



Hidden of Human Potentials of Children with Down Syndrome (DS) Based on Response to Intervention

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ARTICLE INFO

Article history:

Received February 04, 2022

Revised February 05, 2022

Accepted April 28, 2022

Available online May 25, 2022

Kata Kunci :

Potensi Manusia, RTI, Down-Syndrome

Keywords:

Human Potential, RTI, Down-Syndrome



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ABSTRAK

Setiap anak memiliki potensi masing-masing baik anak normal maupun anak berkebutuhan khusus khususnya anak Down Syndrome (DS). Anak dengan DS tergolong memiliki keterbelakangan mental dan ciri yang paling menonjol ditunjukkan dengan tingkat kecerdasan yang rendah. Anak-anak dengan DS memiliki kesempatan untuk tumbuh dan berkembang serta kemungkinan dalam potensi kemanusiaan mereka. Tujuan penelitian ini yaitu mengidentifikasi potensi manusia yang tersembunyi pada anak down syndrome (DS) berdasarkan respon terhadap intervensi. Jenis penelitian ini yaitu studi kasus. Peneliti memilih 3 subjek penelitian sebagai sampel untuk diamati. Pendekatan yang dilakukan dalam penelitian ini adalah studi kasus dengan pendekatan deskriptif kualitatif melalui metode studi eksploratif. Metode pengumpulan data dalam penelitian ini adalah wawancara, observasi dokumentasi dan catatan lapangan. Instrument yang digunakan yaitu lembar observasi dan wawancara. Analisis data yang digunakan dalam penelitian ini adalah data kualitatif dengan model Miles dan Huberman. Hasil penelitian yaitu tiga anak dengan DS telah menunjukkan keunggulan potensi manusia yang tersembunyi seperti menggambar dan menari. Dengan munculnya potensi manusia yang tersembunyi ini ditunjukkan dengan dibuatnya kepercayaan hubungan mereka dengan teman sebaya, orang tua dan guru.

ABSTRACT

Every child has potential, both typical children and children with special needs, especially children with Down Syndrome (DS). Children with DS are classified as having mental retardation; a low level of intelligence indicates the most prominent characteristics. Children with DS have opportunities to grow and develop and possibilities in their human potential. This study aims to identify the hidden human potential in children with Down syndrome (DS) based on the response to the intervention. This type of research is a case study. Researchers chose three research subjects as samples to be observed. The approach used in this research is a case study with a qualitative descriptive approach through an experimental study method. Data collection methods in this study were interviews, observation, documentation, and field notes. The instruments used are observation sheets and interviews. The data used in this study is qualitative data with the Miles and Huberman model. The study results showed that three children with DS had shown the advantages of hidden human potential such as drawing and dancing. The emergence of this hidden human potential is shown by the creation of trust in their relationships with peers, parents, and teachers.

1. INTRODUCTION

Basically, children with Down-Syndrome (DS) have internal problems in terms of learning ability, environmental adaptation, personality and emotions thus impacting their daily life activities (Mayasari, 2019; Simahate & Munip, 2020). Down syndrome children are often referred to as children who have mental retardation. Mental retardation experienced by Down-syndrome children will bring an atmosphere that is less conducive to learning activities at school (Fagan et al., 2020; Griffiths et al., 2022; John et al., 2022). Therefore, in order to be more empowered in life, humanitarian potential needs to be developed like other normal children. Education is a conscious and planned effort to create an atmosphere of learning and learning process so that students actively develop their potential to have a spiritual, religious-controlled power, personality, intelligence, noble character, and the skills needed for himself, society, nation and country (Hartini et al., 2020; Kusdaryani et al., 2016; Maulida, 2017; Wulandari et al., 2020). This means that education is carried out in order to develop self-potential in each individual student (child) (Ayu & Junaidah, 2018; Irsyad, 2019).

To explore the potential of Down syndrome children, it is necessary to conduct in-depth observations first. Parents and educators are expected to be able to see what they like and what they don't

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like (Çelik et al., 2022; Lanfranchi et al., 2021; E. Y. Lee et al., 2021). Parents and educators also need to know the strengths that exist in every child with Down syndrome. Of course, good collaboration between parents and teachers (schools) will greatly help children with Down syndrome so they can learn and develop optimally (Buechele & Ridosh, 2022; N. R. Lee et al., 2020). In principle, children with Down syndrome can develop optimally if supported by a conducive environment, namely the existence of a positive learning support system. A conducive learning environment can be started by providing planned and measured interventions in stages, then responding to children with Down syndrome so that the potential for humanity will develop properly (Ahmed et al., 2022; Brown et al., 2021). However the responsibility for education in Down syndrome children is our shared responsibility.

