Development of Identification Instruments for Children with Specific Learning Disability in Elementary School

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Abstract: This study aims to facilitate the identification of students in elementary school who have specific learning disability. This study employs a qualitative approach to the literature review process. The study collected data from books and articles that discuss identifying specific learning disability. The data collection technique is based on a literature review of scientific books and journals and interviews with professional practitioners and academics, subsequently validated. The findings of this study are presented in the form of a draft identification guide for elementary school-aged children with specific learning disability. Teachers and parents can easily use the draft guidelines for identifying children with specific learning disability because they are presented concisely and clearly that refers to the theory and validated by four validators, including psychologists, special education lecturers, and inclusive school and special education teachers. The identification guideline draft for children with specific learning disability in elementary school-age includes procedures for identifying children with specific learning disability in general and instruments for identifying children with dyslexia, dyscalculia, and dysgraphia. This procedure was proposed to assist teachers and parents in identifying children with specific learning disability in elementary school.

Keywords: Children with Specific Learning Disability, Identifying Children with Specific Learning Disability

INTRODUCTION

In the meantime, many parents have intellectually average or even above-average children but suffer learning disability (Baum, 2004). According to Samuel Torrey Orton's research, most students who struggle academically actually have an average or even above-average IQ. This led Orton to assert that intelligence does not necessarily correspond to actual intellectual capacity (Swanson et al., 2013). Children with average or even above-average intelligence have learning disability in specific fields and low academic achievement. However, exceptional performance in one field might have learning disability.

Additionally, children with learning disability in one particular field are referred to as children with specific learning disability (Marlina, 2019). There is a considerable misunderstanding in the profession about identifying children with learning disability, owing to the numerous mistakes in identifying children with learning disabilities (Stanovich, 2005; Taylor, 2014). According to current data, 2.6 million school-aged children have specific learning disabilities. This statistic equals approximately 4% of the estimated 66 million children enrolled in schools. Of all children labeled as having special needs, 43% are classed as having specific learning disabilities (Flanagan and Alfonso, 2010).

Specific learning disability are described as a disorder in one or more of the fundamental psychological processes underlying spoken and written language comprehension and use. Children with specific learning disability experience difficulties in one or more of the following areas: listening, thinking, speaking, writing, spelling, and counting (Mallet, 2013). Kirk (1962) defines specific learning disabilities as developmental obstacles in one or more of the following processes: speech, language, reading, writing, and arithmetic, which are
included in psychological obstacles and may be caused by possible brain dysfunction or emotional and behavioral disorders. Additionally, learning disabilities are not a sign of mental retardation, nor are they the result of teaching factors. Most people identify a specific learning disability as a neurological condition or a disorder in psychological processing that results in learning difficulties and a lack of academic skills. Furthermore, most classifications state that specific learning disability may coexist with other disabilities (Flanagan and Alfonso, 2010).

Identification is a very early step that is still quite simple. Identification is necessary in order to ascertain a person's challenges and needs, as well as those of children. Children must be identified in order to ascertain their challenges and hurdles in order to obtain appropriate special education services (Obiakor, et al., 2010). On the basis of this definition, identification is the process of determining a person's or object's identification in order to ascertain whether the person faces obstacles or not. Meanwhile, identification in this study refers to the process of defining the identity of children in elementary school, regardless of whether they have specific learning disability.

At the moment, it is critical to identify children with specific learning disability in elementary school, as the results of a recent national study on the use of tests and assessment procedures in schools indicate that schools are now identifying children with learning disability. Around 95% of practitioners reported administering intelligence tests in the previous year, with 8.7 tests per month (Benson et al. 2019; Kranzler et al., 2020). However, today's issue is that many of the tests used to identify specific learning disability do not refer to theory, as indicated in a study that one of the primary limitations of present identification is a lack of theory. Around two decades ago, standardized assessments were criticized for not being derived from theory (Brody, 1994; Kranzler et al., 2020).

