

# Implementation of Technology Towards the Merdeka Curriculum Doing Diagnostic Assessment for Students with Autism Spectrum Disorder in Preschool Level

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**Abstract:** This research aims to develop an effective and applicable diagnostic assessment instrument that has been prepared based on the requirements of competency standards for graduates at the preschool institute. The instrument functions is to separate mild and moderate levels of the autism spectrum, for students with learning disabilities resembling autism spectrum symptoms in early childhood. This research used R and D method from Borg and Gall with the result is this application product containing 23-item questionnaires that have been validated by material, language, and media experts. The subject of this research is teachers of preschool institutions, and the objective is the instrument of diagnostic assessment that the researcher builds. The practicality test results of this instrument have a percentage level of 92.52% in the 'very practical' category, with a validity test level of 84%, on the Likert scale showing the instrument is 'very feasible'.

**Keywords:** diagnostic assessment instrument; children with autism spectrum disorder; Merdeka curriculum

## INTRODUCTION

In maintaining the quality of education for all (Latifah, 2020), the government continues to develop the best curriculum according to current needs, namely the Merdeka Curriculum. In order to achieve educational goals, in accordance with the essence of the Merdeka Curriculum, the government through the Ministry of Education and Culture has established National Education Standards with 3 important stages, there are (1) Competitions of Standard Education Graduate (SKL) (2) Standard of content (3) Standard of Processing (Fadhilah & Yusuf, 2022). The standard of processing in the Merdeka Curriculum contains about important steps called: planning; implementing; and evaluating. Planning called 'assessment' is an important step for measuring the student's condition and potential, in order -learning can be effective and appropriate according to needs. With a good assessment, teachers can choose the correct model in teaching and -teaching tools in the classes (Zahri, Fuad, & Subakir, 2023). In inclusive schools, assessment is a crucial point as a first step to result about how 'this' student will be taught in the class so education can be educated to them with correct needs no matter the student even the school and last educational goals can be fully achieved (Sholihah, 2021) .

Not only at the elementary school level, the implementation of national education standards also applies at the preschool level, especially to inclusive preschools (PAUD, 2018) . Teachers must do the assessment in the right way, starting with diagnostic assessment, formative assessment and last is summative assessment.

The procedural assessment at the preschool level is to accept new students, and parents must fill out the form correctly truth. The school collaborates with the nearest health authorities (Puskesmas), especially the health center or child development clinic, regarding the child's condition. After that, the teacher here as a school consultant talks to the parents with brings the report from authorities about their children's condition (Dini, 2021).

## LITERATURE REVIEW

### Students with learning disabilities

There are so many obstacles to learning from the students, so appropriate measurements are needed to map students based on their conditions, so learning can be achieved optimally, especially for students with spectrum autism (Sari, Novitrie, & Latifah, 2021). From the observation, especially in Deli Serdang, many parents result that simple symptoms that appear, such as lateness in speaking (speech delay), echolalia, and walking on tiptoes

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in the first five years, are common things that are thought to disappear by themselves, especially since visualization does not show any abnormalities on the child's face and physical appearance, especially children with autism spectrum disorders. Parents always think as if the symptoms are a normal condition that will go away by itself, so the intervention starts too late.

### Previous Research

For detecting symptoms of autism spectrum disorder, many researchers develop instruments, such as international researchers or national researchers. Yuniarni and Amalia (2022) developed a pocketbook as an assessment instrument for the preschool level, which symptoms of child psychological disorders and the direction of therapy place (Yuniarni & Amalia, 2022). In difference with research by Lilis and Hamron (2020), is known that there are no special instruments used by preschool schools there to assess students, notes are taken authentically, and learning is carried out the same on a regular basis, but teachers will provide more in-depth assistance to the children. children who have obstacles (Madyawati & Zubadi, 2020). Other instrument that can used for detecting specially in autism spectrum disorders is MCHAT (Modified Checklist for Autism in Toddlers) first developed by Joaquin Fuentes, M.D, then in 2009 further research was carried out by Diana Robins, Deborah Fein, and Marianne Barton and CARS (Childhood Autism Rating Scale), was first developed by American-born German psychologist Eric Schopler, along with two other colleagues, Dr. Robert J. Reichler, and Barbara Roehen Renner in the 1980s (Utami, 2019). Previous research as presented has not been adapted to the implementation needs of the curriculum that has been determined by the Ministry of Education and Culture, Merdeka Curriculum.

