

# READING ABILITY AS A RED FLAG OF MILD LEVEL INTELLECTUAL DISABILITY

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## Abstract

*Intellectual disability often disguises as a mere learning difficulty in early years of elementary education, then become severe in higher level. Teachers often misinterpret that student's learning inability as a simple learning difficulty because of laziness or demotivation. This inability to identify its symptom in early phase makes an irreversible learning output. This study is a sample of using reading difficulty as a red flag to notice a mild level intellectual disability. The participant is MR, a 10-years-3-months-old boy who shows learning difficulty, especially on reading ability. This study is a single-subject design with qualitative approach. The researcher does the assessment by using class and daily observation methods, interviewing parents and teachers, giving test using Stanford-Binet (SB) to measure general intelligence, and doing Draw a Family Test (DAFT) to measure socioemotional state. Assessment result provides an inability of reading in early level (around preschool and first year of elementary school), and it can predict learning difficulty in next level which can be shown as the symptom of mild level intellectual disability.*

*Key words: reading ability, intellectual disability, learning difficulty*

## Abstrak

Disabilitas intelektual sering tampak sebagai kesulitan belajar biasa di awal tahun pendidikan dasar yang kemudian menjadi parah di tingkat selanjutnya. Guru sering salah menginterpretasikan ketidakmampuan belajar siswa sebagai kesulitan belajar sederhana dikarenakan malas atau demotivasi. Ketidakmampuan untuk mengidentifikasi simtom tersebut di awal tahap membuat hasil belajar selanjutnya tidak dapat diulang kembali. Penelitian ini adalah sampel dari penggunaan kesulitan membaca sebagai *red flag* untuk menyadari adanya disabilitas intelektual tingkat *mild*. Partisipan adalah MR, anak laki-laki usia 10 tahun 3 bulan yang menunjukkan kesulitan belajar, terutama pada kemampuan membaca. Penelitian menggunakan desain subjek tunggal dengan pendekatan kualitatif. Peneliti melakukan asesmen dengan menggunakan metode observasi kelas, observasi harian, wawancara dengan orang tua dan guru, memberikan tes Stanford-Binet (SB) untuk mengukur kemampuan intelegensi umum dan *Draw a Family Test* (DAFT) untuk mengukur kondisi sosioemosional. Hasil asesmen menunjukkan ketidakmampuan membaca pada tingkat awal (sekitar usia TK dan kelas 1 SD) dapat memprediksi kesulitan belajar di tingkat selanjutnya yang mungkin muncul sebagai simtom dari disabilitas intelektual tingkat *mild*.

Kata kunci: kemampuan membaca, disabilitas intelektual, kesulitan belajar

## Introduction

Intellectual disability is characterized by deficits in general mental abilities, such as reasoning, problem solving, planning, abstract thinking, making judgment, academic learning, and experience-based learning (APA, 2013:71). There are three criteria must be met to diagnose children with intellectual disability; deficit in intellectual function; deficit in adaptive functioning that result in

failure to meet developmental and sociocultural standards for personal independence and social responsibility; and onset of intellectual and adaptive deficits during the developmental period (APA, 2013).

Intellectual disability occurs mostly because of neurodevelopmental process. The fetal alcohol syndrome, medical conditions in pregnancy state might be the factors, but the cause of intellectual disability in 30-50% of cases remains unknown

(Papalia & Martorell, 2021). Many cases may be preventable through genetic counselling, prenatal care, amniocentesis, new-borns routine screening and health care, and pregnant women and infants' nutritional service (Papalia & Martorell, 2021:285). Those preventable efforts are mostly unaffordable health care services for low socioeconomic status families in Indonesia.

The mild severity level of intellectual disability is described by three domains which are conceptual, social, and practical domains (Mash & Wolfe, 2019:132). For the conceptual domain, school-aged children and adults show learning difficulties in academic skills involving reading, writing, arithmetic, time or money, and the support is needed in one or more areas to meet age-related expectations. Meanwhile, in the social domain, children with the mild severity level of intellectual disability have criteria such as showing immaturity in social interaction, having difficulties in perceiving peer's social cues, showing immature or more concrete communication, conversation, and language for ages; showing difficulty in regulating age-inappropriate emotion and behaviour that may be noticed by peers, having limited understanding of risk in social situations, displaying immature social judgement for ages, and being manipulated at risk by others. For the practical domain, children may function age-appropriately and maintain personal care, but they may need some support with complex daily living tasks compared to their peers.

