

## IDENTIFICATION OF FINE MOTOR SKILLS IN CHILDREN WITH INTELLECTUAL DISABILITY

Joppy Nalurita Asgari<sup>1</sup>, Dwi Aries Himawanto<sup>2</sup>, Edy Legowo<sup>3</sup>

<sup>1,2,3</sup>

Master of Special Education University of Sebelas Maret Surakarta

Jl. Ir. Sutami No.36, Kentingan, Kec. Jebres, Surakarta City, Central Java 57126

nalurita07@gmail.com, legowobk@gmail.com, dwiarieshimawanto@gmail.com

**Abstract:** The purpose of this study was to describe fine motor skills in mentally retarded children. This study involved 20 mentally retarded children in special schools (SLB) in North Lombok. Identification was carried out using several data collection techniques, namely through observation, filling out instruments and interviewing the teacher. Identification of mentally disabled children focuses on several fine motor skills, namely: making curved lines, making horizontal lines, making circle patterns, cutting straight line pattern paper, cutting zigzag pattern paper, cutting circle pattern paper, cutting square pattern paper, simple drawing, coloring using colored pencils, coloring using crayons, and coloring using watercolors. The results of the study used descriptive analysis with two categorizations. Based on the results of the analysis, it was found that out of 20 mentally retarded children can be categorized as follows: on average 68% of children are in the Start Development category (MB), which means that children are starting to be able to do activities, but still with the help of teachers and 32% of children fall into the Developing Appropriate category Hope (BSH). Thus, through this identification it can improve fine motor skills in mentally retarded children by using other interesting methods or strategies.

**Keywords:** skill, finemotor, intellectual disability

**Abstrak:** Tujuan penelitian ini adalah untuk mendeskripsikan keterampilan motorik halus pada anak keterbelakangan mental. Penelitian ini melibatkan 20 anak keterbelakangan mental pada Sekolah Luar Biasa (SLB) di Lombok Utara. Identifikasi dilakukan dengan menggunakan beberapa teknik pengumpulan data, yaitu observasi, pengisian instrumen dan interview guru. Identifikasi anak keterbelakangan mental fokus pada beberapa keterampilan motorik halus, yaitu pembuatan garis kurva, pola lingkaran, menggunting kertas berpola garis lurus, menggunting kertas berpola zigzag, menggunting kertas berpola lingkaran, menggunting kertas berpola kotak, gambar sederhana, pewarnaan dengan pensil warna, pewarnaan dengan crayon, dan pewarnaan dengan pewarna air. Metode penelitian ini menggunakan analisis deskriptif dengan dua pengkategorian. Berdasarkan hasil analisis tersebut, ditemukan bahwa 20 anak keterbelakangan mental bisa dikategorikan sebagai berikut: rata-rata 68% anak masuk pada kategori pengembangan awal/masih berkembang (MB), yang berarti bahwa anak-anak mulai mampu melakukan aktivitas, namun tetap dengan bantuan guru dan 32% anak masuk dalam kategori berkembang sesuai harapan (BSH). Jadi, berdasarkan identifikasi tersebut, hal ini bisa meningkatkan keterampilan motorik halus pada anak-anak keterbelakangan mental dengan menggunakan strategi-strategi dan metode-metode lain yang menarik.

**Kata kunci:** keterampilan, motorik halus, disabilitas intelektual

Sumber: *ICEHoS - International Conference on Education, Humanities, and Social Science*

Children with special needs are children who need education and services that are different from children in general (Cahya, 2013). In this case, children with special needs need a modification in learning activities at school in order to be able to develop according to their maximum capacity according to their respective capacities. One of the children with special needs is a mentally retarded child. Mentally retarded children are children who have intelligence below average and are characterized by limited intelligence and do not have social skills (Atmaja, 2018). In line with this, Somantri (2006) suggests that the term mental retardation is used to refer to children who have intellectual abilities below average.

In accordance with UU No. 20 of 2003 in Pasal 5, it is explained that citizens have the same rights in obtaining quality education. In the same article, it is explained that the colors of the State who have physical, emotional, mental and intellectual disabilities receive special education.

Mentally retarded children can study at special schools (SLB). In the implementation of learning, of course, it is different from children in general, both in the material needed and the method of

presentation. Within the scope of the Special School there are special programs for students, one of which is for mentally retarded students. The scope of special programs for the self- development of mentally retarded children is taking care of themselves, taking care of themselves, helping themselves, communicating, socializing, life skills and filling spare time.

