



ANALYZING DIAGNOSTIC TECHNIQUES FOR LEARNING DIFFICULTIES IN FOURTH-GRADE ELEMENTARY SCHOOL STUDENTS

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Abstract

This study is prompted by the critical need for early detection of learning challenges in elementary education to guide targeted pedagogical interventions. The objective of this study is to examine the diagnostic techniques for learning difficulties among fourth-grade elementary school students. A qualitative approach with a case study design was employed for this research. The study's participants comprised school principals, classroom teachers, and subject teachers selected through purposive sampling. Data were collected using in-depth interviews, participant observation, and document analysis. The data were analyzed interactively through data reduction, data display, and drawing conclusions. Results revealed that diagnosis relies on initial identification via classroom observations and teacher notes, followed by formative and summative assessments and student interviews, all underpinned by strong teacher-principal collaboration. This study concludes that developing comprehensive diagnostic instruments and providing continuous teacher training are essential to enhancing diagnostic practices for learning difficulties.

Keyword :

diagnosis of learning difficulties, elementary school

INTRODUCTION

Literally, education means the act of educating carried out by an educator for students. Adults are expected to provide good examples, instruction, guidance, and character-ethical development for children, as well as to uncover the knowledge within each individual. The instruction provided to students comes not only from formal education organized by authorities; in this regard, the function of the family and community is extremely vital as a foundational environment that can awaken and develop

knowledge and understanding (Marisyah & Firman, 2019). Education aims to develop potential and better educate individuals (Ramdani et al., 2021). With this goal, it is expected that well-educated individuals can possess creativity, knowledge, strong personality, independence, and become more responsible individuals (Gunawan et al., 2021).

Education is crucial in an individual's development from an early age, and one of the initial stages of formal education is elementary school. A school is a system where the educational process takes place, comprising various interconnected devices and elements (Sagala, 2006). A school is an institution that encompasses a learning process supervised by teachers, aimed at strengthening children's moral, character, and intellectual formation to create high-quality individuals (Rahmawati, 2014). School is a formal educational setting tailored for students, aimed not only at attaining knowledge but also at preparing students with the morals and ethics needed to enter the next stages of life with dignity and honor. Elementary school, or equivalent education, is considered a highly strategic and primary determining stage in forming the foundational framework of students' human domain thinking, shaping basic attitudes, knowledge, and skills. Elementary school serves as an essential learning environment for children's development toward achieving quality education (Ampera, 2012). During the learning process in elementary school, some students may experience learning difficulties.

Learning difficulty or learning disability, also referred to as a learning disorder, is a condition that makes it challenging for an individual to engage in learning activities effectively (Jamaris, 2014). The concept of learning difficulties—whether framed as a learning disability, learning disorder, or learning difficulty—refers to developmental learning disabilities (Bolourian & Blacher, 2018), which include impairments in motor skills, perception, language learning, communication, and social behavioral adaptation. A learning difficulty is a condition in which students face certain obstacles in participating in the learning process and obtaining optimal learning outcomes (Irham & Wiyani, 2013). The learning difficulties experienced by students reveal a gap between expected academic performance and actual academic achievement. The obstacles faced by students involve not only mastering instructional material but also psychological issues such as lack of motivation, feelings of displeasure, and similar factors (O'Shea et al., 2017; Hill & Jones, 2018). Given the diversity of students in school, the types of difficulties encountered are naturally varied.

Types of learning difficulties include reading difficulties or dyslexia, which is often caused by memory processing disorders when handling and digesting text being read; writing difficulties or dysgraphia, which can be detected early so as not to cause further difficulties as students enter elementary school since writing requires more advanced skills than reading; and arithmetic difficulties or dyscalculia, which is a developmental disorder affecting mathematical or arithmetic skills that impacts academic achievement and daily life activities. According to Sudrajat (2008), types of learning difficulties can also be viewed based on influencing factors and categorized into three types: learning disability, which is a symptom that emerges as an indicator of psychological abnormality causing learning difficulties through various disorders; underachiever, which describes a student whose achievement is lower than expected based on learning capability test results; and slow learner, which refers to a child who exhibits a low pace of material mastery. Learning difficulties can often be addressed by applying suitable instructional techniques; therefore, diagnosing learning difficulties becomes crucial to helping students overcome these barriers and achieve better comprehension. To assist teachers in detecting differences in learning difficulties, teachers can utilize comprehensive assessment techniques and specific instruments.

