needs in inclusive elementary schools. So that this research is expected to be able to get the right solution and can be applied to learning and be able to improve numeracy literacy skills and mathematical self-concept for children with special needs in inclusive elementary schools.

Children with special needs are frequently challenged with some complex learning problems (Nandang & Kurniawan, 2021). Thus, teachers of children with special needs must face the following main obstacles in learning. Joyful learning is needed to facilitate literacy and imaginative mathematical thinking of children with special needs (Sugiman et al., 2020). Teaching and learning process which are designed by the teacher refer to three stages of children development (Hastuti et al., 2020). Special assistant teachers play a role in helping the development of children with disabilities, including classroom activities and activities influenced by teachers' feedback on children with disabilities (Ku & Rhodes, 2020). The teacher's feedback affects the teacher's ability to garner support from others who can ultimately contribute to the learning process (Fritz, 2020), Inclusive education teachers who demonstrate strong institutions in searching for resources can build these students' resilience and improve their well-being in unfavorable conditions (Michael et al., 2017). The research observation disclosed some non-idealities in the fact that only two of seven inclusive elementary schools that provided children with special needs with special assistant teachers.

Learning ineffectiveness is the inability of teachers to distinguish their teaching in mixed-ability classes. As a result, the practice of teaching mathematics in student-centered classrooms fails to attract students enthusiasm for learning (Legette & Kurtz-Costes, 2020)(Jana et al., 2021). The ideal framework should begin by considering learners as those who need different types of support and scaffolding for education and incorporating their needs in the curriculum design, materials, methods, and environments to support each learner's access, participation, and progress (Griful-Freixenet et al., 2021). Hence, it is vital to support regular teachers and special educators, making the assessment results in the basis for developing a differentiated learning model for students with special needs in inclusive classes (Marlina et al., 2019). The results of the assessment in question are by using a numeracy literacy test in class.

This research contribution consisted of (1) a Detailed description of achievement of numerical literacy and math self-concept; (2) Implementation of differentiated learning in inclusive primary schools; and (3) Learning design for children with special needs.

The function of mathematics aims to deepen students' knowledge in the form of graphs, tables, diagrams, and mathematical models. To help children with special needs and normal children in inclusive schools understand mathematics, teachers need to apply mathematical literacy.

The relationship between numeracy literacy and math self-concept for children with special needs in elementary schools is important to do to meet the demands of life in the future. Therefore, inclusive elementary schools need numeracy literacy and math self-concept through learning that is suitable for children with special needs.

METHOD

The research was carried out in four phases: (1) researchers conducted research by reviewing previous research and studying theory; (2) conducting interviews, distributing questionnaires and documentation; (3) analyzing data qualitatively by collecting data from interviews, questionnaires and documentation; and (4) find the results of this study to answer the existing problem formulation. This research used a qualitative method to explore, identify, and discuss more deeply the achievement of numerical literacy skills and math self-concept in Inclusive Elementary School.

The first stage in the research was conducting preliminary research studies and theoretical studies. Preliminary research was carried out through a systematic literature review to identify, assess, and interpret all relevant research articles to find research gaps. Students involved in this study were 9 students with special needs and 2 class teachers.

The second stage was to conduct tests, interviews, and questionnaires. But in the research process carrying out direct observation of learning carried out by two observers. The test was in numerical literacy questions under the Minimum Competency Assessment indicators from the Ministry of Education and Culture of the Republic of Indonesia. The test consisted of complex multiple-choice questions that provided more than one correct option and required students to organize and state the answers to these questions using their sentences. Interviews were conducted with teachers and students of elementary schools providing inclusive education for children with special needs. Interviews were used to guide researchers to obtain data from respondents directly. The indicators of this interview instrument were obtained from the research formulation, which was then divided into two, namely interviews for teachers and sheets for students. Questionnaires were presented in statements to obtain information from children with special needs in the fifth grade as the research respondents. The indicators used in the questionnaire are self-concept which consists consisted of class participation, doing assignments, confidence in class, and independent learning. The results of the respondents' answers were collected and then tabulated the data according to the level of math self-concept. Observations in research during the stage of analyzing data from these observations are useful for analyzing students' needs for learning to be developed.