Having a low intellectual functioning and low adaptive skills, the mild intellectual disability is specifically an individual whose IQ is approximately 50 to 70 (Hallahan, Kauffman, & Pullen, 2014). It is a well-established finding that ID is more prevalent among children of lower socioeconomic status (SES) and children from minorities (Witwer et al., 2014 in Mash & Wolfe, 2019) which link is found primarily among children on mild intellectual disability range.

Most children with the mild level intellectual disability can gain benefits from school and intervention program to hold jobs, live in community, and function in society (Papalia & Martorell, 2021). It means that teachers, parents, and school have to comprehend the mild intellectual disability.

Children and adolescents with mild intellectual disability constitute the largest group; it is estimated that as many as 85% of people with intellectual disability (later ID) have a mild form of the disorder (King et al., 2009 in Mash & Wolfe, 2019). This data is consistent with the Elementary School Directorate of the Indonesia Ministry of Education, Culture, Research, and Technology's data (September, 2021) that there are 57.155 special needs students from 17.134 inclusive elementary school who 33,80% of them are diagnosed as having learning difficulties. There are likewise 6,09% or approximately 3.480 children who are diagnosed as mild level intellectual disability. Meanwhile, there

are many students with mild level intellectual disability who are left unrecognized and oftentimes categorized as lazy or troubled students.

A reading skill is a cognitive ability which a person is able to use when interacting with text (Urquhart & Weir, 1998 in Liu, 2010). By having reading skill, students gain knowledge and insight that will increase their intelligence (Marlitiana & Sakti, 2021). Many researchers (Davis; 1968, Munby; 1978, Heaton, 1988; Hughes, 1989 in Liu, 2010) believe that having reading skill equals to its various types such as macro and micro skills, grammatical and lexical abilities, and low operations level.

By age 7, children usually enjoy writing stories and learn new words quickly (Yardstick, 2017). Reading and writing are two main lessons in which students learn during their early years in elementary school. Children are more likely to become good readers and writers in a case parents provide right conversational challenges during preschool years (Reese, Sparks, & Leyva, 2010 in Papalia & Martorell, 2021:221). Before learning to read, children should learn about vocabulary, grammar, and metalinguistic awareness. Children learn to use language to talk about non-existent things from whence they learn to know words, recognize sounds, and talk about them (Santrock, 2018:293).

Children whose preschool teachers use sophisticated words during free play have a wide range of vocabularies and better reading comprehension in 4<sup>th</sup> grade because they have a good receptive vocabulary in kindergarten beforehand (Dickinson & Porsche, 2011 in Papalia & Martorell, 2021:221). Children's vocabulary development plays an important role in their reading comprehension (Vacca & others, 2018 in Santrock, 2018:294). Those are the reasons why step-by-step language development toward reading skills can be an appropriate signal of academic inability in later years, especially the mild level intellectual disability.

Moreover, the overrepresentation of minority and low-SES children in the group with a mild intellectual disability remains as a complicated and unresolved issue. A lot of research conducts this issue, and the result shows the likelihood of an intellectual disability diagnosis is shaped and influenced by social and cultural forces such as racial discrimination, poverty, and cultural insensitivity (Emerson, 2012 in Mash & Wolfe, 2019). Broadly, kindergarten readiness is related to positive academic and social outcomes for children (Goldstein, McCoach, & Yu, 2017 in Papalia & Martorell, 2021:224). Those are the reasons why early detection of unusual inability to read in early years such as kindergarten or 1<sup>st</sup> grade of elementary school becomes essential for mild intellectual ability students. Early detection leads to an early diagnosis, and therefore it means that students can get an early intervention in optimizing their potentials.

## **Method**

This study uses a single study case. The Participant of study is MR, a 10-years-3-months-old boy who also a 4<sup>th</sup> grade-student in one of the state elementary schools in Semarang. One of his teachers currently finds out that he has a serious problem rather than a mere reading skill or learning disability.

The assessment method is begun by interviewing the teacher that first concern is dyslexia prejudice, then it followed by class observation and parents' interview. Before giving the test, researcher does some meetings to make a rapport with the student. Stanford-Binet (SB) is used to measure his general intelligence and Draw a Family Test (DAFT); and to understand his socioemotional state. The assessment process takes about 13 meetings in which the duration of each meeting is no longer than an hour.

