

Intervention Method of Beginning Reading Skills in Students with Intellectual Impairment

Bahrudin^{1*}, Endang Rochyadi², Sunardi³, Mohammad Arif Taboer⁴

^{1, 4}Universitas Negeri Jakarta, DKI Jakarta, Indonesia

^{2, 3}Universitas Pendidikan Indonesia, Bandung, Indonesia

Abstract

Intellectual disability has far-reaching social impacts for individuals with the condition. Stigmatization always shackles the minds of the wider community. One stigma that arises is to associate impairment with mastery of early reading skills. This study was developed in describing intervention methods that provide opportunities for students with intellectual disabilities to develop beginning reading skills. The method used in this study is a literature study on research that develops in Indonesia in connection with efforts to develop the initial reading skills of students with intellectual disabilities. The results obtained were found as many as 101 students with mild intellectual impairment were able to develop their initial reading skills. Furthermore, a discussion of the developed reading teaching methods can be studied in this article.

Keywords: Beginning Reading, Intellectual Disability, Intervention Method

Introduction

The phenomenon of early reading difficulties is a phenomenon that is still problematic in the educational implementation setting in Indonesia. Taboer (2019) found as many as 31 elementary school students experienced difficulties in beginning reading ranging from grade III to grade VI. The Batang Regency BPS report found that 6.31% of the Batang Regency population starting from the age of 10 years or more were not literate (BPS Batang Regency, 2020). Until now, early reading difficulties that occur in students are often associated with the condition of a person's IQ. Pramesti (2018), and Soleha, et.al (2022) suggest that one of the causes of students experiencing difficulties in beginning reading is related to IQ. On the other hand, Pratt and Brady (1988), Stanovich (2005), Puolakanho (2007), Lyytien & Erikson (2016) Taboer, et.al (2020) found that predictors of early reading difficulties in students are problems with phonological awareness and visual perception. Kuppen and Huss (2011) found that poor auditory processing is independent of low IQ. Furthermore, Deary, McCrimmon and Bradshaw (1997) found that lack of contrast sensitivity, a difficult discrimination task in which stimuli are not time-limited, had a near-zero correlation with other visual processing tasks and with IQ-type test scores. This explains that visual perception can be

said to be independent of IQ. Thus there is a different understanding of the relationship between reading and IQ.

This study was developed to obtain an answer to whether early reading skills depend on IQ? If it does not depend on IQ, then what kind of intervention methods can provide opportunities for individuals with below-average IQ to develop their early reading skills?

This study is very important to criticize the stigma that students who experience difficulties in beginning reading are stupid students (Lyster S. A., 1999). Stupid people are individuals who have not been able to master abilities or skills like other people their age and these people are often known as individuals with intellectual disabilities (Ditchman, et al., 2013). If this view is not properly critiqued, there will be a misunderstanding of how to view students with reading comprehension difficulties.

The question further developed in this study is whether it is true that students with intellectual disabilities cannot read? If they can indeed be taught to read, what are the methods that can develop beginning reading skills in students with intellectual disabilities?

Method

This study was developed in order to find answers about the ability of students with intellectual disabilities to master beginning reading skills and find methods developed to provide opportunities for students with intellectual disabilities to master beginning reading skills. In order to achieve the objectives of this study, the method used in this research is literature review.

In collecting data, a search was conducted using the Publish or Perish search engine focusing on research developed in Indonesia and published in Google Scholar. The researcher analyzed 994 journals on beginning reading for intellectual disabilities published from 2000 to 2023 in Indonesia. The focus of this study was to find information on the development of beginning reading skills in students with intellectual disabilities. All study results regarding studies on the development of beginning reading skills for students with intellectual disabilities will have the opportunity to be analyzed in more depth.

Based on the results of the analysis, 25 publications in scientific journals published in Indonesia were found. Furthermore, 101 students with intellectual disabilities were found to be the subjects of the study. All of these students fall into the mild category with an IQ range of 70 - 50.

Data analysis was conducted using tabulation of study results. This tabulation contains the journal analyzed, the purpose of the study, the research subject, the research method, and the findings. The results of this tabulation were then synthesized to obtain a formulation of findings from the review of the journals in accordance with the study questions developed.

Results and Discussion

Based on the results of the selection of journals that publish articles with the theme of beginning reading in Mentally disabled the data obtained are as in table 1.