At the elementary school level, the teacher should be able to identify children with specific learning disability. This is consistent with the idea that if a student does not achieve age or grade level criteria in reading, writing, or mathematics, the student can be classified as having specific learning disabilities (Bouck, 2020). However, according to this study, student attendance is a significant determinant in identifying learning disabilities. According to Clements (1966), the specific causes of learning disabilities may be genetic variations, biochemical aberrations, insults, perinatal brain or disease, or other injuries sustained over a long period that adversely affect the nervous system's development and maturation of the central nervous, or from unknown causes. Meanwhile, according to another opinion, reading difficulties might be produced by postmortem, topological selection, family, genetic, and neurological variables (Galaburda, 1993; Hynd et al., 1995; Hynd & Semrud-Clikeman, 1989; Lyon),. 1996; Swanson et al., 2006; Zeffiro & Eden, 2001). Meanwhile, according to Zumeta et al. (2014), specific learning disabilities can result from neurobiological variables rather than environmental circumstances (Zumeta et al., 2014). Around 6% of children in public schools have learning disability, though the identification varies across countries (Taylor, 2014). The percentage of students experiencing learning disability in school increases by 28.5%, specifically between 1991-1992 and 2000-2001 (Taylor, 2014). According to estimates, 32% of children have specific learning disability, of which 16%–20% are dyslexia, 8%–15% are dysgraphia, and 6% are dyscalculia (Marlina 2019). Children with specific learning disability comprise between 1% and 30% of the population in Indonesia's public schools (Abdurrahman, 2012; Lerner, 2002; Hallahan & Kauffman, 7; Lloyd, 1985). Each year, the prevalence of children with specific learning disability increases dramatically (Abdurrahman, 2012:5; Hallahan; 1985). For example, 16.52% of children in DKI Jakarta's 3,215 elementary schools in grades I through VI had specific learning disabilities (Abdurrahman, 2012). Meanwhile, 19.8% of 510 students in Surabaya from grade IV to grade VI were classified as having specific learning disability (Abdurrahman, 2012). Another study discovered that 11.28% of 411 children in an elementary school in the Pauh Padang sub-district faced various specific
difficulties. According to these findings, up to 76.6% of children have difficulties in reading, 61.3% have difficulty writing, and 48.6% have difficulty in calculating (Masroza, 2013; Tamansyah, 2003). Children with specific learning disability are a concern in Indonesia and in other countries, including the United States. According to the National Center for Education Statistics of the United States Department of Education, the most frequent difficulty among students is a specific learning disability, with about half of the population experiencing learning disabilities since 1975. This has resulted in much debate and controversy about identifying students with specific learning difficulties because there are numerous distinct identification models for detecting students with specific learning disabilities (Flanagan and Alfonso, 2010).

The debates and problems surrounding the identification of children with learning disabilities have sparked controversy in the field and sparked extensive polemic debate over the appropriate way to describe specific learning disabilities. Numerous schools are under pressure to complete appropriate identification quickly because colleges and universities, the Social Security Administration, the State Department of Rehabilitation, medical communities, and courts, as well as other agencies involved in SLD (Specific learning disability) identification and service provision, use a variety of methods to detect specific learning disabilities (Flanagan and Alfonso, 2010).

Given its prevalence and negative effect on academic progress and life, a mutually agreed upon identification should be made (Youman and Mather 2013, 2015; Barber & Odegard, 2017). According to a 2017 article by Barber and Odegard, research on regulation for identifying learning challenges should have been conducted since such a study would have provided critical information for enacting legislation to support the identification of individuals with dyslexia. However, the authors urge that not only dyslexia but also other types of learning disabilities be detected. There should be a draft identification guide to assist teachers and parents in identifying and classifying learning disabilities, regardless of whether the child is dyslexia, dysgraphia, or dyscalculia.

Children should be identified at primary school age to avoid being late, as research indicates that many adults lack basic abilities. Around 20% to 30% of adults in the United States lack the literacy abilities required to enable daily life and work's reading and numeracy demands (Lasater & Elliott, 2005; Taymans, 2012). According to census data, more than 40 million American adults lack a high school degree (Lasater & Elliott, 2005; Taymans, 2012). According to the National Assessment of Adult Literacy (NAAL), 11 million Americans are unable to read, 30 million have below-basic skills, xx million face reading challenges beyond the simplest and most concrete tasks, and 63 million can perform basic daily literacy activities but struggle with technical information or extended prose (Kutner et al., 2007; Taymans, 2012). Additionally, 46 million performed below the baseline on numeric literacy tasks (Kutner et al., 2007; Taymans, 2012). Thus, to avoid being late in addressing learning disabilities, teachers must be trained to identify learning disabilities in begins as early as elementary school age.