Observations were made through the observation sheet of the implementation of learning.

The third stage was to collect test results interviews, and questionnaires and perform qualitative data analysis. The data obtained in this research was qualitative, and thus they were analyzed using descriptive qualitative analysis. Data exposure was further qualitatively interpreted by way of narrative description to obtain conclusions. Data were analyzed ever since the data were collected to be grouped for conclusion. The resulted conclusion in this research was in the form of a description. The final description obtained from this research was about numerical literacy and math self-concept for children with special needs in inclusive elementary schools. The four stages in data analysis were data collection, data reduction, data presentation, and verification or drawing conclusions collected from the field using the test, interview, and observation techniques. Data reduction was conducted by the selection process, centralizing the main discussion, abstracting, and transforming the data obtained in the field. Data were presented by a structured set of information that provides an opportunity to draw conclusions and take action to further generate conclusion based on the collected data. The four stages formed an interrelated cycle. These activities took place continuously generating conclusion. The validity of the qualitative data was tested using a credibility test by way of a triangulation, particularly a technical triangulation.

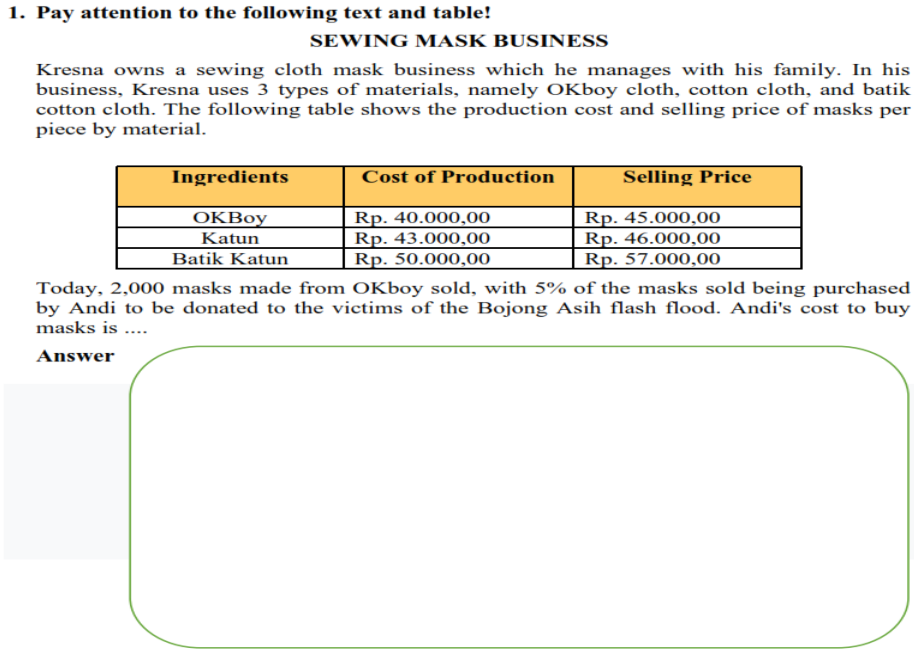
The fourth stage was to generate hypotheses and research findings to answer the research problems. The findings of the hypothesis were obtained through analysis of test results, interviews, and questionnaires to explore the numerical literacy and math self-concept of students with special needs in inclusive elementary schools. The research findings described the differentiated learning implementation by analyzing learning designs to facilitate numerical literacy and math self-concept for students with special needs in inclusive elementary schools to answer the research problem.

Research Subjects

This research was conducted on children with special needs in the fifth grade at seven inclusive elementary schools in the Special Region of Yogyakarta. The research objects were numerical literacy and math self-concept of children with special needs in inclusive elementary schools by learning differentiation. The research was carried out in the even semester of the 2021/2022 academic year. The subjects were selected based on two criteria: elementary schools with inclusive education for children with special needs, and the fifth-grade elementary school students with special needs. The student is a child with special needs in the slow learner category, aged 11 years. Teachers consist of class teachers and special companion teachers for children with special needs. So that this research does not involve normal students and only inclusive schools that have special accompanying teachers who can be used as research locations.