## **Result**

The result of class observation shows that MR struggles to finish his task compared to all of his classmates that have already finished it in the first place. Besides, he cannot involve in a discussion once questions are delivered to him by his teacher. On the other hand, he can follow the rhythm of music, mumble the lyrics, and enjoy it when it comes to a singing activity.

The teacher's interview gives information about MR's reading disability. He cannot either spell alphabet in a simple word combination or remember the alphabet. Moreover, he cannot follow his teacher's instruction in writing down words that have been red in front of the class, and he is not able to arrange the words as he needs to look at them. He takes more time than his classmates in duplicating a writing task. The same condition applies similarly for reading. The teacher thinks MR has a problem with his reading skill or in other word is dyslexia. His inability in reading has been noticed by his 1<sup>st</sup> grade teacher, but that teacher perceived him as normal as other 1<sup>st</sup> grade students who commonly could not read well. Consequently, he did not receive enough attention that he deserved.

Unfortunately, the Covid-19 pandemic forced public activities included school to conduct an online based learning, and this change that runs ineffectively at first makes most of MR's homeroom teachers in 2<sup>nd</sup> and 3<sup>rd</sup> grades did not recognize his difficulties in studying. In addition, the online classes were only conducted by WhatsApp group where teachers shared the assignments. The method for evaluation did not improve his academic performance significantly, let alone his reading skills and teachers' understanding on his academic capabilities because of those two years learning based online.

Before MR's preschool age, the interview with his parents provides his slow learning development. When most of his friends at early age enrol at TPA or Taman Pendidikan al-Qur'an (An educational program to encourage children to recite al-Quran) held inside a mosque. He prefers playing to studying there. Parents then conclude that it causes him to not be able to interact and follow rules once he joins preschool. Other than that, he also shows a slower understanding to reading and learning materials compared to his classmates. Additionally, he cannot recognize the alphabet; refuse to learn al-Qur'an, to stay in class, and to perform his tasks for a long time.

Physically, MR does not have any shortcoming in early years, and he grows up normally like others children. He develops good motoric coordination skills which are running, jumping, and athletic skills when involved in playing soccer with his friends. According to his parents' interview, his mother could not breastfeed him due to her sickness from prenatal to MR's first two years and died when he turned to two years old. That condition and disadvantage might hold up his development and growth in later years.

The test result of Stanford-Binet (SB) shows that MR's mental age was 5 year-8-months compared to his 10 years-3-months old chronological age. It informs that he has a mental ability of preschool student while his body is 4<sup>th</sup> grade elementary school's student. This condition correlates with his academic performance which shows his difficulties in doing tasks and being immature for his age. Furthermore, the mental age informs his 56 IQ (Stanford-Binet Scale) which is categorized as mildly impaired intellectual.

His intellectual ability shows a low score related to short-term memory, conceptual thinking, language, and socioemotional, and that is the reason why he cannot understand learning materials because of his sort-term memory shortcoming. Meanwhile, his visual motor skills and numerical logic equal to his 7 years old which is better than the rest of his intellectual abilities. In addition, he can imitate writings with the right shape and fold papers as 1<sup>st</sup> or 2<sup>nd</sup> grade students do. His good performance from imitating learning materials does not show his understanding on what he has been written down.

In terms of socioemotional aspect, MR has difficulties in understanding and distinguishing social cues in different situations like playing, class, or home. Teacher states that he sometimes acts out in class and does not want to tact although the teacher asked him to do it beforehand. While studying in class, he likes roaming around and disturbing his classmates by talking to them. He likely acts the same at home. Even though he can do daily and personal activities by himself, he cannot understand the time limit when playing with his friends. Because of it, his parents often search for him and calls him back home when playing far from home in the late evening.

His inability to behave well according to different situations is due to minimum rules and discipline at home. Based on his family, the way he often gets what he wants causes him to lose temper and throw tantrum to the opposite situation. Because of his responses, his parents make sure to fulfil his wishes. Consequently, that kind of treatment does let him to neither be patient nor persistent, and it also applies in terms of his learning habits.

Even though MR cannot differentiate social cues, he plays well with his friends. He can give opinions on choosing games, making rules, or trying to solve problems related to the game. Because of his games' choice and friendship styles, his playmates are often younger than him. One the other hand, the same-age friendship prevents a continuous conversation for him.

## **Discussion**

MR's problem emerges in his 4<sup>th</sup> year of elementary school when he becomes the one who is dropped behind in the class. According to his classroom teacher's interview, he comes to the latest rank with a low reading ability; and reading text or learning materials understanding. Children with mild intellectual disability often show small delays in development during the preschool years but remain typically unidentified until academic or behaviour problems emerge during early elementary years. This category also has an overrepresentation of minority, most likely due to the social and economic disparities (Mash & Wolfe, 2019).