In implementing a special program for mentally retarded children, it will involve fine motor skills to support life skills activities in carrying out daily activities. Fine motor skills are skills in managing and coordinating small muscles (Rahyubi, 2012: 222). Fine motor skills also have a significant relationship to functional performance in self-care, mobility and social functioning (Cameron et al., 2012; Case Smith, 1995; Grissmer et al., 2010).

Another problem that often occurs based on the observations of researchers is that children's fine motor skills are not stimulated appropriately according to their age development stage. Often children are immediately given activities to write numbers and letters. Meanwhile, for children to reach the writing stage correctly, their fine motor skills need to

be optimized gradually. Children whose fingers are not strong enough, but have been forced to write directly on paper, will often strike down writing (Paramita, 2017). For this reason, the importance of strengthening the finger muscles first with the right stimulation to stimulate fine motor skills, only then can we teach children to write. Therefore, this study was conducted to be able to identify the fine motor skills of mentally retarded children in special schools (SLB) with the aim of knowing their fine motor skills so that they can be used as a reference or as a basis for providing appropriate methods to stimulate the fine motor skills of mentally retarded children.

## **LITERATURE REVIEW**

### **Intellectual Disability**

Atmaja (2018: 97) suggests that mentally retarded children are a condition of children whose intelligence is far below average and characterized by limited intelligence and inadequacy in social communication. According to Somantri (2006: 103) mental retardation is a term used to describe children who have intellectual abilities below average. The condition of children whose intelligence is below average and

characterized by limited intelligence and inadequacy in social interactions. Therefore, they need special educational services that are tailored to the abilities of these children.

Mentally retarded children are children who have learning problems caused by obstacles to the development of intelligence, mental, emotional, social and physical Delphie (2006: 2). According to Kemis and Rosnawati (2013: 1) mentally retarded children are individuals who significantly have intelligence below normal intelligence with an IQ score equal to or lower than 70. Intelligence that is below the average for normal children will hinder all activities of daily life, both in terms of socializing, communication and academic disabilities.

Based on the explanation above, it can be concluded that mental retardation is a child who has a delay in the development of intelligence, so that it can hinder other aspects such as in terms of academic, communication and their daily activities.

### **Fine Motor Skill**

Motor skills are the maturity of nerve muscles in supporting limb movement activities. The higher a person's motor development ability, the higher the possibility of working power,

and vice versa. According to Rahyubi (2012: 222) fine motor skills are skills in coordinating or managing small muscles. In line with Decaprio (2013: 20) fine motor skills are learning related to physical skills that involve small muscles and the presence of eye and hand coordination. Rohendi & Seba (2017: 119) defines fine motor skills as a body movement that uses fine muscles.

Based on the above opinions, it can be concluded that fine motor ability is an individual ability to use small muscles accompanied by eye and hand coordination in carrying out certain activities.

## **METHODOLOGY**

This study uses several data collection techniques, namely: observation, filling out instruments and interviewing the teacher. Observations were made on 20 mentally retarded children at the Special School (SLB) in North Lombok, filling in the instruments by the teacher in the group. Meanwhile, interviews were conducted as an effort to obtain triangulation of sources.

The next stage, the researcher conducted the analysis. The analysis was carried out with descriptive statistics, in order to obtain the results

of the fine motor skills achievement of mentally retarded children in Special Schools (SLB). The categories of the results of this study consist of two categories, namely: Starting to Develop (MB) and Developing according to Expectations (BSH). Starting to develop means that the child has begun to be able to carry out these activities, but still needs teacher assistance. and Developing according to Expectations (BSH) means that the child is able to do it independently, without the help of the teacher. The identification carried out by researchers in the study was focused on 11 fine motor activities as follows: fine motoric focus was: making curved lines, making horizontal lines, making circle patterns, cutting straight line pattern paper, cutting zigzag pattern paper, cutting circle pattern paper, cutting square pattern paper, drawing simple, coloring using colored pencils, coloring using crayons, and coloring using watercolors.

