Diagnostic Assessment Of Independent Curriculum At SMP Penggerak In Buleleng District

Dewa Bagus Sanjaya[1], Dewa Gede Firstia Wirabrata[2], Dewa Ayu Puteri Handayani[3]

{bagus.sanjaya@undiksha.ac.id[1], firstia.wirabrata@undiksha.ac.id[2], ayu.puteri@undiksha.ac.id[3]}

Universitas Pendidikan Ganesha, Indonesia[1,2,3]

Abstract. This research aimed to evaluate the implementation and challenges associated with diagnostic assessments at Penggerak Junior High School in Buleleng District. The study employed a qualitative descriptive method, collecting data through interviews, observations, and documentation, with participants including the principal and teachers. Findings indicated that both the principal and teachers shared a common understanding of two types of diagnostic assessments: cognitive and non-cognitive. Regarding cognitive assessments, 97.45% of teachers were prepared to implement them, while 2.55% were not. For non-cognitive assessments, 86% were ready, while 14% were not. The results suggest that teachers at Penggerak Junior High School in Buleleng District are actively implementing diagnostic assessments.

Keywords: analysis, diagnostic assessment, Penggerak Junior High Schools

1 Introduction

Learning and assessment are interconnected aspects of education. For educators and students to align with learning goals, they need to grasp competencies tied to these objectives, ensuring that the entire learning process supports these goals. Learning should be engaging, interactive, motivating, and adapted to the students' abilities, interests, and development, resulting in meaningful evaluations. According to Johnson and Johnson, meaningful assessments involve authentic and contextual tasks that mirror everyday experiences [1]. Marhaeni highlights three core components in performance assessment: tasks, rubrics, and scoring guides [2].

Assessments generally serve three purposes: assessment of learning, assessment for learning, and assessment as learning, as classified by the Western and Northern Canadian Collaboration in Education. In the independent curriculum, assessments include diagnostic, formative, and summative. Diagnostic assessments identify student competencies, strengths, and weaknesses, allowing tailored learning[3]. Brummitt describes diagnostic assessment as a pre-assessment for identifying individual strengths, weaknesses, knowledge, and skills before instruction [4]. Non-cognitive assessments explore aspects like psychology, social-emotional status, learning activities at home, family conditions, and students' interests and learning styles.The interviews with eight junior high school teachers in Buleleng revealed that 87% had conducted cognitive diagnostic assessments across five subjects: Mathematics, Citizenship

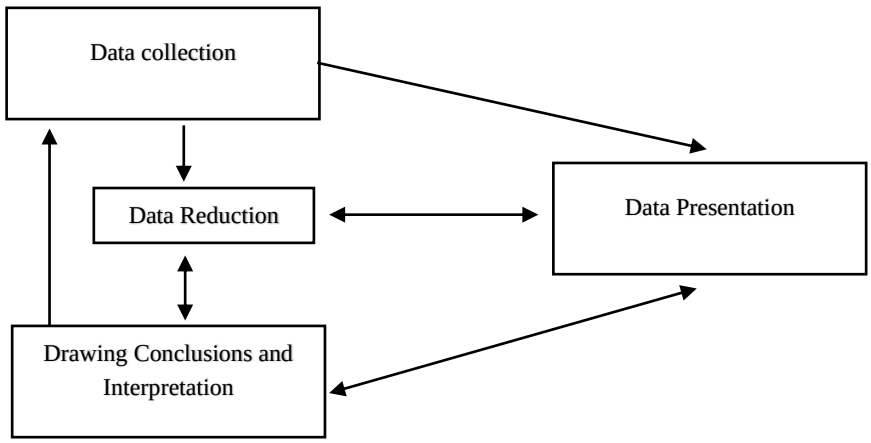
ICLSSE 2024, October 17, Singaraja, Indonesia

DOI 10.4108/eai.17-10-2024.2353688

Education, Social Sciences, Indonesian Language, and Natural Sciences. Meanwhile, 78% had conducted non-cognitive assessments. A study by Ulfa Laulita Marzoan and Fitriani Rahayu (2022) indicated teacher readiness in diagnostic assessments varied, with some teachers unfamiliar with or not having participated in relevant socialization programs. These findings motivated this study focusing on junior high schools in Buleleng District.

2 Methods

This study adopts a qualitative approach with an analytical descriptive method. Data collection involved observations, questionnaires, and interviews. The subjects were teachers and principals at Penggerak Junior High School in Buleleng District, focusing on diagnostic assessments. Data analysis followed a qualitative descriptive technique, adapting the methodologies of Miles & Huberman [4]. The process included data reduction, data presentation, and conclusion drawing/verification.