According to Ross and Stanley (Abin S.M., 2005), the stages of diagnosing learning difficulties address five core questions: who the pupils having trouble are, where the errors are located, why the errors occur, what remedies are suggested, and how errors can be prevented. In another instance, Ross and Stanley (1956) outlined the problem-solving stages as follows: identifying students experiencing learning difficulties through flagging students in a group, using effective study time records, attendance records, participation records, and sociometric records; determining the location of the difficulty by identifying problem areas in specific subjects, detecting learning targets, and analyzing learning process records; determining the types and nature of factors causing students to experience difficulties, which include internal factors within the students themselves and external factors coming from the

environment (Koestoer & A. Hadisuparto, 1998); estimating potential assistance; determining possible ways to overcome the difficulties; and executing follow-up procedures.

Although the theoretical framework for diagnosing learning difficulties is clearly conceptualized, a research gap remains in field practice. Most previous literature focuses heavily on final outcomes such as academic achievement or general causal factors, with limited exploration into how elementary school teachers actually integrate comprehensive diagnostic stages ranging from initial identification and mapping of specific difficulties to executing collaborative intervention strategies. At the fourth-grade elementary school level, which marks a crucial transition from basic conceptual understanding to more complex material, addressing learning difficulties often relies solely on summative assessments without structured diagnostic instruments. Therefore, this study aims to fill that gap by examining in depth the diagnostic techniques for learning difficulties applied to fourth-grade elementary school students. The objective of this study is to identify effective diagnostic methods, map out obstacles in the identification process, and formulate appropriate intervention strategies to improve students' understanding and academic achievement. This research is expected to offer practical and theoretical contributions to resolving student learning difficulties in the early stages of education.

METHODOLOGY

This study employs a qualitative approach with a case study design to comprehensively examine the techniques for diagnosing and addressing learning difficulties among fourth-grade elementary school students. A qualitative approach was selected because it is capable of generating descriptive data in the form of words, statements, and observable behaviors from informants (Bogdan, 1992), while also providing an understanding of social phenomena and functional relationships within the school environment (Strauss & Corbin, 2007) through an inductive reasoning process.

The subjects of this research include the School Principal, the Fourth-Grade Homeroom Teacher, and Subject Teachers, who were selected using a purposive sampling technique. The selection criteria for subjects included a minimum tenure of two years, willingness to participate in the research, and residence in Serang. The research data consist of primary data sourced directly from these subjects, as well as secondary data comprising academic achievement records, student progress notes, and supporting activity photographs.

Data collection was conducted using three primary techniques: in-depth interviews using an interview guide to explore diagnostic strategies and obstacles, participant observation using an observation guide to observe students' learning behaviors in the classroom, and document analysis using a documentation guide to gather students' academic track records.

All data obtained were analyzed using the interactive model proposed by Miles and Huberman (2014), which consists of four sequential stages: data collection; data reduction through selecting and focusing on relevant data; data display presented in a structured narrative format; and conclusion drawing and verification to accurately formulate the final findings of the study.

RESULTS AND DISCUSSION

Based on the research findings conducted at the elementary school level, differences were found regarding the techniques used to address learning difficulties experienced by students at Public Elementary School (SDN) Serang 01. This article discusses the school observation results concerning how learning difficulties are managed in elementary education.

The interview results from State Elementary School Serang 01 reveal that, according to the principal, the school conducts guidance sessions for teachers on diagnosing student learning difficulties, which are held before the start of each new academic year. Regarding student identification, the principal is not directly involved, as the identification of learning difficulties is carried out by teachers in the classroom during the instructional process. The identification results are subsequently submitted by the teachers to the principal in the form of student attendance logs and learning duration records.

Based on the research findings, the school principal stated that the school provides guidance and briefing for teachers on diagnosing students' learning difficulties, a program conducted prior to the commencement of each new academic year. In terms of student identification, the principal is not directly involved, as the process of identifying learning difficulties is carried out directly by classroom teachers during instruction. The identification results are subsequently submitted by the teachers to the principal in the form of student attendance logs and learning time records.

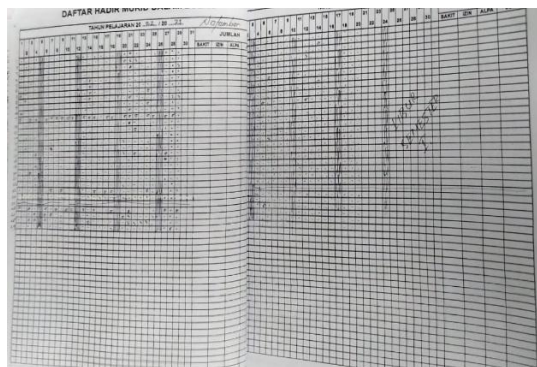


Figure 1. Student Attendance Records

Based on the research findings, the homeroom teacher stated that in identifying students' learning difficulties, the teacher observes the learning process, attendance records, and participation logs, all of which assist in pinpointing student challenges. Furthermore, the teacher determines the specific areas of difficulty by monitoring students' academic progress reports, from which it can be concluded that the most common difficulties experienced by students are reading comprehension and mathematical reasoning. From the results of identifying and locating these learning barriers, the teacher is able to determine the contributing factors causing the learning difficulties. At this school, the predominant factors are external, primarily involving a lack of parental attention regarding students' home studying, as well as peer environments that frequently distract students with play.