FINDINGS

Numerical Literacy Test Results



1. Pay attention to the following text and table!

SEWING MASK BUSINESS

Kresna owns a sewing cloth mask business which he manages with his family. In his business, Kresna uses 3 types of materials, namely OKboy cloth, cotton cloth, and batik cotton cloth. The following table shows the production cost and selling price of masks per piece by material.

Ingredients	Cost of Production	Selling Price
OKBoy	Rp. 40.000,00	Rp. 45.000,00
Katun	Rp. 43.000,00	Rp. 46.000,00
Batik Katun	Rp. 50.000,00	Rp. 57.000,00

Today, 2,000 masks made from OKboy sold, with 5% of the masks sold being purchased by Andi to be donated to the victims of the Bojong Asih flash flood. Andi's cost to buy masks is ....

Answer

Figure 1
Example of numerical literacy questions

The numerical literacy test measured students' ability to apply facts, concepts, and mathematical procedures to solve problems. Complex multiple-choice questions provided more than one correct option. Explanation questions required students to organize and state answers using their sentences. The Minimum Competency Assessment component was carried out to determine numerical literacy skills.

The broad context was critical to assess minimum competency in numerical literacy so that students could recognize the role of mathematics in daily life. The choice of strategy and concepts, procedures, facts, and mathematical tools to explain events, solve problems, or make decisions depends on the actual context of the event or issue. The context in assessing minimum competency in numeracy included contexts surrounding students' world, social, cultural, environmental, scientific, and mathematical sciences. These contexts were categorized into personal, socio-cultural, and scientific contexts.

The test consisted of complex multiple-choice by providing more than one correct option. The test consisted of five questions based on the minimum competency assessment indicators for numerical literacy. The number of subjects in seven schools consisted of nine children with special needs. The test results obtained the following data:

Table 1
Numerical literacy test results for children with special needs

Classification	Total	Percentage
Excellent	0	0
Good	0	0
Sufficient	1	11.11
Poor	2	22.22
Very Poor	6	66.67
Total	9	100
The Average Category	Very Poor	

Based on the analysis, children with special needs were included in the category having sufficient numerical literacy ability of 11.11%. The poor category was 22.22%, and the very poor was 66.67%. The average numerical literacy ability was very poor. Figures 2 and 3 were samples of student answers with very poor and poor categories in terms of aspects of the numerical literacy test.