Teachers are supposed to be able to identify students in their classrooms. This is critical so that teachers can give learning services for children with specific learning disabilities that are accurate and tailored to the child's requirements, rather than only to the teacher's desires. Additionally, learning will no longer be linked with children in general, allowing children's potential and advantages to grow optimally (Marlina, 2019). The number of students in Indonesia with specific learning disabilities cannot be determined with certainty in each school. This is due to the government and the local education office paying insufficient attention. The local education office could not identify the number of children with specific learning disabilities because no reports on the number of children with specific learning difficulties from each school were provided. This is because school personnel, such as
principals and teachers, rarely identify children with specific learning disabilities due to a lack of understanding, leading to an inability to determine the actual number of children with specific learning disabilities (Masroza, 2013).

According to the preliminary study conducted in several elementary schools in Bandung, it was discovered that there were a significant number of children who struggled with learning difficulties such as reading, writing, and arithmetic, particularly in the lower grades 1, 2, and 3 and even in the upper grades, specifically in grades 4, 5, and 6 of elementary school. Teachers have been providing less effective methods of instruction to children who have learning difficulties and have been generalizing the delivery of learning materials to children in general. This is natural, given how rarely teachers recognize children with learning disabilities. Teachers have utilized general identification instruments or identification instruments for children with special needs, not tools for identifying specific learning disabilities.

Many teachers have been unable to identify children in their classrooms who have specific learning disabilities due to a lack of references to utilize as guidelines. This undoubtedly harms children who experience specific learning disabilities. Children who are not well served and do not receive the appropriate assistance and supervision will suffer negative consequences in the future just because their teacher does not identify them correctly. Teachers provide learning services to children that are not based on accurate identification, resulting in inefficient learning and the continuation of learning disabilities for children who do not receive timely assistance and suitable treatments. Indeed, children may overcome these learning disabilities (Masroza, 2013). As a result, it is essential to develop an identification instrument for children with specific learning disabilities. There is currently no validated identification that can be utilized and clear scoring instructions.

**METHOD**

This study utilized qualitative research methods (qualitative research). This research aims to elicit a description of how teachers have identified children with specific learning disabilities for elementary school age, which will serve as the foundation for the development of a validated identification guide draft for children with specific learning disabilities for elementary school age.

This research provided the use of the literature as a source of information. The author does not collect data directly from the field or other sources but rather from data collected in written records and is ready to use. The author can use this approach to identify theories, develop theories, and demonstrate the validity via a draft that the author will write, namely a draft identification guide for elementary school-aged children with specific learning disabilities.

The literature review and expert judgment were employed to obtain data in this study. Literature reviews are conducted by compiling data or sources on specific learning disabilities, such as scientific publications, journals, encyclopedias, and other textual and electronic sources. The author's primary sources include the following: Diagnostic assessment (2014); Learning About Learning Disability (2004); Handbook of Learning Disabilities (2006); Learning Disability From Identification to Intervention (2007); Essentials of Specific Learning Disability Identification (2011); Hand Book of Learning Disabilities (second edition) (2013); Identification of Learning Disability (2002); Current Issues and Trends in Special Education Identification, Assessment and Instruction (2010); Teaching Student With Learning Disabilities (2008); Issues facing the field of learning disabilities (2000); Writing strategies instruction for expository essays for adolescents with and without learning disabilities (2000); Learning About Learning Disability (third edition) (2004). The steps taken were collecting existing data on children identified as having specific learning disabilities, conducting cross-checks, specifically cross-checks on the primary source with other sources for data validation.
purposes, analyzing the data obtained, and finally drawing conclusions about the studied problem.