Children with Down syndrome have the same rights and obligations in getting education and learning so their best potential can be raised (He et al., 2021; Tovar et al., 2018). The emergence of the best potential in every child will only occur if given the opportunity and the right care and needed by the child. Parents and teachers (schools) are responsible for generating leading potential in every child, including children with Down Syndrome (Dimitriou & Halstead, 2021; Meneghetti et al., 2019). Therefore explorative will to identify human potential based on responses to interventions in children with Down syndrome is very important. Human potential is very possible to be developed, especially children with Down syndrome as part of children with special needs. Behind the specificities or deficiencies in children with special needs, there is positive hope to identify the hidden superior potential it has (Koivu et al., 2018; Valencia-Naranjo & Robles-Bello, 2017). Excellence is not always synonymous with intelligence. Excellence is not always academic. Excellence is multiple intelligence, therefore it will always be present in every individual.

The research were showed that down syndrome affects children among one in 700 live births or between 800-1000 births in infants worldwide which is estimated to currently number four million (Masgutova & Sadowska, 2015). Children with (DS) Down categorized as children with special needs. A common characteristic known by ordinary people in children with Down Syndrome is having low intelligence, or known as a children with mental retardation, mild mental retardation with IQ: 50-70, moderate retardation with IQ: 35-49 and severe mental retardation with IQ: 20-34, but rarely found children with severe mental retardation. For mild and moderate mental retardation children are found mostly in elementary level education students (Popescu et al., 2013; Wegier & Shaffer, 2017). Not because they have IQs below the average, then they are judged to not have the potential for humanity that can be developed. This is exactly the opposite when explored by identifying the hidden potential that they have through response to intervention model, it will enable them being empowered and successful live in the future. The level of mental retardation carried by children with Down syndrome produces negative perceptions as individuals who have low learning potential (Mengoni et al., 2014; Rahmah et al., 2016). As parents, of course they want their children to succeed in their learning through developing the potential of the school's teachers by conducting specific strategies or interventions so that human potential can develop optimally. Many children with Down syndrome can grow and develop if they are trained and honed in their learning potential and many of them succeed in becoming musicians and sports athletes.

Identification of human potential based on intervention responses in children with Down syndrome is carried out through explorative-descriptive studies with a qualitative approach at SD Kahuripan East Jakarta in 4th grade elementary school students. The study was conducted with careful observation as a form of identification in several layers of interventions so that a complete picture of the potential of children with Down syndrome can be obtained. The results of this identification are then used as a basis for designing appropriate learning programs according to the needs of children with Down syndrome. In the end, children with Down's Syndrome themselves can know and understand their human potential to be developed and raised to the fullest. Through this research, we change our paradigms and perceptions to be more optimistic and positive that children with Down syndrome have the same opportunity to grow and develop according to their superior potential outside of academia. When we can uncover their human potential precisely. In turn, the results of identifying human potential are used as a reference in designing individual education programs (IEPs) and designing positive learning support systems for children with Down-Syndrome.

The findings of previous studies stated that children with Down syndrome should be considered carefully (Lemons & Fuchs, 2010; Ratz, 2013). Other research also states that Down syndrome needs to get good learning like students in general (Andreou & Katsarou, 2013; Dekker et al., 2014). Through this research is expected to change the negative stigma and false perceptions about children with Down syndrome as children who do not have superior potential. It should be that education in Indonesia follows itself that No Child Left Behind. Human potential exists in every individual as a basic ability that must be identified through education and learning. The intervention response model is one of the effective and systematic models for identifying superior potentials that have not yet been revealed. Excellence is not

always synonymous with intelligence. Excellence is not always academic. Excellence is multiple intelligences, therefore there will always be in every child, including children with Down syndrome. The study aims to identify the hidden human potential in children with Down syndrome (DS) based on the response to the intervention.