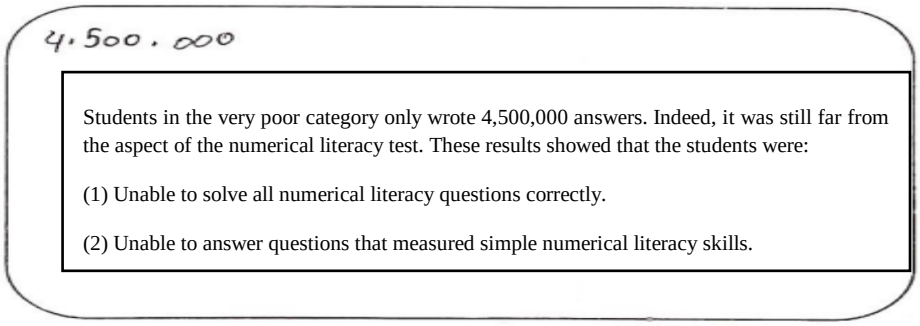


Figure 2
Examples of answers in the very poor category

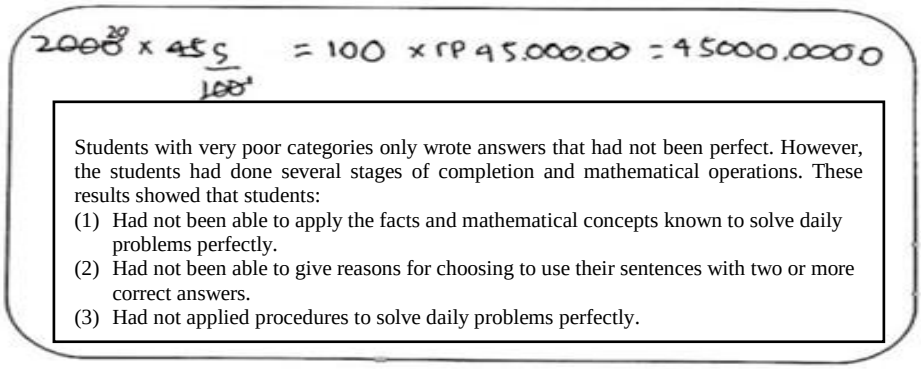


Figure 3
Examples of answers for poor category

As additional information, there were children with special needs whose score was 0. It was confirmed from the student answer sheets that was completely left blank. Ideally, to obtain a minimum category of good numerical literacy, students must be able to apply facts, concepts, and mathematical procedures they have learned to solve daily problems perfectly on the grounds of using their own sentences with more than two correct answers.

In general, it can be concluded that children with special needs did not know whether the answers that they wrote were right or wrong. Students did not understand the concept of mathematics delivered in school learning because they only understood that mathematics was only about numbers and counting. Even though they have tried to solve the given problem, in principal, they had no idea about what they wrote, and only attempted to answer the question by hoping that it could be related to the problem at hand. Therefore, their inability to analyze the questions resulted in the majority of very poor category of numerical literacy score of children with special needs.

Results of the Math Self-Concept Questionnaire

Questionnaires were used to obtain information about the math self-concepts of fifth-grade elementary school students who were provided with inclusive education. The respondents' answers were collected and then tabulated according to the level of math self-concept. Math self-concept was an excellent predictor to assess the development of students' self-perceptions in mathematics achievement, consisting of four concepts, *i.e.*, class participation, doing assignments, confidence in class, and independent learning (Legette & Kurtz-Costes, 2020).

Table 2
criteria for assessment of the math self-concept questionnaires for children with special needs

Criteria	Total	Percentage
Excellent	0	0
Good	5	55.56
Sufficient	3	33.33
Poor	1	11.11
Very Poor	0	0
Total	9	100
The Average Category	Sufficient	

Based on the picture consisting of nine children with special needs, it can be stated that the data for the math self-concept variable category for children with special needs was 55.56% in the good category, 33.33% in the sufficient category, and 11.11% in the Poor category. The average math self-concept category for children with special needs was in the sufficient category. In conclusion, the math self-concept of children with special needs is in the sufficient criteria, which can be described as follows. First, they do not actively take part in classroom learning by answering and asking questions and participating in voluntary class discussions and activities. Second, most of the students have not completed the task, which means that they only do the assignment if it is

related to the instruction. Third, they have no confidence in class. Their thoughts and beliefs are influenced by feelings/ emotions when in class. Fourth, they have not developed independent ability for independent learning. Children with special needs realize that their wishes or desires are real by depending on others.

Results of Interview

Interviews were conducted directly with children with special needs and teachers. The interview consisted of questions related to self-concept, math numerical literacy, and the implementation of learning in inclusive schools. The results of the interview were as follows:

The child with special needs 1 had no idea about numerical literacy. It was proven that his understanding of the learning process was sometimes tricky. During the interview, it was proven that he was still confused about the math concept because he did not acquire the knowledge about the meaning of numeracy. The student in question said that learning math

was essential for him, but he still found it difficult to understand the learning materials and was hesitant to answer the questions. Upon facing any difficulties, this child sometimes was embarrassed to ask, and thus, in his opinion, learning math was not fun at all.

Meanwhile, the second respondent, child with special needs 2 also did not know much about literacy and mathematical arithmetic ability. His understanding of math learning was sometimes still far from perfect. During the interview, it was proven that he was still confused about the ideal math concept because he did not know the meaning of numeracy related to mathematical ability. In the case of facing any difficulties in doing his homework, he would seek for the help of his brother. In the opinion of the second respondent, learning to count at school was important. Upon facing any learning difficulties in class, he always called his teacher to help him.

