



CIREBON INTERNATIONAL CONFERENCE ON EDUCATION AND ECONOMICS (CICEE)

DIAGNOSTIC ASSESSMENT IN DIFFERENTIATED LEARNING: SUPPORTING STUDENTS' NEEDS FOR ENHANCED LEARNING

Amy Siti Nazilah¹, Ferry Ferdianto^{2*}

^{1,2}Fakultas Pendidikan dan Sains, Universitas Swadaya Gunung Jati Cirebon, Indonesia

*Corresponding author: ferry.ugj@gmail.com

Abstract

Differentiated learning is at the forefront of efforts to create a more equitable and inclusive education system, diagnostic assessments play a key role in understanding students' individual learning needs and designing appropriate interventions. However, the implementation of diagnostic assessments in supporting differentiated learning still has challenges. This research aims to explore effective strategies in diagnostic assessment and their impact on the learning process and student learning outcomes. This research method uses a literature review approach to investigate the role of diagnostic assessment in supporting differentiation learning, analysis of key findings related to the role of diagnostic assessment in supporting differentiation learning. This includes identifying effective strategies in implementing diagnostic assessments, as well as their impact on improving learning for students. The findings show that the implementation of differentiated learning by utilizing diagnostic assessment data has a positive impact on student learning and learning outcomes. By understanding students' conditions through diagnostic assessments, teachers can determine appropriate follow-up in the form of content, process or product differentiation. The scientific contribution of this research is a deeper understanding of the role of diagnostic assessment in supporting differentiation learning.

Keywords: *Inclusive Education, Diagnostic Assessment, Differentiated Learning, Individual Student Needs, Learning Strategies.*

INTRODUCTION

Inclusive education as a paradigm committed to providing access and learning opportunities for all individuals, regardless of student background, abilities or needs, has become the main focus in efforts to create a more equitable and inclusive education system (Kurniawan, 2020). Along with this, diagnostic assessments play a key role in understanding students' individual needs and designing appropriate interventions (Salend, 2019). In education, diagnostic assessment has profound significance. Through diagnostic assessments, teachers and education professionals can identify students' specific needs, understand their learning styles, and accommodate the various challenges and learning needs they may face (Purnawanto, 2023). The role of diagnostic assessment in supporting

differentiated learning is not only related to identifying individual student needs, but also in designing inclusive learning environments and providing the necessary support to increase student learning potential (Mansur, 2019).

Diagnostic assessments enable teachers to identify the obstacles faced by students, as well as providing a solid foundation for developing learning activities that suit student needs (Firmanzah & Sudiby, 2021). Although awareness of student diversity in the classroom has existed in pedagogical contexts for a long time, attention to this condition in the learning process in accordance with previous teaching achievements has not been optimal (Purnawanto, 2023). Based on the results of research conducted by (Siswaningsih et al., 2013), the implementation of diagnostic assessments has not been optimal, resulting in differentiated learning not being optimal. Meanwhile (Maut, 2022), implementation of the diagnostic assessment requires honesty because the results obtained do not match reality. Diagnostic assessment is a systematic and holistic process of collecting information about students' abilities, needs and learning characteristics (Salend, 2019). It involves using a variety of techniques and instruments to identify the unique learning needs of each student, so that teachers can design appropriate interventions to support student learning success (Aslihah et al., 2023). Diagnostic assessments are not only about assessing students' knowledge, but also about understanding their learning styles, learning preferences, as well as other factors that can influence the learning process (Maut, 2022). Diagnostic assessment is an assessment carried out specifically to identify student competencies, strengths and weaknesses (Firmanzah & Sudiby, 2021). This allows learning to be designed to suit individual student competencies and conditions.

Differentiated learning is a method used in an inclusive approach to ensure that all students, including students with special needs, have access, participate and succeed in the learning process (Purnawanto, 2023). This concept emphasizes the use of learning strategies that are tailored to students' learning styles, interests, level of readiness and individual needs (Herwina, 2021). In general, the aim of differentiated learning is to coordinate learning that focuses on aspects of students' learning interests, students' readiness for learning, and students' learning preferences (Marlina, 2020). Through differentiated learning, educators strive to create a learning environment that is inclusive and responsive to the different learning needs of each student (Tomlinson, 2014).

Diagnostic assessments play an important role in supporting differentiated learning by providing the information needed to design learning experiences tailored to each student's learning needs (Tomlinson, C. A., & Strickland, 2005). By understanding students' individual learning profiles, teachers can identify the most effective and relevant learning strategies for each student. In addition, diagnostic assessments also help educators adjust the curriculum, determine the level of difficulty of assignments, and provide additional support needed by students (Salend, 2019). Thus, the role of diagnostic assessment not only allows educators to design learning experiences that suit students' individual learning needs, but also helps improve the quality of learning and create an inclusive learning environment for all students in the classroom (Yani et al., 2023).