2. METHODS

The study was conducted at the Dian Kahuripan Extraordinary School, Pisangan, East Jakarta. Researcher collaborate with class teachers in teaching children with Down syndrome at the school. The researcher chose 3 research subjects as sample to be observed. The three subjects with the initials ZZ (a boy aged 8 years), ZTW (a girl aged 9 years) and THA (a girl aged 8 years) they are a group of grade 2 elementary schools with varying abilities. The approach taken in this research is a case study with a qualitative descriptive approach through explorative study methods. To get accurate data, researchers followed every development in the field with the research subjects for a period of approximately within 1 years. Analysis of the data used in this research is qualitative data with the model of Miles and Huberman. While the data collection techniques in this study were interviews, documentation observation and field notes that consist of first, Researcher conduct interview by doing direct conversations with class teachers, principals and three parents who have children with Down syndrome. Second, observations made by researchers directly in the field by observing the activities of the three down-syndrome children, but not involved in all activities carried out by the research subjects. At the time of the study, the researcher observed the responses raised by the three research subjects to the interventions given by the teacher in the form of art and sports learning interventions. For learning art in the form of painting and dance, while sports is futsal. Third, the researcher uses written documents to collect the required data. Documents can be in the form of notes, journals, portfolios, and others that support.

3. RESULT AND DISCUSSION

Results

Subjects were children with Down syndrome who were in Class 2 of the Extraordinary School of Dian Kahuripan, Pisangan, East Jakarta. The three research subjects are ZZ, ZTW, and THA. The result in terms of the abilities possessed by ZZ based on observations and interviews with education teachers in particular presented in [Table 1](#), [Table 2](#), and [Table 3](#).

Table 1. Observation Results in Terms of the Abilities Possessed by ZZ

Aspect of Observation	Result	Aspect of Observation	Result
Knowledge	Good	Verbal Ability	Enough
Adjustment	Good	Emotion Maturity	Good
Good Social Understanding	Good	Abstraction Ability	Enough
Memory	Enough	Ability to Count	Enough
Non-verbal Ability	Enough	Attention	Good
Concentration	Enough	Accuracy	Enough
Interest to Learn	Enough	Independence	Good

Table 2. Interventions in Tier 1 Subject ZZ

Domain	Objective	W1	W2	W3	W4
Reading	Knowing Alfabet	K	K	K	K
	Simple Reading	K	K	K	K
Writing	Simple Writing	K	K	K	K
	Simple Counting	K	K	K	K
Coloring/Painting	Able to color simple images by understanding the boundaries of images and choosing colors using colored pencils, and able to draw 5 simple images that are meaningful	K	K	C	C
	Able to imitate the patterned movements and be able to dance simply.	K	K	K	K

Domain	Objective	W1	W2	W3	W4
Dance		K	K	C	C
Sport	Capable of moving head, up, down, left, right, rotating, going nowhere, Jump, and Run	K	K	K	K
		K	C	C	C
		C	C	C	C

Table 3. Intervention on Tier 2 Subject ZZ

Domain	Objective	W1	W2	W3	W4
Reading	Knowing Alfabet	K	K	C	C
	Simple Reading	K	K	K	K
Writing	Simple Writing	K	K	K	K
Counting	Simple Counting	K	K	K	K
Coloring/Painting	Able to color simple images by understanding the boundaries of images and choosing colors using colored pencils, and able to draw 5 simple images that are meaningful	K	K	K	K
		K	K	K	K
Dance	Able to simple dance	K	K	K	K
		K	C	C	C
Sports	Capable of moving head, up, down, left, right, rotating, going nowhere, Jump, and Run	K	K	K	K
		C	C	C	C
		C	C	C	C

The abilities possessed by ZTW based on observations and interviews with education teachers in particular are presented in [Table 4](#), [Table 5](#), and [Table 6](#).