A child with special needs 3 was one of the resource persons who talked that numerical literacy was learning related to math. In his view, his ability to count was crucial. The student could learn mathematics independently or not depending on others, but he lacked self-confidence. The child with special needs 3 was doubtful about the answers he wrote in solving the given problem. This student thought that learning at school was fun because it helped him to solve math problems. In the face of difficulties in understanding the material or working on the questions, the teacher allowed the student to ask questions. When having trouble doing homework, he browsed for help in finding answers. Counting could help students in solving daily problems. In his opinion, with questions and answers, the student would easily understand the material presented by the teacher. Presentation of learning materials through video learning was one of favorable media children with special needs.

Interview with Teacher 1 as a fifth-grade elementary school teacher stated that numerical literacy for children with special needs was related to numbers and included story, geometry, and algebra questions. Students with special needs had excellent

reading skills but had problems in understanding their reading. The teacher did not understand the math self-concept, but constantly gave them relevant daily problems to students with special needs in inclusive elementary schools. The teacher always facilitated class participation, and sometimes required the students to complete some assignments. Furthermore, the concept given by the teacher was the same as students who did not have special needs. The teacher also said that the learning facilities provide students with opportunities to ask questions and guide each student. After that, the teacher confirmed students understanding, by asked the same questions to test their understanding of material. This way, the students could understand the material and could cope with environmental factors, which made them less confident.

Teacher 2 stated that numerical literacy for children with special needs was related to numbers and included story, geometry, and algebra questions. Numerical literacy was significant for all students. In their later grown-up stage, children with special needs will still live in the society that needs math concept. Although the teacher did not seem to understand math self-concept, he tried to give daily problems to students in inclusive elementary schools. Teacher 2 explained that giving students with special needs questions was conceptually the same as students who did not have special needs. However, the nominal number of the questions was reduced for children with special needs.

The teacher provided students with learning facilities in the form of opportunities to ask questions and guide each student. After that, the teacher confirmed students understanding, by asked the same questions to test their understanding of material. Barriers experienced by teachers were in terms of the use of technology in delivering learning materials, lacking school facilities especially LCD projectors, students' ability to understand learning materials, some environmental factors around the student, and students' lack of confidence According to teacher 2, the factors that influenced the obstacles included the lacking technological literacy of students, and the surrounding environment of students. He asked the students' parents to cooperate in guiding students in learning.

The teachers believed that learning design was considered significant for the learning process because it could affect students' learning outcomes. A well- arranged learning design would produce good learning outcomes. However, there was no differentiation in the curriculum between regular students and children with special needs Teachers also had not or rarely used learning media when delivering material, despite the fact that the e-module learning media was excellent for students in elementary schools. it was relatively rare for schools to compile or plan to make chrome books to make easy for students in exploring learning materials individually.

Based on the test results, children with special needs have numeracy literacy skills in the low category. In completing the numeracy test, unable to present mathematical statements in a written way. Children with special needs have not been able to present mathematical statements, are unable to manipulate mathematics properly, and are unable to provide conclusions. The results of the questionnaire show that the average mathematical self-concept for the category of children with special needs is in the

sufficient category. They did not actively participate in learning in discussions and most students had not completed their assignments. At the time of being interviewed, he assumed that he was experiencing difficulties, both in understanding the material presented by the teacher and when working on the questions.

DISCUSSION

The research results indicated that the numerical literacy of children with special needs in inclusive elementary schools was in the poor category, and the math self-concept of students with special needs was sufficient. The average numerical literacy of children with special needs in inclusive elementary schools is in the low category, although there are several categories that are not good. In contrast to the results of research showing students' numeracy skills were categorized as good, with 72.92% having moderate, high, and very high numeracy skills (Purnomo et al., 2022). Special assistant teachers require strategies to guide children with special needs but unfortunately teacher had not found such strategies in learning. The special assistant teachers said that students were slow in the learning process if compared to regular students. The weakness of children with special needs is the inability to read, slowness in doing assignments, retardedness in differentiating shapes and letters, and retardedness in understanding the provided material Teachers should pay attention to and mention each student's progress in the learning process (Zeidmane, 2011). Strategies, methods, or ways of implementing inclusive education in each country varied widely. The success of implementing inclusive education was influenced by human resources (Kwon, 2005). This finding is also supported by the results of research that gradually improvements need to be conducted to create an inclusive environment, including: increasing teachers understanding of the meaning of inclusive, completing student's documentation of developmental records, gathering and evaluating pre-learning according to student characteristics, providing personnel and infrastructure according to the needs of developing (Efendi et al., 2022).