## **DISCUSSION**

The following is a table of the results of the achievement of fine motor skills for 20 mentally retarded children who are in Special Schools (SLB) in North Lombok. The fine motor skills that

are focused on are: making curved lines, making horizontal lines, making circle patterns, cutting straight line pattern paper, cutting zigzag pattern paper, cutting circle pattern paper, cutting square pattern paper, simple drawing, coloring using colored pencils, coloring using crayons, and coloring using watercolors. The identification results are presented in the table below:

**Table 1. Achievement of Fine Motor Skills for Children with Intellectual Disabilities**

No	Activities	Achievement Development	
		MB	BSH
1	Make a curved line	14	6
2	Make a horizontal line	10	10
3	Make a circle pattern	17	3
4	Cut straight the pattern paper	7	13
5	Cutting zigzag pattern paper	15	5
6	Cutting the circle pattern paper	15	5
7	Cutting square pattern paper	12	8
8	Simple drawing	16	4
9	Coloring using colored pencil	14	6
10	Coloring using crayon	12	8
11	Coloring using watercolors	18	2

From the table above, it is known that in the activity of making curved lines, it was found that 14 children (70%) of 20 children achieved the Start of Development (MB) and 6 (30%) who developed according to expectations (BSH) In the horizontal line drawing activity, there were 10 children (50%) who achieved the Start of Development (MB) and 10 children (50%) who achieved the Development according to Expectations (BSH) achievement. For the activity of creating a circle pattern, there were 17 children (80%) who got the Start of Development (MB) and 3 (20%) who got the 'Developing as Expectations' achievement).

The next activity was cutting straight pattern paper, there were 7 (35%) of the 20 children who achieved the Start of Development (MB) and 13 children (65%) who developed according to expectations (BSH). To cut the zigzag pattern paper, there were 15 children (75%) who achieved the Start of Development achievement and 5 children (25%) who achieved the Development according to Expectations (BSH) achievement. Furthermore, in the circle pattern paper cutting activity, there were 15 children (75%) who achieved the Start of Development achievement

and 5 children (25%) who achieved the Development according to Expectations (BSH) achievement. To cut square pattern paper, there were 12 children (60%) who achieved the Start Development achievement and 8 children (40%) who achieved the Developmental Expectations achievement. Cutting activities can stimulate fine motor skills in children, because through this activity the finger muscles are used to make them stronger (Lailah & Khotimah, 2013; Mahmudah, 2015)

In simple drawing activities, there are 16 (80%) of the 20 children who get the Start Development (MB) and 4 (40%) who get the Development according to Expectations (BSH) achievement. Through drawing activities, it can also improve fine motor skills in students (Sukamti, 2014).

The next activity is coloring. Coloring activities can be used with a variety of media, such as colored pencils, crayons and markers. As for some coloring activities carried out in this study. In coloring activities using colored pencils, there are 14 (70%) of 20 children who are starting to develop and 4 (30%) who develop according to expectations (BSH). To color using crayons, there

were 12 children (60%) who achieved the Start of Development achievement and 8 children (40%) who obtained the Developmental Expectations (BSH) achievement. While coloring using paint, there were 18 children (90%) who obtained the Start of Development achievement and 2 children (10%) who obtained the achievement of Developing according to expectations. Coloring activity is a game that can provide opportunities for children to freely express themselves through various colors (Azizah & Wati, 2014). Coloring activities can also improve children's fine motor skills (Warnida, 2017).

Based on the exposure to the results of the achievement of children's fine motor skills development, it can be concluded that 68% of mentally retarded children still need assistance from the teacher in carrying out activities. Through this, it is hoped that in providing activities to be stimulated according to the stage of development, in order to strengthen the finger muscles to carry out activities from simple to more complex activities

## **CONCLUSION**

Based on the results of the discussion above, it can be concluded

that the data on the results of identification of fine motor skills in 20 mentally retarded children in Special Schools (SLB) in North Lombok found that 68% of the children were in the Start Developing (MB) category, which means that the children began to be able to carry out activities. However, with the help of teachers and not being able to be fully independent, 32% of mentally retarded children are in the Developing according to Expectations (BSH) category, which means that children are able to carry out activities independently, without the need for teacher assistance. Under these conditions, it is necessary to provide a strategy or method that can help mentally retarded children improve fine motor skills effectively.