3 Results and Discussion

The legal foundation for the School Mover Program is established through Decree No. 371/M/2021 by the Minister of Education, Culture, Research, and Technology. This program offers multiple benefits, including enhancing the quality of learning outcomes, developing the skills of teachers and principals, accelerating school digitalization, fostering changes in other educational institutions, advancing the Pancasila Student Profile, serving as a catalyst for transformation, mentoring, and improving students' academic performance.

Achieving these objectives requires effective assessment. Assessment is a process of gathering information that aligns with learning objectives and involves interpreting data based on specific criteria or rules [5]. Popham [6] defines it as a structured effort to assess students' status across different aspects, while Nitko [7] describes it as a method of gathering data for decision-making related to learners, educational programs, and policies. Kim [8] suggests that

assessment goals reflect both cognitive and social human processes, highlighting the challenge of authentic assessment. Assessment involves making qualitative judgments based on measurements. According to Mardapi [9], assessment interprets and explains measurement outcomes. Kizlik explains that assessment is a process of obtaining information based on specific objectives or goals [10]. Tests, a subset of assessments, are designed under controlled conditions, meaning while all tests are assessments, not all assessments are tests.

Government Regulation (PP) No. 4 of 2022 on National Education Standards emphasizes the need for developing a curriculum that outlines the content, objectives, methods, and teaching materials [11,12]. The purpose of such assessments includes: 1) Monitoring the progress of students' learning; 2) Evaluating the achievement of learning outcomes and providing insights on the process and results; 3) Collecting feedback for continuous improvement for students, teachers, study programs, and institutional growth; 4) Ensuring the quality control of graduates; and 5) Supporting institutional accountability by offering information on the learning process and outcomes to relevant stakeholders.

According to Boyle & Fisher [13], formative assessment is considered an assessment for learning, whereas summative assessment is an assessment of learning. Cowie & Bell explain that formative assessment is a method used by teachers and students to identify and respond to student learning needs [14]. Popham defines formative assessment as a structured process where information gathered from assessments is used by teachers to modify their teaching methods or by students to adapt their learning strategies [6]. This implies that formative assessment is a systematic approach in which evidence of student progress is employed by educators to adjust teaching practices or by students to refine their learning techniques.

At the elementary and secondary education levels, summative assessment is used to evaluate whether learning objectives and student outcomes have been achieved, serving as a basis for determining class advancement or graduation. This assessment is typically presented as a report detailing student achievements and may also include information about the child's growth and development. Teachers may conduct summative assessments at the end of the semester if additional data is needed to confirm student progress. However, if the teacher believes that the data collected throughout the semester is sufficient, an end-of-semester assessment may not be necessary. It is important to note that summative assessments can be conducted using various methods beyond tests, such as observations and performance-based activities like hands-on tasks, project work, or portfolios. Diagnostic, formative, and summative assessments are all considered authentic forms of evaluation.

The study results indicated that the implementation of cognitive diagnostic assessment at SMP Penggerak in Buleleng Regency showed a consistent understanding among teachers. This indicates that they recognize the importance of integrating assessment into the learning process as part of a cohesive approach. In terms of teacher readiness for cognitive diagnostic assessment, 97.45% of teachers are prepared, while 2.55% are not. For non-cognitive diagnostic assessment, readiness is slightly lower, with 86% of teachers ready and 14% not prepared. Based on field data, it is evident that teachers at SMP Penggerak in Buleleng Regency have been carrying out diagnostic assessments. However, further socialization and training, particularly on non-cognitive diagnostic assessments, are still necessary.