Effective diagnostic assessment plays a key role in supporting inclusive education and differentiated learning. Direct observation by teachers, conducting interviews with students and using student portfolios are effective strategies in observing student learning behavior and identifying student learning needs (Nur Budiono & Hatip, 2023)a. By involving students in the creation and selection of materials for their portfolios, educators can gain deeper insight into students' learning progress as well as their interests and preferences in learning. By utilizing these effective diagnostic assessment strategies, educators can gain comprehensive insight into students' learning needs and design more appropriate and inclusive learning experiences.

This research is to describe the role and strategies that have been used in implementing diagnostic assessments in learning activities. Through in-depth literature analysis, this research aims to comprehensively understand how diagnostic assessment has been implemented and contributes to supporting student learning, as well as identifying and analyzing potential changes that can occur in learning as a result of implementing more effective diagnostic assessment. In other words, this research aims to explore the use of diagnostic assessments and encourage changes in educational and learning practices that are more inclusive and sustainable in supporting student learning success.

METHOD

This research uses a literature review approach to investigate the role of diagnostic assessment in supporting differentiation learning. The literature review was carried out through a search of various relevant sources, including scientific journals, textbooks, and the latest research reports in the field of differentiated learning and diagnostic assessment. After the selected literature was collected, an analysis of key findings related to the role of diagnostic assessment in supporting differentiated learning was carried out. This includes identifying effective strategies in implementing diagnostic assessments, as well as their impact on improving learning for students.

RESULTS AND DISCUSSIONS

Diagnostic assessments play a crucial role in supporting inclusive education by providing a deep understanding of students' individual needs. Several studies demonstrate the role of diagnostic assessments in supporting differentiation learning. The first research by (Setiawan et al., 2023), shows that the implementation of differentiated learning can be carried out well by utilizing data from diagnostic assessments to understand students' conditions from a cognitive and non-cognitive perspective. Thus, appropriate follow-up can be determined in the form of content, process, or product differentiation. This provides opportunities for all students to develop their skills, talents and interests more optimally, as well as training them to innovate, adapt to change and achieve predetermined learning goals.

Then, the second research is (Elviya & Sukartiningsih, 2023) was carried out by implementing differentiated learning in Indonesian language subjects. Teachers map students' learning needs through diagnostic assessments and design differentiated learning based on the results of the mapping, which are recorded in the teaching module. This

differentiated learning has a positive impact on students, increasing their enthusiasm and enthusiasm for learning according to their respective learning readiness. Student learning outcomes after participating in this lesson are also satisfactory, as evidenced by the scores obtained on the LKPD and formative assessments.

The third research by (Dhahana Aris Saputra et al., 2023) shows that differentiated learning provides benefits to students' learning activities and interests. Teachers use the results of mapping students' learning needs to design learning that is tailored to their level of learning readiness and learning style. This differentiated learning also has a positive impact on students' interest in learning, which is an important aspect in the learning process.

The fourth research (Setyo Adji Wahyudi et al., 2023), was carried out by describing the three steps taken by teachers to implement a differentiation learning approach in science subjects in Class V SDN 08 Samarinda Seberang. First, content differentiation is carried out by modifying teaching materials according to student interests. Second, process differentiation involves providing teaching and assessment materials with different content and objectives, tailored to students' interests. Third, product differentiation allows students to express their creativity in accordance with the curriculum. With this approach, teachers and students both benefit, where students feel satisfied with education that is tailored to their interests, learning style and level of readiness.

The four studies that have been presented show that the implementation of differentiated learning by utilizing diagnostic assessment data has a positive impact on the learning process and student learning outcomes. Overall, the research results show that differentiated learning is an effective approach in improving the quality of learning and student learning outcomes by paying attention to their individual learning needs. By designing inclusive and responsive learning, teachers can create a learning environment that allows each student to reach their learning potential optimally.

CONCLUSION

Differentiated learning is the main focus in creating a more equitable and inclusive education system. In this context, diagnostic assessment plays a key role in understanding students' individual needs and designing appropriate interventions. Through effective strategies in diagnostic assessment, such as direct observation, interviews with students, and the use of student portfolios, educators can gain a comprehensive understanding of student learning needs and design more appropriate and inclusive learning experiences.

The most important finding from this research is that the implementation of differentiated learning by utilizing diagnostic assessment data has a positive impact on the learning process and student learning outcomes. By understanding students' conditions from a cognitive and non-cognitive perspective through diagnostic assessments, teachers can determine appropriate follow-up in the form of content, process or product differentiation. This provides an opportunity for all students to develop their potential more optimally. By paying attention to students' individual learning needs through diagnostic assessments, educators can design more inclusive and responsive learning experiences. Apart from that,

this research also shows that the differentiation learning approach is an effective method in improving the quality of learning and student learning outcomes.

This research has limitations in field data coverage and analysis. Therefore, further studies involving more participants and expanding the scope of research are needed to gain a deeper understanding of the implementation of diagnostic assessments in the context of differentiated learning. Thus, it is hoped that further studies can make a greater contribution in supporting inclusive education and differentiated learning that is more effective and sustainable.

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