The implementation of differentiation learning has not been able to help support and facilitate numerical literacy and math self-concept for students with special needs in inclusive elementary schools. The strategy carried out by the special assistant teachers is also part of fixing the sitting position of children with special needs by placing students in the front row. The teachers observe the students' condition, help mutual connections from teacher to student, students with other students, and give awards for the part in the construction of praise, applause, and motivation. Besides, the teachers also give special extra hours outside over the classroom session after class. Students tend to lose focus when teachers fail to use appropriate learning strategies for students' learning styles. Supported by research findings showing that teachers' teaching experience is the most influential factor affecting the teaching and learning of (Enikanolaye & Akanmu, 2020). Therefore, teaching should be differentiated and provide practical strategies that teachers can use to implement teaching methods (Morgan, 2014). Special assistant teacher describes three important strategies in carrying out the learning process,, *i.e.*, first, identifying and implementing specifications and qualifications of changes in student attitudes and personality as expected; second, choosing a teaching and learning

approach system following the community's view of life; third, selecting and establishing procedures, methods, and teaching techniques considered the most appropriate and effective so that teachers can use them in carrying out learning activities (Witono & Istiningsih, 2021).

In the learning method for children with special needs, the methods were lecturing, question and answer, and discussion. Supported by research findings which show that use of technology in the form of learning media can be an alternative to overcome the limitations of space and time of the existing learning process so that teachers do not need to explain the material to students in excess (Puspitarini & Hanif, 2019). Teachers mostly used the lecture method to explain the material presented. The gap between the subject matter and students' real-life math experiences and the lack of mathematics application hindered student learning (Kao, 2021). The lecturing method in an inclusive class was combined with practical activities. It was because of the explanation given in the middle when directing the practice activities. With practice, teachers could give and compare concrete objects through directions according to the ability of children with special needs. The concept was based on teaching methods to create new ideas and innovations that could promote learning among modern learners and respond directly to their learning experiences (Chatwattana, 2021).

Special assistant teachers have the opportunity to see confused students and make quick changes to help students understand quickly. The teacher uses the lecture method in the conventional learning process, meaning that there is no constant contact between the teacher and students. Therefore, it focuses more on delivering material in one direction. Based on the observations, special assistant teachers were more vital in mastering the class through the lecturing method than other methods.

Another method used is question and answer. The implementation system of the question and answer method refers to the learning manual. When applying the question and answer method, in terms of activities in the classroom during the learning process, children with special needs tend to be passive when the teacher invites students to answer questions. Children with special needs show a passive attitude because when the teacher asks questions or asks students to work on questions, since they find it difficult and do not know how to answer. And through the Communicate students are required to foster an attitude of self-confidence (Wulandari et al., 2020).

Furthermore, the group discussion method comprises two methods that the teacher combines in one learning time. This method starts with the teacher as a facilitator in learning activities, followed by forming groups for discussion so that each group can present the results of their discussions in front of the class. The teacher divides students into some groups by combining regular students and children with special needs. Only students who have higher intellectuals are grouped with children with special needs. It can be said that models and groups are vital for studies, so they are always helpful for students. Regular students and children with special needs hold a mutually facilitating two-way contribution. According to the inclusive teachers, with the group discussion method, children with special needs can complement each other. The framework begins by considering learners, especially those who need different types of learning support,

and incorporating their needs in the design of curriculum, materials, methods, and environments to support access, participation, and progress for each learner (Griful-Freixenet et al., 2021).