Based on the above needs, the researcher developed a diagnostic assessment instrument name is 'autiso.id' that is applicable and effective, where this instrument contains symptoms of autism spectrum disorders in early childhood which have been adapted to the requirements of competency standards for graduating from the Merdeka Curriculum.

### LITERATURE REVIEW

The subject of this research are teachers of preschool institutions at Deli Serdang, and the object of this research is the instrument of assessment diagnostic, autiso.id. As needs to develop a product of assessment instrument, this research is development research, using the R and D development method from Borg and Gall, which has 8 steps from 10 steps (Abdillah, 2021).

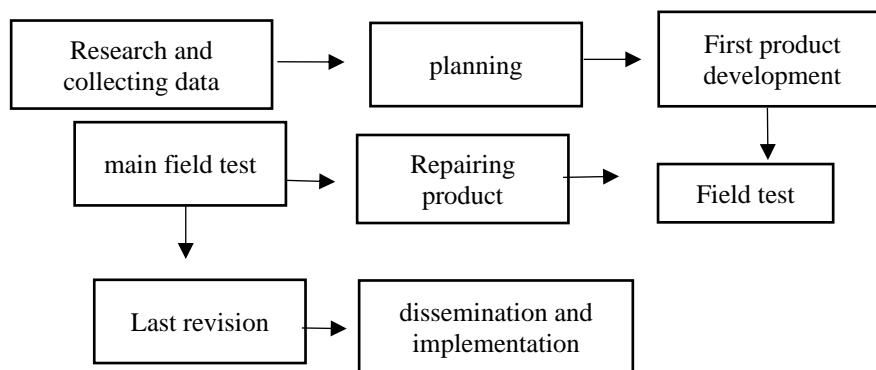


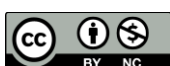
Figure 1. Research Flow of Borg and Gall

Research and collecting data. From the results of literature studies and field observations, it was found that there is no special instrument to measure learning barriers that lead to autism spectrum disorders as a fulfillment of the National Standard of Education stages in the process standards at the PAUD level, especially inclusive PAUD.

Planning. Develop a diagnostic assessment instrument which applicatively and effective, namely 'autiso.id';. autiso.id will be validated by material experts (Dra. Dini E Oktaufik as PM Intervention of children with Autism Spectrum Disorder), language experts, and media experts (lecturer from Medan State University).

First Product Development. The first product name is autiso.id, which has 23 questionnaire items. The 23 questions include symptoms of obstacles in language variables, motor variables, and social-emotional variables (Ismet, 2019) (Vogindroukas, Stankova, Chelas, & Proedrou, 2022) (Kotroni, Bonoti, & Mavropoulou, 2019) (Ramadhani & Supena, 2021). The answer to these questions is 'never' (has 1 point), 'occasionally' (has '2' point), and 'always' (has '3' poin), with result 23 as normal or not on the autism spectrum, result between 23-46 as with mild autism need consulting with a psychologist, and 47-69 as moderate autism need fast to bring the child to the child clinical.

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Field Test. The first test product is at Special Needs School, SLB. Mutiara Hati Deli Serdang, and the main field test are at Lia Namira Preschool, Pelangi Preschool, and RA. Nurul Iman.

## RESULT

Using the R & D method from Borg and Gall, the researcher conducted two field tests. The first field test was conducted at the SLB unit where the researcher taught, then to several PAUD units as explained. Where the results of the correction at the SLB were then improved, and questionnaires were distributed which were filled out by teachers using the autiso.id application. Based on the feasibility test carried out by material experts, linguists, and media experts, concluded that the assessment instrument developed by researchers in the form of an application is 'very feasible', with a material expert score of 75.5%, expert media by 85%, and media experts by 91.6%.

Table 1. Teacher's Kindergarten Practicality Test Results

Number	Name	Score	Score in Percent
1	Fauziah Ali, S. Pd	12	96%
2	Hardiatunyah, S. Pd	11 1	94,4%
3	Sunarty, S. Pd	7 5	91,6%

The score results from the three validators were then processed using the UAT User Acceptance Test analysis with a result of 84.0%. This score was declared 'very decent'. Based on the practicality test carried out by the teacher, regarding the diagnostic assessment instrument for diagnostic assessment for spectrum autism in the form of an application result of 92.52% was obtained, which means the instrument is in the 'very feasible' category

## DISCUSSIONS

Unlike previous research written by Gusti Ayu Kadek Tutik A and colleagues in their journal titled Penerapan Forward Chaining Pada Program Diagnosa Anak Penderita Autisme', the autiso.id application includes the need for the development of three key elements: cognitive, affective, and psychomotor development, which serve as evaluation criteria in early childhood education. When research was going, there are other cases were found, there are a few children using autiso.id found as a stunting and intellectual disability. Of course, in the future, instruments will also be needed to support other disabilities like autiso.id.