Table 4. Observation Results in Terms of the Abilities Possessed by ZTW

Aspect of Observation	Result	Aspect of Observation	Result
Knowledge	Good	Verbal Ability	Enough
Adjustment	Enough	Emotion Maturity	Enough
Good Social Understanding	Enough	Abstraction Ability	Enough
Memory	Enough	Ability to Count	Enough
Non-verbal Ability	Enough	Attention	Good
Concentration	Enough	Accuracy	Enough
Interest to Learn	Enough	Independence	Good

Table 5. Tier 1 Intervention Subject ZTW

Domain	Objective	W1	W2	W3	W4
Reading	Knowing Alfabet	K	K	K	K
	Simple Reading	K	K	K	K
Writing	Simple Writing	K	K	K	C
Counting	Simple Counting	K	K	K	K
Coloring/Painting	Able to color simple images by understanding the boundaries of images and choosing colors using colored pencils, and able to draw 5 simple images that are meaningful	K	K	C	C
		K	K	C	C
Dance	Able to simple dance	K	K	C	K
		C	C	C	C
		K	C	C	C
Sports	Capable of moving head, up, down, left, right, rotating, going nowhere, Jump, and Run	K	C	C	C
		C	C	C	C

Table 6. Tier 2 Intervention Subject ZTW

Domain	Objective	W 1	W 2	W3	W4
Reading	Knowing Alfabet Simple Reading	C	C	C	C
Writing	Simple Writing	K	K	C	C
Counting	Simple Counting	K	K	K	K
Coloring/Painting	Able to color simple images by understanding the boundaries of images and choosing colors using colored pencils, and able to draw 5 simple images that are meaningful	C	C	C	C
Dance	Able to simple dance	C C C	C C C	C C C	C C C
Sports	Capable of moving head, up, down, left, right, rotating, Going nowhere, Jump, and Run	C C	C C	C C	C C

The abilities possessed by the THA based on observations and interviews with education teachers in Table 7, Table 8, and Table 9.

Table 9. Observation Results in terms of the Abilities Possessed by THA

Aspect of Observation	Result	Aspect of Observation	Result
Knowledge	Good	Verbal Ability	Enough
Adjustment	Enough	Emotion Maturity	Enough
Good Social Understanding	Enough	Abstraction Ability	Enough
Memory	Enough	Ability to Count	Enough
Non-verbal Ability	Enough	Attention	Enough
Concentration	Enough	Accuracy	Enough
Interest to Learn	Enough	Independence	Good

Table 6. Tier 1 Intervention Subject THA

Domain	Objective	W1	W 2	W3	W4
Reading	Knowing Alfabet Simple Reading	SK	SK	SK	SK
Writing	Simple Writing	SK	SK	SK	SK
Counting	Simple Counting	SK	SK	SK	SK
Coloring/Painting	Able to color simple images by understanding the boundaries of images and choosing colors using colored pencils, and able to draw 5 simple images that are meaningful	SK	SK	SK	K
Dance	Able to simple dance	SK K	SK K	SK K	SK K
Sports	Capable of moving head, up, down, left, right, rotating, Going nowhere, Jump, and Run	K C	K C	K C	K C

Table 7. Tier 2 Intervention Subject THA

Domain	Objective	W1	W2	W3	W4
Reading	Knowing Alfabet Simple Reading	SK	SK	SK	SK

Domain	Objective	W1	W2	W3	W4
Writing	Simple Writing	SK	SK	SK	SK
Counting	Simple Counting	SK	SK	SK	SK
Coloring/Painting	Able to color simple images by understanding the boundaries of images and choosing colors using colored pencils, and able to draw 5 simple images that are meaningful	K	K	K	C
		K	K	K	K
Dance	Able to simple dance	K	C	C	C
		C	C	C	C
Sports	Capable of moving head, up, down, left, right, rotating, Going nowhere, Jump, and Run	C	C	C	C
		C	C	C	C

Discussions

Learning must continue to run smoothly and be adapted to the characteristics of the child so that children with Down syndrome gain knowledge like ordinary children (Andreou & Katsarou, 2013; Mengoni et al., 2014). Learning is given to subjects ZZ, ZTW, and THA in the classroom is to use a national curriculum that has been modified according to the needs of the subject. Academic learning is focused on the ability to read, write and count simply because the three subjects are people with Down Syndrome who have low IQ scores less than or equal to 67. Even for THA subjects based on psychological test results are in the category of severe mental retardation with IQ = 30 according to the Scale Stanford Binet. This means that the THA ability is below the average age of children. Therefore, if examined on each subject, the ability to respond to THA in each tiers compared to the other two subjects is very lacking. Among the three down syndrome subjects, ZZ subjects included having sufficient self-capacity. Although they do not or do not have a psychological test (according to the teacher), ZZ subjects can be classified as moderate mental retardation. Likewise, with ZTW subjects, although no psychological testing has been done (according to the class teacher), based on the observation that ZTW is down syndrome with a moderate category of mental retardation. Another characteristic of children with Down syndrome in plain sight is that their faces are almost identical to each other, even though they are different, nationally, even nationally, but the faces of children with Down Syndrome have similarities (Lemons & Fuchs, 2010; Popescu et al., 2013; Rahmah et al., 2016).