In determining potential assistance for learning difficulties, the homeroom teacher manages the intervention directly without external assistance, as these challenges are considered manageable within the classroom setting. However, the teacher actively requests that parents pay greater attention to their children's learning activities at home. The teacher designates specific times and locations for providing learning assistance, which takes place in the classroom after regular instructional hours by reviewing materials that students found particularly challenging.

The follow-up action undertaken by the teacher to address learning difficulties is conducting remedial instruction, which is provided to students scoring below the passing threshold and administered following summative assessments. At this school, all students experiencing learning difficulties are successfully supported internally without requiring referral or transfer to external institutions.

The research findings also reveal that the Islamic Religious Education (PAI) subject teacher identifies learning difficulties by observing students' learning behaviors in class, focusing specifically on those who struggle to maintain attention during instruction. Additionally, attendance records serve as a key metric to help the teacher flag students experiencing learning difficulties. The teacher then locates specific learning hurdles by reviewing student performance in each session. These results indicate that within a single lesson, some students appear active but are unable to complete their assignments, whereas others remain passive during instruction yet manage to complete assigned tasks successfully. Ultimately, it can be concluded that the primary learning difficulty in PAI lessons stems from a lack of comprehension regarding the concepts explained by the teacher.

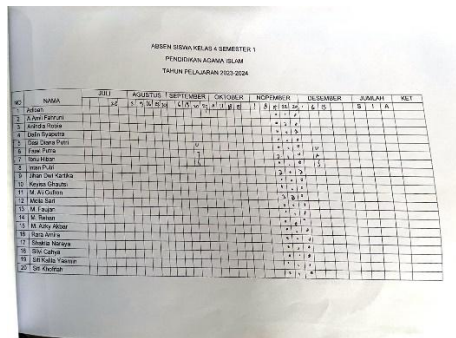


Figure 2. Student Attendance Records Image

The teacher stated that the primary factor causing learning difficulties in Islamic Religious Education (PAI) is an external factor stemming from the family environment. This occurs because families often fail to support students' learning activities at home, which consequently leads to student lethargy toward studying. Beside family influences, peer interactions also serve as a key contributing factor, as peers frequently entice the students to play instead of study.

In addressing these learning difficulties, the teacher involves parents to guide their children's learning at home. By assigning supplementary tasks, it is expected that students can study and comprehend the instructional material with their parents' assistance. Furthermore, the follow-up action implemented by the teacher consists of providing remedial instruction administered after summative assessments, aimed at evaluating the extent of student progress resulting from the teacher's diagnostic interventions.

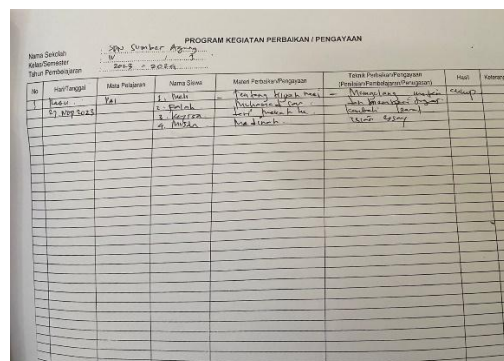


Figure 3. Remedial Test Records

CONCLUSION

The dominant learning difficulties experienced by fourth-grade students at this school include limited reading ability and low comprehension of instructional material, which are subsequently addressed by teachers through remedial programs involving active collaboration among homeroom teachers, subject teachers, school principals, and parents. These findings imply the importance of shifting from a merely reactive approach toward a preventive and structured diagnostic strategy, as the effectiveness of remediation relies heavily on the accuracy of initial identification and strong synergy among stakeholders. Without standardized diagnostic instruments, the mapping of student learning barriers risks remaining suboptimal. Therefore, it is recommended that school administrations and teachers develop more comprehensive diagnostic assessment instruments and conduct regular training for educators; that parents enhance communication and home-learning mentorship; and that future researchers evaluate the effectiveness of specific intervention models in overcoming reading and conceptual comprehension difficulties at the elementary school level.

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