Meanwhile, the product expert test examined the feasibility of the draft guidelines for experts to identify specific learning disabilities. Meanwhile, product validation is carried out through discussions with other professionals and experts to identify product shortcomings. Researchers then address these faults by eliminating faults and enhancing the product design. The researcher created a questionnaire that experts completed to determine the feasibility of the book product "Guidelines for Identifying Children with Specific Learning Disabilities in Elementary School Age." Experts validate the draft to ensure that it comprises a valid label. One psychologist, one lecturer in the Department of Special Education, an expert in that field, one orthopedagogue in inclusive schools, and one special education teacher were chosen to assess the draft content. The outcomes of the expert assessments are then reviewed to serve as input for the enhancement of previously prepared products.

The Miles and Huberman model was utilized in this study, which entails continuously analyzing the data until it is deemed sufficient. As a result, data analysis procedures such as data reduction, data presentation, and conclusion drawing were used in this study. The processes involved in data reduction are assessing data regarding specific learning disabilities to determine the child's difficulties, summarizing the steps and references from numerous sources, and eliminating irrelevant data to provide the necessary information. After data reduction is complete, the data must be presented. The organized data in this study were given in descriptive and narrative texts. The last stage involves drawing conclusions from previous activities and presenting them in narrative form.

The instrument in this study was designed to assist the author in collecting data systematically and simply to prepare a draft identification guide for children with specific learning disabilities of elementary school age. The research employed guidelines for conducting a literature review and expert validation instruments.

RESULT AND DISCUSSION
Result(s)

The draft identification guideline for children with specific learning disabilities in elementary school-age is divided into several sections that will assist teachers and parents in better understanding children with specific learning disabilities, including the identification concept, the concept of specific learning disabilities, and identification instruments for children with learning disabilities in elementary school age, such as dyslexia, dysgraphia, and dyscalculia. To assist teachers and parents in identifying children who have specific learning disabilities, the authors have highlighted the critical steps in the identification process, which are grouped into three distinct categories of academic learning disabilities: dyscalculia, dysgraphia, and dyslexia.

Dyscalculia Identification

Dyscalculia (Arithmetic Disorder) is a general term that relates to a variety of specific lifelong mathematics learning disabilities (National Center for Learning Disabilities, 2006). These obstacles affect an individual's capacity to comprehend and handle numbers, perform mathematical operations, and/or conceptualize numbers as abstract concepts of comparative quantities. According to the Learning Disabilities Association (2005), critical elements in recognizing dyscalculia include the following:

a. Placing language in the mathematical process
b. Understanding words
c. Remembering numbers
d. Remembering a dance step sequence or rules for playing a sport
e. Learn to feel to play an instrument
f. Abstract concept of time and direction
g. Grasping and remembering mathematical concepts, rules, formulas, and sequences (order of operations) and basic addition, subtraction, multiplication, and division
h. Remembering the schedule and sequence of past or future events
i. Strategic planning for games like chess
j. On-time
k. Mastering the material about music
l. Understanding cash transactions
m. Athletic coordination (e.g., following changing physical directions such as in aerobics, dance, and exercise classes)

Dysgraphia Identification

Dysgraphia is a neurological disorder that manifests itself through difficulties with writing (Pierangelo & Giuliani, 2006). To be more precise, this disorder results in a person's writing being distorted or wrong. When children are introduced to writing, the condition manifests. They create the incorrect size and spacing letters, or they type incorrect or misspelled words (National Institute of Neurological Disorders and Strokes, 2006). According to the International Dyslexia Association (2000), critical elements in recognizing dysgraphia include the following:

a. Writing that is generally illegible (though adequate timing and focus are provided)
b. Inconsistency: mixed print and cursive or upper- and lower-case letters or irregular font size and shape
c. Unfinished words or letters; omitted words
d. Inconsistent positioning on the page concerning lines and margins
e. Inconsistent space between words and letters
f. Grip in tight or unusual places, especially the following: holding stationery very close to the paper, odd position of wrist, body, or paper
g. Talking to themselves while writing or carefully observing their hand
h. Slow or difficult copying or writing, even if the result is neat and legible
i. Content that does not reflect the student's language
j. Combination of fine motor difficulties, a difficulty to evaluate letters, and an inability to recall writing motor patterns. A lack of motor coordination can cause handwriting difficulties in students, a difficulty to complete assignments, an inability to comprehend and/or recall visual pictures accurately, or insufficient handwriting training in class.