## REFERENCE

- Azizah, S., & Wati, S. E (2014). Upaya Menurunkan Tingkat Stres Hospitalisasi dengan Aktifitas Mewarnanai Gambar Pada Anak Usia 4-6 tahun di Ruang Anggrek RSUD Gambiran Kediri. *Jurnal No 25 Volume, 1*, 6- 10.
- Cameron, C. E., dk. (2012). Fine Motor Skill and Executive function both contribute to kindergarten achievement. *Child Development*, 83(4), 1229-1224
- Case-Smith, J. (1995). The relationship among sensorimotor component, fine motor skill, and functional in preschool children. *American Journal of Occupational Therapy*, 49 (7), 645-652)
- Decaprio, R. (2013). *Aplikasi Teori Pembelajaran Motorik di Sekolah*. Jogjakarta: Diva Press.
- Delphie, B. (2006). *Pembelajaran Anak Tunagrahita*. Bandung: PT Refika Aditama.
- Elcombe, E. (2017). Effect of Practical Life Exercises on Fine Motor Development in a Montessori Childrens' House Classroom. University of Wisconsin-River Falls.
- Grismer, dkk. (2010). Fine Motor Skill and Early Comprehension of the world: two new school readiness indicators, *Developmental Psychology*, 46 (5), 1008.
- Gustek, Gerald. 2013. *Metode Montessori (Panduan Wajib untuk guru dan Orangtua didik PAUD)*. Yogyakarta: Pustaka Belajar.
- Hainstock. E. (2002). *Montessori untuk sekolah dasar*. Bandung: Delapratasa Publishing



- Hunt, Nancy dan Marshall. Kathleen. (2005). *Exceptional Children Youth*. USA:Houghton Mifflin Campany
- \_\_\_\_\_.(2005). *Exceptional Children and Youth*. USA: Houghton Mifflin Company
- Kemis., Rosnawati, A., (2013). Pendidikan Anak Berkebutuhan Khusus Tunagrahita. Jakarta Timur: PT Luxima Metro Media.
- Mahmudah, H. (2015). *Mengembangkan Motorik Halus melalui Kegiatan Menggunting Kertas Mengikuti Pola GarisLurus Pada Anak Usia 3-4 tahun diKelompok Bermain Bunga Mulia Slumbang Kecamatan Ngadiluwih Kabupaten Kediri*.
- Lailah. I., & Khotimah, N. (2013). *Upaya Meningkatkan Kemampuan Motorik Halus Anak Melalui Menggunting dan Menempel di Kelompok B TK Muslimat 2 Jombang*. *Jurnal Paud Teratai*, 2(3)
- Montessori, Maria. (1914). Dr. Montessori's Own Handbook. New York: Frederick A. Stokes Company Pulishers.
- Montessori, Maria. (2013). *Metode Montessori. Panduan Wajib Untuk Guru dan Orangtua Ddidik PAUD (Pendidikan Anak Usia Dini*. Yogyakarta: Pustaka Belajar.
- Paramita, Vidya Dwina. (2017). *Jatuh Cinta Pada Montessori: Seni Mengasuh Anak Usia Dini*. Yogyakarta: Penerbit B first. Permendikbud no 12 tahun 2018. Renstra Pendidikan tahun 2015-2018.
- Rahyubi, Heri. (2012). *Teori-Teori Belajar dan Aplikasi Pembelajaran Motorik*. Majalengka: Penerbit Referens. Reni Akbar-Hawadi (2002). *Identifikasi Keberbakatan Intelektual Melalui Metode Non tes*. Jakarta:Grasindo.
- Reichbow, Brian. 2006. *Handbook Early Chilhood Spesial Education*. USA: Springer.
- Rohendi, A., Seba, L., (2017). *Perkembangan Motorik (Pengantar Teori dan Aplikasinya dalam Belajar)*. Bandung: Penerbit Alfabeta.
- Sukanti. (2014). *Upaya Meningkatkan Motorik Halus Melalui Kegiatan Menggambar Pada Anak Kelompok B TK Dharma Wanita 2 Patihan Sidoharjo Sragen*.
- Somantri, S. (2002). 2006. *Psikologi Anak Luar Biasa*. Bandung: Refika Aditama
- Warnida. (2017). *Upaya Meningkatkan Kemampuan Motorik Halus Melalui Kegiatan Mewarnai di Kelompok B1 TK Berkah Kota Jambi*. *Jurnal Ilmiah Dikaya*, 9 (1), 132-140.