While non-academic learning includes art and sports provided by the school in the form of art activities that include the art of coloring, painting, and simple dance. While sports is futsal. The activity is actually to support children's readiness for academic learning, because in it there are observations related to motor functions and perceptions that support children's cognitive abilities and behavior (Buechele & Ridosh, 2022; Dimitriou & Halstead, 2021; N. R. Lee et al., 2020). Through arts and sports activities can also be seen the level of self-development ability in each child with Down syndrome. Even the response shown by children with Down syndrome can be used as a step by the teacher to practice the skills of self-development that are still lacking or weak to be improved even better (He et al., 2021; Valencia-Naranjo & Robles-Bello, 2017). This means that the intervention response used in teaching children with Down syndrome is very beneficial for teachers and parents to monitor progress on the potential possessed by children with Down syndrome. Both academic and non-academic learning activities with the intervention response approach in children with Down syndrome are a must to bring up the human potential of these children (Brown et al., 2021; Meneghetti et al., 2019). Academic learning activities are important, but far more important is to include non-academic learning activities for children with Down syndrome so that they can be independent and have good self-confidence.

Intervention response approach is an approach that must be continuously carried out and improved by the system. Because this is very helpful for teachers and parents to identify other potential outside academic possessed by children with Down syndrome. Children with Down syndrome have the same right to develop as normal children in general. An intervention response that will work well if the positive behavioral support system is well built by all of us (parents, teachers, and the community) (Çelik et al., 2022; Lanfranchi et al., 2021). Identification of learning potential through intervention response in children with Down syndrome is an effort to see children with Down syndrome from the other side, namely the diverse and diverse human potential. If cognitive and academic are lacking, at least there are other intelligences outside of academics that can be highlighted and proud of (Griffiths et al., 2022; Koivu et al., 2018). In other words, this research awakens and proves to us all for No Child Left Behind. All of that can only be done through a positive behavior support system by developing a response to intervention approach.

Response to Intervention (RtI) is a model that has been widely developed in several developed countries related to how to identify children with needs systematically and effectively. This is also trying to be implemented by SLB Dian Kahuripan in a way that is still simple. However, it has very good benefits for how we can still monitor the development or progress of children with Down syndrome in particular, and children with special needs in general. SLB Dian Kahuripan facilitates art in the fields of coloring, painting and simple dance. Intervention responses require teachers to be creative in providing learning stimuli that children can respond to. While sports is futsal. It really depends on the ability of schools to facilitate non-academic learning activities.

RtI was carried out in stages to identify the learning potential of children with Down syndrome is very good to continue to be developed through subsequent research. But there are some suggestions that can be continued in the research that will be carried out next. The identification process through RtI has benefit (1). Identification through intervention responses can be done effectively if positive behavior support systems are also carried out simultaneously to support these efforts; 2. Requires the existence of a school team, including parents and teachers, who are solid to work together to match children with Down syndrome in order to identify the potential for learning outside of academic or other human potential; 3. Require dynamic and continuous assessment to be able to find superior potential in children with Down syndrome.

4. CONCLUSION

Intervention responses demand a dynamic assessment process through progress monitoring done in stages (tiers). There are no limits to the phasing of interventions, which means that they continue to be carried out continuously until children with Down syndrome can show their human potential, and may even lead to achievements that can be appreciated by the community. From the results of the children's responses we can find out which ones are still weak, and what have begun to improve. Of course for children with Down syndrome not much is expected from the potential ability of academic learning, but must also look at the potential of non-academic, for example in the arts and sports. The arts and sports are also very many kinds.

5. ACKNOWLEDGEMENT

This study was supported by LP3M with Project Dosen Mengajar in SLB Dian Kahuripan East Jakarta by three teams.

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