Learning designs to facilitate numerical literacy and math self-concepts for children with special-needs in inclusive primary schools have not been implemented. In handling the learning process of children with special needs special assistant teachers must be able to consider many things, among others, firstly understanding if children need many repetitions, three to five times to understand the material compared to others. The second is providing tutorial activities both at school and at home. Third is the use of demonstration methods and lots of visual cues to avoid verbalism. The fourth is teaching simple concepts to understand the next lesson at the beginning of learning. The fifth is simplifying the instructions, and the sixth is recognizing students' learning styles, whether visual, auditory, or kinesthetic.

There are several things that can be done by special assistant teachers to deal with children with special needs, namely (1) understanding the characteristics of children; (2) knowing the character of the child, for examples in terms of their naughtiness, laziness, hyperactiveness, quietness, aloofness, and others; (3) applying specific methods to slow learning children in understanding lessons with the aim of finding out the most effective methods in dealing with these children; (4) providing a front-row seat that allows children with special needs to more listen teacher's explanation more clearly.; (5) applying another method of dealing with slow learning children in understanding lessons by having an intelligent classmate who has a social spirit for assistance; (6) giving additional assignments as a homework in the form of reading text or reading assignments to help slow learning children catch up with other students; and (7) consulting with parents of children or students and providing direction to parents of slow learning children on the best method to educate children appropriately and adequately.

Evaluation of learning methods for children with special needs assesses students' achievement in taking objects. Students' achievement in elementary schools is seen from the achievement of the minimum standard of completeness criteria. For special programs for children with special needs, it can be concluded that the agenda included is an assessment.

Evaluations used by high-grade teachers are given directly to detect the appropriate practice of students. The evaluation focuses on students' efforts and learning outcomes. Evaluation of students' efforts is carried out by teachers assessing the development of learning outcomes for children with special needs, especially in literacy skills, through observations of ongoing learning activities either individually or in groups in the classroom, although only with one student in a particular group with special needs (Lin, 2021).

Another finding from this research was that not all-inclusive schools had special assistant teachers. The existence of a special assistant teacher was highly needed in the learning process. Ideally, every inclusive school should have at least one special

assistant teacher. It was strengthened by the real-life fact that there were only two special assistant teachers in seven inclusive schools. This condition should serve as a wake-up call for institutions and policymakers to be more careful in implementing inclusive schools.

The relationship between numerical literacy of children with special needs and self-concept and its relation to the application of differentiating learning is explained as follows. Numerical literacy is the ability to apply number concepts and arithmetic operations skills in everyday life. In addition to the cognitive side in the form of numeracy literacy, psychological strength in the form of self-concept is also developed in mathematics education. To facilitate numeracy literacy and math self-concept for children with special needs, learning designs and media are needed to help them learn fun mathematics. Through inclusive education, namely a learning that adapts to children with special needs.

CONCLUSION

This research concluded that (1) the numerical literacy of children with special needs in inclusive elementary schools was in the very poor category, and the math self-concept of students with special needs was sufficient. (2) The implementation of differentiation learning has not been carried out appropriately. It has not been able to help support and facilitate numerical literacy and math self-concept for students with special needs in inclusive elementary schools. Children with special needs have not yet developed the ability to learn independently, they realize that they are still dependent on others. (3) The learning design to facilitate numerical literacy and math self-concept of students with special needs in inclusive primary schools has not been implemented. The framework has not started to take into account the learners in mind, who, in fact, require different types of support and design for learning. Learning has not been able to make students actively participate in learning in discussions and most students have not completed assignments.

The limitations of this study were only carried out on the subject of fifth grade students in children with special needs slow learners whose number was limited. The numeracy literacy test referred to is numeracy literacy adopted from the minimum adequacy assessment of the Ministry of Education and Culture of the Republic of Indonesia.

On this basis, future research opportunities are wide open on the essential aspect of numerical literacy and math self-concept in inclusive elementary schools Thus, it was necessary to develop learning media to facilitate, manage, and implement new learning designs suitable for children in inclusive elementary schools. So that future research projections place more emphasis on learning that makes students actively participate in learning and develop the ability to be independent so as not to depend on others.

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