Based on parent's interview, MR shows some delays since his preschool years and followed by his inability to understand learning materials in his early elementary years. Unfortunately, the teacher at that time speculated his difficulties as a normal and mere inability which commonly emerges at his age. Even though he shows some drawbacks and more delays than his peer, his teacher does not aware of his real conditions. Online classes conducted from 2020 to 2021 worsen his condition even more. Other than that, his 2<sup>nd</sup> and 3<sup>rd</sup> grades' homeroom teachers are unable to identify his academic performance due to online learning methods. The problem emerges and becomes serious in his 4<sup>th</sup> grade when offline classes start effectively again after the decrease in Covid-19 graphic.

Other than belated diagnosis, minimal stimulation on MR's early years of life might be another factor. Based on his early development, his condition in the first two years of life is unrecorded. The reason behind is his frail and sick biological mother who rears him until she dies after he turning 2 years old. Meanwhile his biological father is not there to foster him, and therefore his aunt and her family are the one who raise him until now. There is no record to explain his in early years, but researcher conclude that he does not get a proper stimulation in

terms of cognitive and socioemotional, considering his environment and parents' condition.

Organic intellectual disability describes a genetic disorder or a lower intellectual functioning caused by brain damage, and down syndrome is one of many forms of organic intellectual disability (Santrock, 2018). Meanwhile, in MR's case, organic intellectual disability does not apply to him. Longitudinal study conducted by Werner (1987 in Papalia, Olds, & Feldman, 2009) states that the physical and psychological development of children who suffered birth complications were seriously impaired once children grew up in persistently poor environmental circumstances. The children who have been exposed to both childbirth problems and later stressful experiences have the worst health and the most delayed development which are similarly applied to him.

One other reason to considered is lower socioeconomic status (SES) as the condition where MR grows up. Besides, ID is more prevalent among children of lower socioeconomic status (SES) (Witwer et al., 2014 in Mash & Wolfe, 2019) where the link is found primarily among children in mild intellectual disability range. The environment might also influence his development in terms of lifestyle such as healthy eating, and family cultures cognitive stimulation such as reading, learning, and discussing; and educational aspirations from his closer environment.

His condition is a common case in Indonesia. The data from Elementary School Directorate of the Indonesia Ministry of Education, Culture, Research, and Technology shows that (September, 2021) there are about 3.480 children are diagnosed as mild level intellectual disability, but there are more undiscovered cases outside there. There are 26,16 billion people in low socio-economic status while 11,82 billion of them live in city slum areas (BPS, 2022). The similar data mentioned by King et al (2009 in Mash & Wolfe, 2019) shows that children and adolescents with mild intellectual disability constitute the largest group, estimated as many as 85% of people with ID. Moreover, there are more vulnerable neighbourhoods in remote villages which have difficulties to access proper education and medical services in Indonesia, unfortunately left unidentified.

School is the only place where students with mild level intellectual disability from low socioeconomic statuses (SES) can access education. While they can get benefit from school and intervention program, late diagnosis become another problem to solve. Homeroom teachers can do an early mild level intellectual disability detection by observing students' reading ability in their understanding case of reading abilities' red flag. In MR case, his undiagnosed condition is unable him to access an inclusive school because it can only be afforded once he gets both the assessment and reference from the Education Authority. Beforehand, their teacher has to identify their conditions.

By understanding the drawback in reading ability since kindergarten or 1<sup>st</sup> grade of elementary school, teacher will be able to reach and ask for help from expert in developmental psychologist or special educational teacher to assess and diagnose students. Reading difficulties in early years might be common, but students will be fluent in reading skills as their word and passage processing become more automatic (Stevens, Walker, & Vaughn, 2017 in Santrock, 2018). Those conditions do not apply to mild intellectual disability who finds reading process difficult and shows slower progress. Diagnosis from expert will result in an exact recommendation of the problem and how to give a proper intervention or suitable program for their learning needs.

However, those follow-ups can just be done once the first step is done properly by teachers. As reading and writing abilities become the two main focuses in early years of elementary school, homeroom teachers can give proper attention to every progress of the students, and how they develop their reading abilities overtime. Looking at their reading progress, homeroom teachers can identify which students show irregular curve on their reading abilities. By understanding how reading abilities usually performed, homeroom teachers can mark its red-flag once students show insignificant progress even though the strategy has been changed.