Table 1 Results of Analysis of Relevant Research

No	Types of research	Title	Intellectual Type	Number of research subjects	Data analysis method	Findings
1	Experiment	Effect of visual perception awareness training on early reading ability in children with mild mental retardation at SLB Kasih Ibu and SLB YJS III Bandung Regency	Mild mental retardation	7	One group pre-posttest design	Method Visual perception training had an increasing effect on beginning reading skills
2		The Effect of Linguistic Awareness and Visual Perception Awareness on the Beginning Reading Ability of Mentally Disabled Children	Mentally disabled IQ 50 - 75	32	One group pre-posttest design	Intervention of linguistic awareness and visual perception influences improving early reading skills
3		Synthetic Analytical Structural Method in Improving the Beginning Reading Ability of Mentally Disabled Children	Mild mental retardation	5	One group pre-posttest design	The SAS method can improve beginner reading skills
4		Synthetic Structural Analytical (SAS) Methods in Improving Beginning Reading Ability for Moderately Mentally Disabled Students	Mild mental retardation	5	One group pre-posttest design	SAS can improve beginning reading skills
5		Syllabic Method in Beginning Reading Ability of Mentally Disabled Students	Mild mental retardation	5	One group pre-posttest	Syllabic method can improve beginning reading skills

No	Types of research	Title	Intellectual Type	Number of research subjects	Data analysis method	Findings
6		Implementation of the Somatic, Auditory, Visual, intellectually (SAVI) Approach to the Beginning Reading Ability of Mild Mental retardation	Mild mental retardation	7	design One group pre-posttest design	Somatic, Audio, Visual, Intellectual (SAVI) can improve beginning reading skills
7		Application of the Kinaesthetic Tactile Method in Beginning Reading Learning for Mentally Disabled Children	Mentally disabled	5	One group pre-posttest design	Kinesthetic and tactile methods can improve beginning reading skills
8		The Effectiveness of the Mingle Technique to Improve Beginning Reading Ability for Mild Mentally Disabled Children at SLBN 2 Padang	Mild mental retardation	2	Pre dan posttest design	The mingle method can improve beginning reading skills
9		INCREASING THE READING SKILLS OF STUDENTS OF CLASS 9 SEMESTER I TUNAGRAHITA SMP LB	Mild mental retardation	5	Pre dan Posttest design	The <i>lqro</i> method can improve beginner reading skills
10		IMPROVING WORDS READING ABILITY FOR MIND CLASS D3/C CHILDREN THROUGH THE MEDIA OF SYLLABLE CARDS. (RESEARCH ...	Mild mental retardation	2	SSR	The syllable method can improve beginning reading skills
11		Improving the ability to read words through phonetic methods for children with moderate mental retardation	Mild mental retardation	1	Action research	The Phonetic Method can improve beginning reading skills
12		THE EFFECTIVENESS OF THE CANTOL ROUDHOH METHOD TO IMPROVE BEGINNING READING ABILITY FOR MIDDLE CHEAP CHILDREN	Mild mental retardation	1	SSR	Methods Reading whole words can improve beginning reading skills
13		The VAKT method for learning to read at the beginning of mild mentally retarded children	Mild mental retardation	1	SSR	The VAKT method can improve beginner reading skills
14		IMPROVING BEGINNING READING ABILITY THROUGH THE GLENN DOMAN METHOD FOR MODERATELY INDEPENDENT CHILDREN	Mild mental retardation	1	SSR	The Whole language approach can improve beginning reading skills
15		Improving Beginning Reading Skills through the Method for Slow Learning Children	Slow learner	1	SSR	The Phonemic Approach can improve beginning reading skills
16		IMPROVING BEGINNING READING ABILITY THROUGH THE SOUND METHOD IN MIND CATEGORY STUDENTS	Mild mental retardation	1	Action research	The sound method can improve beginning reading skills