Diagram 1. Cognitive diagnostic assessment

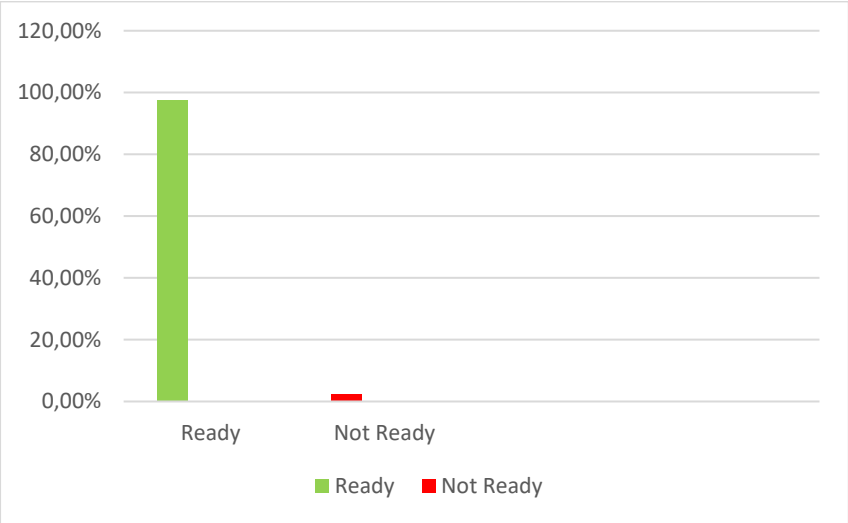
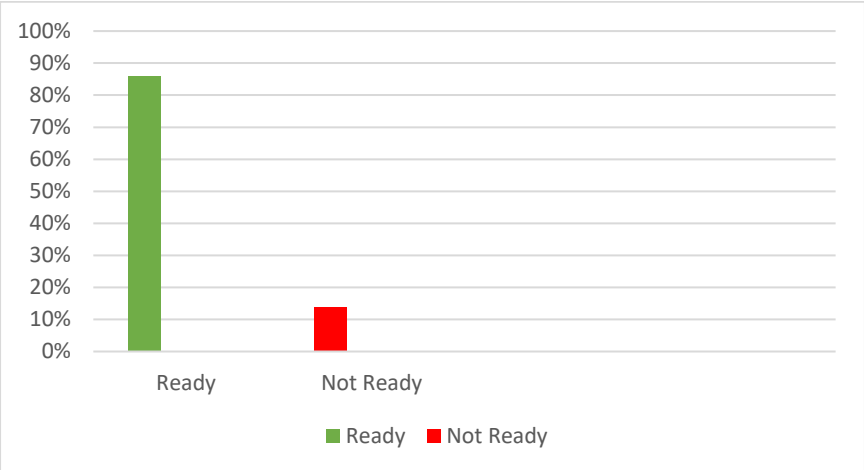


Diagram 2. Non-cognitive diagnostic assessment



The high percentage of teachers ready to conduct cognitive diagnostic assessments indicates that they are familiar with integrating diagnostic assessments into the learning process. It is acknowledged that a learning process is incomplete without proper assessment. Diagnostic assessment, as part of the independent curriculum, is specifically designed to identify students' characteristics, competencies, strengths, and weaknesses to tailor learning according to their needs [3]. According to Nitko, diagnostic decisions focus on identifying the learning outcomes students have not achieved and the reasons for these gaps [16]. Diagnostic assessments are categorized into two types: cognitive and non-cognitive. These assessments can be applied at the start of the school year, when new material is introduced, or before developing individual

teaching modules. Diagnostic assessment serves as a process for evaluating specific needs, challenges, or conditions in individuals and groups [17]. They are frequently used to determine students' understanding of the material, pinpoint learning difficulties, and develop effective teaching strategies. To ensure students are prepared, diagnostic assessments should be conducted before learning begins [18].

However, some schools have shown that certain teachers and principals do not fully comprehend the core of the independent curriculum, with some principals obtaining information primarily from social media, and some teachers only relying on the principals without further exploring the curriculum themselves [19]. In elementary schools, challenges remain in implementing diagnostic assessments, particularly in designing them. Research findings suggest that many elementary teachers still face difficulties in developing these assessments [20].

According to Brummitt , cognitive diagnostic assessment is a form of pre-assessment that helps teachers identify students' abilities, such as their strengths, weaknesses, knowledge, and skills, prior to instruction [4]. It is primarily used to identify learning challenges and guide the planning of lessons and curriculum. This assessment process includes stages like preparation, implementation, and follow-up.

In contrast, non-cognitive diagnostic assessment aims to assess the psychological and emotional well-being of students before they begin the learning process. It focuses on evaluating students' behaviors and activities at home, considering their family context. Teachers must use effective questioning techniques to gather thorough and detailed information during these assessments. Non-cognitive diagnostic assessments are conducted at the start of the learning process to assess: 1) students' emotional and psychological conditions, 2) their home study activities, and 3) their family situations. Like cognitive assessments, non-cognitive assessments also follow the steps of preparation, implementation, and follow-up.