A red flag for reading abilities does not always indicate a signal of mild level intellectual disability, but mild level intellectual disabilities will eventually show a red flags of reading ability. Finding a red flag of abilities will lead to an early identification and diagnosis of student's disabilities because these will help the students to get proper and suitable intervention programs immediately.

## Conclusion

Students with mild level intelligence disabilities need an early identification to get benefit from intervention programs. Meanwhile, most of mild level intelligence disabilities cases come from low socioeconomic statuses (SES) frequently discovered in late elementary years when severe academic and social problems emerge. Nonetheless, those paradoxical problems can be solved when parents and teachers understand that those reading difficulties are a red flag of mild level intelligence disability cases.

By understanding reading difficulties as a red flag of mild level intelligence disabilities, teachers can make students a reference to be diagnosed. By having reading difficulties which become a red flag of mild level intelligence disabilities, students can

get an early diagnosis of their symptoms because the earliest diagnosis will make for them the better impact of intervention programs. Early diagnose of mild level intelligence disabilities become a way to reduce academic and social drawbacks that will emerge in later years. By being identified in kindergarten or early years in elementary school, homeroom teachers and school can give proper and suitable intervention programs in which beneficial for students with mild level intelligence disability.

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## Appendix

### Stanford-Binet Test Result

#### Chronological Age, Mental Age, and IQ Score

| Age                      | Success to Answer | Credit | Credit – Year     | Credit – Month |
|--------------------------|-------------------|--------|-------------------|----------------|
| III-6 ( <i>basal</i> )   | 6                 | 1      | 3                 | 6              |
| IV                       | 5                 | 1      | -                 | 5              |
| IV-6                     | 6                 | 1      | -                 | 6              |
| V                        | 5                 | 1      | -                 | 5              |
| VI                       | 3                 | 1      | -                 | 6              |
| VII                      | 2                 | 1      | -                 | 4              |
| VIII ( <i>ceiling</i> )  | 0                 | -      | -                 | 0              |
| <b>Total</b>             |                   |        | 3 years           | 26 months      |
| <b>Mental Age</b>        |                   |        | 5 years 8 months  |                |
| <b>Chronological Age</b> |                   |        | 10 years 3 months |                |
| <b>IQ</b>                |                   |        | 56                |                |

#### Binetgram

| Test Arrangement                                                                                                                                                                               | III-6 ( <i>basal</i> ) | IV   | IV-6    | V          | VI   | VII  | VIII ( <i>ceiling</i> ) | (%)         |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------|------|---------|------------|------|------|-------------------------|-------------|
| Language                                                                                                                                                                                       |                        | 1, 4 | P       | 3          | 1    |      | 1                       | 3/6<br>50%  |
| Short-term Memory                                                                                                                                                                              |                        | 2, P | 5       |            |      | 6    | 2                       | 1/4<br>25%  |
| Conceptual Thinking                                                                                                                                                                            |                        | 3    | 2       |            | 2, 5 | 2, 5 | 4                       | 3/7<br>43%  |
| Reasoning                                                                                                                                                                                      | 1, 2, 3, 5, P          | 5    | 3       | 5, 6       | 3    |      | 3                       | 9/11<br>82% |
| Numerical Reasoning                                                                                                                                                                            |                        |      |         |            | 4    |      |                         | 1/1<br>100% |
| Visual-Motoric                                                                                                                                                                                 |                        |      |         | 1, 2, 4, P | 6    | 3    |                         | 5/5<br>100% |
| Socioemotional                                                                                                                                                                                 | 4, 6                   | 6    | 1, 4, 6 |            | P    | 1, 4 | 5, 6, P                 | 6/11<br>54% |
| <b>Keterangan:</b> Highlight grey – No item in the test. Highlight red – fail to answer. Highlight yellow – success to answer. Bold – untested. Grey column– <i>basal</i> dan <i>ceiling</i> . |                        |      |         |            |      |      |                         |             |

### Author

Amalia Fauziah is a graduate student of Psychology Professions which concentration is education, the Faculty of Psychology, Universitas Indonesia. This research is one of study cases she took in terms of PKPP to finish her study, and it is supervised by Linda Primana as a lecturer in the Faculty of Psychology of Universitas Indonesia. Her expertise is in educational psychology, student engagement, educational motivation, career adaptability, self-esteem, academic, involvement, creativity, and musical psychology.