No	Types of research	Title	Intellectual Type	Number of research subjects	Data analysis method	Findings
17		IN ELEMENTARY CLASS II AT ... IMPROVING BEGINNING READING ABILITY THROUGH THE SYNTHETIC ANALYTICAL STRUCTURE METHOD FOR MIDDLE DEAD STUDENTS IN SDIT	Mild mental retardation	1	PTK	The SAS method can improve beginner reading skills
18		Improving Beginning Reading Ability in Mild Mental Mental Disability Children Through the Peel Off Method Using the Sound Repositioning Technique	Mild mental retardation	2	SSR	The peel-off method with sound repositioning can improve beginning reading skills
19		The Effectiveness of the Multisensory Method in Improving the Ability to Begin Reading in Children with Mild Mental Disability	Mild mental retardation	1	SSR	The Multisensory Method can improve beginning reading skills
20		Application of the phonics method in improving early reading skills in mildly mentally retarded children in grade 5 SD at Slb Bc Nike Ardilla	Mild mental retardation	2	SSR	The phonics method can improve beginning reading skills
21		Efforts to Improve Beginning Reading Ability in Indonesian Language Lessons Through the Application of the VAKT Method for Class III Semester II Mentally Disabled Students ...	Mentally disabled	4	PTK	The VAKT method can improve beginner reading skills
22		Improving Beginning Reading Skills through the Syllabic Method for Mild Mentally Disabled Children (Class IV Classroom Action Research at SLBN ...	Mild mental retardation	2	PTK	The syllable method can improve beginning reading skills
23		IMPROVING BEGINNING READING ABILITY THROUGH THE GLOBAL METHOD FOR MIDDLE THINGS CHILDREN	Mild mental retardation	3	PTK	The Global Method can improve beginning reading skills
24		Improving Beginning Reading Ability Through the SAS (Synthetic Structural Analysis) Method for Children with Mild Mental Mental Disability	Mild mental retardation	1	PTK	The SAS method can improve beginner reading skills
25		Application of The Phonic Method to Improve The Early Reading Skills of Mentally Retarded Children	Mild mental retardation	4	SSR	The Phonic method can improve beginner reading skills
101						

Information obtained through table 1 shows that in essence students with intellectual disabilities can develop initial reading skills. the intellectual disability group that has the greatest opportunity to develop early reading skills is the mild group with an IQ range of 70-50. Students with intellectual disabilities in the medium group, based on the two previous studies, can also develop their initial reading skills.

The intervention method that has been developed to provide opportunities for students with intellectual disabilities in the mild group is to use a sound approach. Meanwhile, students with intellectual disabilities in the moderate group can use the whole word approach in giving them the opportunity to develop their initial reading skills.

Discussion

Beginning reading is essentially a process of decoding orthographic codes into language sound symbols (Beck & Juel, 2002; Ehri, 2005; Konza, 2010). This process is closely related to the language used by individuals in everyday life. Thus, in essence, reading the beginning is part of language activity and the development of the language itself. Bunawan and Yuawati (2000) suggest that language development begins with

auditory language and ends with visual language. Auditory language is a language that develops naturally through the process of hearing and speaking. Auditory language develops starting from listening or receptive language, then develops into expressive language or through speaking. Visual language develops after expressive language has fully developed. Visual language develops according to the principles of language development, namely receptive in this case reading and expressive in this case writing.

Reading, as previously explained, develops through a long process. Phonological awareness is the basis of the stages of language development which is the foundation for someone to be able to read beginning (Lyon R. , 1997; Stanovich, 2005; Elsaad, Ali, & El-Hamid, 2015; Paige, David D; Rupley, William H. ; Smith , Grant S; Olinger, Crystal; Leslie, Mary, 2018; Taboer, Rochyadi, Sunardi, & Bahrudin, 2020). This is proven by Lyster (1998) and Ayriza (1997) that when parents are given training on phonological awareness it contributes

positively to their children's reading skills. The phonological awareness component is basically divided into 3 parts, namely phoneme factors, syllable factors and rhyme factors (Høien, Lundberg, Stanovich, & Bjaalid, 1995).

Phonological awareness is a prerequisite for individuals to be able to read. Through phonological awareness, individuals will try to connect the sounds that make up words in a language into writing codes. This law appears as stated by Wolf, et.al (1998) stating that ideally the relationship between graphemes and phonemes is clear. The one-to-one correspondence relationship between the word-forming sounds and the script code is the foundation for an individual's ability to read. In Indonesian, the word-forming elements are syllables (Soewargana, 1971; Laubach, 2013). Thus the main foundation of someone who speaks Indonesian which is a family of Malay languages will use the approach of connecting the syllables with the written script. That is why Lee and Whedall (2010) found that students in Malaysia prefer learning to read using the syllable method. This entire explanation is part of the phonic approach as one of the approaches used in teaching beginning reading (Lyster S. A., 1999).