The implementation of non-cognitive diagnostic assessments includes: 1) presenting emotional images to students, and 2) encouraging students to express their emotions through storytelling, writing, or drawing. The objectives of non-cognitive assessments are to: 1) understand the psychological and social-emotional state of students, 2) observe their home learning activities, 3) evaluate their learning environment, 4) understand their social backgrounds, and 5) explore their learning styles, personalities, and interests [21].

4 Conclusion

Teachers share a common understanding that there are two types of diagnostic assessments: cognitive and non-cognitive. Most teachers are prepared to use cognitive diagnostic assessments, though a small percentage remain unprepared. Similarly, while the majority of teachers are ready to implement non-cognitive diagnostic assessments, a small number still need further preparation. Field observations indicate that teachers at junior high schools in Buleleng District have already been applying these diagnostic assessments.

References

[1] Johnson, D. W., & Johnson, R. T. (2002). Meaningful assessment; a manageable and cooperative process. Boston: Person Education Company.

[2] Marhaeni, AAIN Authentic Assessment in Language Learning-Rajawali Pers. PT. RajaGrafindo Persada.

[3] Decree of the Minister of Education and Culture (Kepmendikbud) of the Republic of Indonesia No. 719/P/2020, Guidelines for Implementing the Curriculum in Educational Units in Special Conditions.

[4] Miles Huberman, 1984, consists of data reduction, data display, data conclusion drawing/verification as shown in the chart below.

[5] Widoyoko, Eko Putro. 2012. Evaluation of Learning Programs. Yogyakarta: Pustaka Pelajar.

[6] Popham, W. J. (2008). Transformative Assessment, Virginia: Association of supervision and curriculum development (ASCD).

[7] Nitko AJ (1996). Educational Assessment of Students, 2nd Ed. Columbus Ohio: Prentice Hall.

[8] Kim, K.M., & Md-Ali, R. (2017). Geogebra: Towards realizing 21st century learning in mathematics education. Malaysian Journal of Learning and Instruction, 93-115.

[9] Mardapi, D. 1999. Measurement, Assessment, and Evaluation. Paper presented in the Junior High School Mathematics Learning Evaluation Training for Core Mathematics Teachers at MGMP Junior High School, PPPG Mathematics Yogyakarta, Yogyakarta.

[10] Kizlik, B. (2009). Measurement, Assessment and Evaluation in.

[11] Asfiati, A., & Mahdi, NI (2020). Independent Learning for Children with Special Needs at SLB Kumala Indah Padangsidimpuan. KINDERGARTEN: Journal of Islamic Early Childhood Education, 3(1), 59-69.

[12] Lazwardi, D. (2017). Curriculum management as the development of educational goals. Al-Idarah: Journal of Islamic Education, 7(1), 119-125.

[13] Boyle, J. & Fisher, S. (2007). Educational Testing A Competence Based Approach. Victoria: British Psychological Society.

[14] Cowie, B., & Bell, B. (1999). A model of formative assessment in science education. . Assessment in Education: Principles, Policy, & Practice, 6,1,101.

[15] Popham, W. J. (1995). Classroom Assessment, What Teachers Need to Know. Boston: Allyn and Bacon .

[16] Nitko, A. J. (1989). Designing tests that are integrated with instruction: Educational measurement, London: Collier Macmillan Publisher

[17] Huda, AAS, Alamsyah, A., Selvia, S., & Sangadah, N. (2023). Cognitive Diagnostic Assessment in the Subject of Islamic Education for Grade 7 at Smpn 3 Lembang. Al'Ulum Journal of Islamic Education, 3(2), 213–224. https://doi.org/10.54090/alulum.298

[18] Kunaenih, K., Firdaus, F., Farisi, S. Al, & Hasanah, N. (2023). The Effect of Diagnostic Assessment on Learning Motivation. Journal of Science and Technology, 5(1), 451. https://doi.org/10.55338/saintek.v5i1.1471.

[19] Laulita, U., Marzoan, M., & Rahayu, F. (2022). Analysis of Teacher Readiness in Implementing Diagnostic Assessment in the Independent Curriculum. Indonesian Educators Journal (JPIn), 5(2), 1-17

[20] Azis, ACK, & Lubis, SK (2023). Diagnostic Assessment as Learning Assessment in Independent Curriculum in Elementary Schools. Your Pen: Journal of Elementary School Education, 1(2), 20–29. https://doi.org/10.33830/penaanda.v1i2.6202

[21] Curriculum, P., Depdiknas, B., & No, JGSR (2006). Development of Life Skills Education Model. Central Jakarta.