## CONCLUSION

With this research we can take a conclusion, that's with autiso.id we can doing standard process in Merdeka Curriculum in the right step especially for student in preschool level. Teachers and school can make a decision for accepted or reject the children with their spectrum autism condition, also they can prepared to choose an appropriate learning model and tools for their student. My recommendation for other researcher in their next research is in further expands the types of impairment that lead to early symptoms in other cases.

## REFERENCES

- Ramadhani, S. P., & Supena, A. (2021). Persepsi Guru dan Orangtua Strategi Mengajar Anak Autism Saat Covid-19 di Sekolah Dasar. *Jurnal Basic Edu*, 2461-2471. doi:<https://doi.org/10.31004/basicedu.v5i4.990>
- Dini, D. P. (2021). *Pedoman Identifikasi Hambatan Tumbuh Kembang Anak dan Penanganan di Satuan PAUD*. Jakarta: Direktorat Jenderal Pendidikan Anak Usia Dini, Pendidikan Dasar, dan Pendidikan Menengah.
- Ismet, I. (2019). Intervensi Anak Usia Dini Penyandang Autis. *Journal of Early Childhood Care & Education*, 2(1), 30-37. doi:10.26555/jecce.v2i1.176
- Kotroni, P., Bonoti, F., & Mavropoulou, S. (2019). Children with autism can express social emotions in their drawings. *International Journal of Developmental Disabilities*, 65(5), 1-10. doi:<https://doi.org/10.1080/2F20473869.2018.1434855>
- Madyawati, L., & Zubadi, H. (2020). Pelayanan Anak Berkebutuhan Khusus di PAUD Inklusi. *Insania: Jurnal Pemikiran Alternatif Kependidikan*, 25(1), 1-13.
- PAUD, D. P. (2018). *Prosedur Operasi Standar Pendidikan Anak Usia Dini Inklusif*. Jakarta: Kementerian Pendidikan dan Kebudayaan Direktorat Jenderal Pendidikan Anak Usia Dini dan Pendidikan Masyarakat Direktorat Pembinaan Pendidikan Anak Usia Dini.
- Sari, D. P., Novitrie, A., & Latifah. (2021). Analisis Penatalaksanaan Interaksi Sosial pada Anak Autis dengan Menggunakan Metode Social Story di Klinik Shally Autis Center Palembang Tahun 2020. *Jurnal Ilmiah Universitas Batanghari Jambi*, 505-510. doi:<http://dx.doi.org/10.33087/jiubj.v21i2.1400>
- Sholihah, D. A. (2021). Pendidikan Merdeka dalam Perspektif Ki Hadjar Dewantara dan Relevansinya Terhadap Merdeka Belajar di Indonesia. *Literasi: Jurnal Ilmu Pendidikan*, 12(2), 115-122. doi:[http://dx.doi.org/10.21927/literasi.2021.12\(2\).115-122](http://dx.doi.org/10.21927/literasi.2021.12(2).115-122)

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- Utami, P. E. (2019, Juni 23). *Childhood Autism Rating Scale (CARS)*. Retrieved from <https://www.slideshare.net/primaelmira/childhood-autism-rating-scale-cars>
- Vogindroukas, I., Stankova, M., Chelas, E. -N., & Proedrou, A. (2022). Language and Speech Characteristics in Autism. *PubMed Central*, 18(1), 1-10. doi:10.2147/NDT.S331987
- Yuniarni, D., & Amalia, A. (2022). Pengembangan Buku Saku Panduan Layanan Inklusi untuk Anak Usia Dini. *Jurnal Obsesi : Jurnal Pendidikan Anak Usia Dini*, 6(6), 6710-6722. doi:<https://doi.org/10.31004/obsesi.v6i6.3473>
- Zahri, M., Fuad, H., & Subakir, S. (2023). Kemampuan Guru SD dalam Menyusun Modul Ajar Guru SD pada Sekolah Penggerak di Kabupaten Bangkalan. *Transformasi : Jurnal Pendidikan Matematika dan Matematika*, 7(1), 93-106. doi:10.36526/tr.v7i1.2848

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