Kuppen and Huss (2011) found that auditory processing is independent of low IQ. Furthermore, Deary, McCrimmon and Bradshaw (1997) found that visual perception has a near-zero correlation with other visual processing tasks and with IQ-type test scores. These findings provide an understanding that the activities that develop in the phonic approach used in teaching reading to be beginning readers are very independent of the problem of IQ scores. This answers why the developed teaching has a positive impact on the development of early reading skills of students with intellectual disabilities in the mild group in the IQ range of 70 – 50.

The goal of the educational process, especially education for moderate intellectual disabilities, is independence. Independence is defined as an effort to complete the tasks of daily life without the help of others. Based on this thought, the orientation of education for intellectual disabilities is forming independence and oriented towards functioning. The contextual approach is an

approach that is often used in learning for intellectual disabilities.

Shree & Shukla (2016) found that individuals with intellectual disabilities have the characteristic of thinking that requires a longer time than most and makes it easier to think concretely than abstractly. This finding suggests that education for intellectual disabilities is more about something concrete, including learning to read. Johnson (2002) further explained that the educational process is essentially aimed at providing opportunities for students to connect academic lessons with the context of everyday life. Thus it can be said that context is reality (Illes, 2001). This whole explanation then provides an opportunity for students with moderate intellectual disabilities to develop reading skills through a whole language approach.

Conclusions

Overall, we can conclude that in essence students with intellectual disabilities can be given the opportunity to be able to learn to read in the beginning. the methods developed to provide opportunities for students with intellectual disabilities depend on the tendency of the degree of disability itself. Mild intellectual disabilities will have an evolving method tendency within the scope of the phonic approach. Students with moderate intellectual disabilities are more likely to develop within the scope of the whole language approach. Thus, the stigma that intellectual disabilities cannot develop initial reading skills based on intellectual conditions that are below average has begun to be refuted.

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References

[1] Ayriza, Y. (1997, Februari). Pelatihan Kesadaran Fonologis pada Anak-Anak Pra Sekolah untuk Menyambut Tugas Belajar Membaca Pada Masa Sekolah. *Cakrawala Pendidikan*.

[2] Beck, I. L., & Juel, C. (2002). <http://citeseerx.ist.psu.edu>. Retrieved

September 18, 2017, from <http://citeseerx.ist.psu.edu/viewdoc/http://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.463.6197&rep=rep1&type=pdf>

[3] BPS Kabupaten Batang. (2020). *KEMAMPUAN BACA TULIS 2020*. Retrieved from <https://batangkab.bps.go.id/>: <https://batangkab.bps.go.id/backend/images/Kemampuan-Baca-Tulis-2020-ind.JPG>

[4] Bunawan, L., & Yuwati, C. S. (2000). *Penguasaan Bahasa Anak Tunarungu*. Jakarta: Yayasan Santi Rama.

[5] Deary, I. J., McCrimmon, R. J., & Bradshaw, J. (1997). Visual information processing and intelligence. *Intelligence*.

[6] Ditchman, N., Werner, S., Kosyluk, K., Jones, N., Elg, B., & Corrigan, P. (2013). Stigma and Intellectual Disability: Potential Application of Mental Illness Research. *Rehabilitation Psychology*.

[7] Ehri, L. C. (2005). Learning to Read Word : Theory, Findings and Issue. *Scientific Studies of Reading*, 167-188.

[8] Elsaad, T. A., Ali, R., & El-Hamid, H. A. (2015). Assessment of Arabic phonological awareness and its relation to word reading ability. *Logopedics Phoniatrics Vocology*.

[9] Høien, T., Lundberg, I., Stanovich, K. E., & Bjaalid, I. K. (1995). Components of phonological awareness. *Reading and Writing*, 171-188.

[10] Illes, E. (2001). *The Definition of Context and its Implications for Language Teaching*. London.

[11] Johnson, E. B. (2002). *Contextual teaching and learning: What it is and why it's here to stay*. California: Sage Publication.