Dyslexia Identification

Dyslexia is a reading-related learning disabilities (Pierangelo & Giuliani, 2006). According to the National Center for Learning Disabilities (2008), dyslexia is a lifelong language processing problem affecting spoken and written language development. Children and adults with dyslexia can be pretty clever, but they suffer from a neurological disorder that alters how their brain processes and interprets information. According to the International Dyslexia Association (2007), numerous vital indicators of dyslexia include the following:

a. Have trouble learning the alphabet, rhyming words, or connecting letters to their sounds
b. Makes many mistakes when reading aloud and often repeats or stops

c. Do not understand what they read

d. Have tremendous difficulty spelling

e. Learn languages late and have limited vocabulary

f. Have trouble remembering sounds made by letters or only slight differences between words

g. Have difficulty understanding jokes, comics, and sarcasm

h. Have difficulty following directions

i. Misinterpreting words or using the wrong words that sound similar

j. Have difficulty organizing what he wants to say or cannot think of the words needed to write or converse

k. Do not follow social rules of conversation, such as taking turns, and may stand too close to the listener

l. Difficult in understanding math symbols and misreading numbers

m. Cannot retell sequentially (what happened first, second, third)

n. Not knowing where to start a task or how to proceed with a task

Identification Guidelines Draft

After undergoing a validation stage, identification Guideline Draft for Children with Specific Learning Disabilities in Primary School Age were compiled by experts. Several sections of the draft have been updated due to expert validation. According to the results of validation by four experts, the draft was considered feasible for use as a whole. This is reflected by the validator's average percentage, which is 75%, indicating that it can be utilized with some modification. This identification guideline draft comprises a cover, preface, table of contents, introduction, basic concepts of specific learning disabilities in children, basic concepts of identification, identification procedures, identification instruments and scoring, bibliography, and back cover.

Discussion(s)

The primary reason for developing identification guidelines for children with specific learning disabilities is widespread uncertainty regarding the proper classification and identification of specific learning disabilities. Additionally, it was discovered that numerous mistakes were made when identifying children with specific learning disabilities (Stanovich 2005). Thus, developing an identification guide draft for children with learning disabilities in primary school age may be a solution to addressing all of the field's existing problems.

Teachers must be equipped with various skills prior to conducting assessment activities to identify children with special needs (ABK), including children with specific learning disabilities. To identify children who are experiencing specific learning disabilities, teachers must expand their knowledge of various types of childhood disorders, including physical, mental, intellectual, social, and emotional disorders, as well as children who exhibit exceptional potential, intelligence, and talents. The instrument is a list of statements including symptoms or abnormalities that commonly occur in children. We can determine which children have specific learning disabilities and which do not by identifying the various symptoms (Haryanto, 2019). Thus, developing a draft guideline for identifying children with specific learning difficulties in elementary school can aid in these efforts by addressing all identification needs.

The study found that implementing identification using a draft identification guide for elementary school children with specific learning disabilities had a beneficial effect. It can assist teachers and parents in quickly identifying children with specific learning disabilities. Teachers and parents may utilize the draft, which already defines, describes, and categorizes children with specific learning disabilities and the identification instruments and procedures
for their usage. Thus, teachers and parents will have an easier time identifying children with specific learning disabilities and classifying the child, whether the child is in a group that struggles with writing, reading, or math, to have a positive impact on the child, namely that the child will receive appropriate treatment or intervention to maximize their potential.

CONCLUSION

In general, the findings of this study reveal that the researcher's draft identification guide indicates that identifying specific learning disabilities entails various stages or procedures that must be completed in order for identification activities to run efficiently and reliably. There are four instruments for identifying specific learning disabilities: instruments for identifying general specific learning disabilities, instruments for identifying reading difficulties, instruments for identifying writing difficulties, and instruments for identifying mathematical difficulties. The identification draft has been carefully prepared with simple sentences to ensure that the teacher can quickly determine whether the child has problems learning to read, write, or do the math. Due to timing constraints, this research still has problems. One of them is that this research has only been validated by four validators and has not been widely tested, implying that it is still in its development and cannot be utilized directly in schools. As a result, the researcher recommends that the study's findings can serve as a guide for future studies.

REFERENCE