[12] Konza, D. (2010, August). https://www.ecu.edu.au/__data/assets/pdf_file/0009/663696/SA-DECS_-Understanding-the-Reading-Process.pdf. Retrieved from <https://www.ecu.edu.au/>: https://www.ecu.edu.au/__data/assets/pdf_file/0009/663696/SA-DECS_-Understanding-the-Reading-Process.pdf

[13] Kuppen, S., & Huss, M. (2011). Basic Auditory Processing Skills and Phonological Awareness

- in Low-IQ Readers and Typically Developing Controls. *Scientific Studies of Reading*.
- [14] Laubach, F. C. (2013). *Teaching the World to Read*. New York: Martino Publishing.
- [15] Lee, L. W., & Wheldall, K. (2010). Acquisition of Malay Word Recognition Skills: Lessons From Low-progress Early Readers. *DYSLEXIA*, 19-37.
- [16] Lyon, R. (1997 йил 10-July). Why Reading Is Not Natural Process.
- [17] Lyster, S. A. (1998). Preventing Reading Failure : A Follow Up Study. *Dyslexia*, 4, 132 - 144.
- [18] Lyster, S. A. (1999). *Learning to Read and Write the individual child and contextual interaction*. Oslo: University of Oslo rch Ltd.
- [19] Lyytinen, H., & Erskine, J. (2016). *Early Identification and Prevention of Reading Problems*. University of Jyväskylä, Child Research Centre & Department of Psychology. Quebec: Encyclopedia on Early Childhood Development.
- [20] Paige, David D; Rupley, William H. ; Smith, Grant S; Olinger, Crystal; Leslie, Mary. (2018). Acquisition of Letter Naming Knowledge, Phonological Awareness, and Spelling Knowledge of Kindergarten Children at Risk for Learning to Read. *Hindawi*.
- [21] Pramesti, F. (2018). Analisis Faktor-Faktor Penghambat Membaca Permulaan pada Siswa Kelas 1 SD . *Jurnal Ilmiah Sekolah Dasar*.
- [22] Pratt, A. C., & Brady, S. (1988). Relation of Phonological Awareness to Reading Disability in Children and Adult. *Journal of Education Psychology*, 80(3), 319-323.
- [23] Puolakanaho, A. (2007). *Early Prediction of Reading Phonological Awareness and Related Language and Cognitive Skills in Children with a Familial Risk for Dyslexia*. University of Jyväskylä,, Departement of Psychology. University Library of Jyväskylä.
- [24] shree, A., & Shukla, P. C. (2016). Intellectual Disability: Definition, classification, causes and characteristics. *Learning Community-An International Journal of Educational and Social Development*.
- [25] Soewargana, O. (1971). *Pendidikan prasarana dari semua prasarana pembangunan*. Bandung: GANACO N.V.
- [26] Soleha, R. S., Enawar, Fadhilah, D., & Sumiyani. (2022). ANALISIS KESULITAN MEMBACA PERMULAAN PADA SISWA KELAS II SEKOLAH DASAR. *Berajah Journal*.
- [27] Stanovich, K. E. (2005, May 1). The Future Mistake : Will Discrepancy Measurement Continue to Make The Learning Disabilities Field A Pseudoscience ? *Journal of Learning Disabilities*, 28(2), 103 - 106.
- [28] Taboer, M. A., Kartadinata, S., & Rochyadi, E. (2019). Assessing Students with Reading Problem in Elementary School: A Case Study in 7 Elementary Schools. *1st International Conference on Education Social Sciences and Humanities (ICESSSHum 2019)*. Padang: Atlantis Press.
- [29] Taboer, M. A., Rochyadi, E., Sunardi, & Bahrudin. (2020). Prediktor Kesulitan Membaca Permulaan di Sekolah Dasar. *Sekolah Dasar: Kajian Teori dan Praktik Pendidikan*.
- [30] Taboer, M. A., Rochyadi, E., Sunardi, & Bahrudin. (2020). Prediktor Kesulitan Membaca di Sekolah Dasar. *Sekolah Dasar: Kajian Teori dan Praktik Pendidikan*, 182-190.
- [31] Wolf, M., Vellutino, F., & Gleason, J. B. (1998). A Psycholinguistic Account of Reading. In J. B. Gleason, & N. B. Ratner, *Psycholinguistics* (p. 412). Texas: Harcourt Brace College Publisher.