Analysis of The Implementation of Diagnostic Assessment in Elementary School Mover in The Buleleng District

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Abstract. A diagnostic assessment is a specialized evaluation conducted with the specific purpose of identifying students' characteristics, competencies, strengths, weaknesses, and preferred learning styles. In schools, such assessments yield numerous benefits and ignite a particular passion among teachers, enabling them to tailor and devise learning methods, models, and media that cater to each student's unique abilities. The objective of this study was to examine the implementation of diagnostic assessments at the Elementary School Mover in the Buleleng district, using a qualitative research approach. The research participants included purposefully selected teachers, principals, and students. The study's findings indicate that an overwhelming majority, 95% of teachers at the Elementary School Mover in the Buleleng district, are familiar with and acknowledge the significance of the independent curriculum, with assessment being one of its key components. In general, 78% of teachers have conducted cognitive diagnostic assessments, while 72% have carried out non-cognitive diagnostic assessments in their own customized approaches.

Keywords: analysis, diagnostic asessment, elementary school mover.

1. Introduction

The learning process is designed based on students' development and needs, emphasizing communication, interaction, inspiration, enjoyment, challenge, motivation, creativity, and active participation. It culminates in meaningful assessments, which Johnson and Johnson (2002) describe as evaluations comprising authentic and contextual tasks representing real-life situations. For assessments to be meaningful, students must be at the core of the learning experience. Authentic assessments are essential as they enable students to identify problems, devise solutions, and interpret results. According to Marhaeni (2017), performance assessment consists of three key components: performance tasks, performance rubrics, and scoring guides. There are three methods for evaluating performance: holistic scoring, analytic scoring, and

primary trait scoring. In general, assessment serves three primary purposes: assessment of learning (final evaluation of learning), assessment for learning (evaluation during the learning process), and assessment as learning (Western and Northern Canadian Portfolio for Collaboration in Education, 2006).

Assessment as learning serves a function similar to assessment for learning, acting as a formative evaluation conducted during the learning process. In assessment as learning, students also play a role in devising assessment procedures, criteria, and rubrics/guidelines. On the other hand, assessment of learning occurs after the learning process is complete. Its primary purpose is to gather data to provide feedback, assess student progress, and aid teachers in enhancing the learning experience. In the independent curriculum, three types of assessments exist: diagnostic, formative, and summative assessments. The diagnostic assessment, including cognitive and non-cognitive components, identifies students' competencies, strengths, and weaknesses to design tailored learning plans (Kepmendikbud No.719/P/2020). The non-cognitive diagnostic assessment explores aspects such as students' psychological, social, emotional well-being, activities while studying at home, family conditions, student associations, learning styles, characters, and interests. A survey with 10 teachers revealed that 80% conducted diagnostic assessments, while 48% carried out non-cognitive assessments. Teachers cited reasons like inadequate understanding of implementation, lack of detailed indicators, and absence of standardized and practical guidelines. Indonesia's Program for International Student Assessment (PISA) rankings from 2000 to 2018 indicate a need for research due to the gap between the desired independent curriculum and current reality.

Assessment, as defined by various authors, is a process of data collection aimed at making decisions about students' status and educational programs. Kim highlights authentic assessment as a challenge in reflecting human cognitive and social processes. Arikunto views assessment as a qualitative decision-making process, while Mardapi defines it as interpreting or describing measurement results. These perspectives highlight key elements of assessment, including deliberate efforts to determine student status, recognition of variations in students' abilities and attitudes, and decision-making regarding student status. Process assessment involves a teacher's activity during learning, focusing on decisions about students' competency achievements. Government Regulation (PP) Number 4 of 2022, an amendment to PP Number 57 of 2021 concerning National Education standards, emphasizes the need for curriculum development to plan and regulate content, objectives, methods, and teaching materials (Asfiati & Mahdi, 2020; Lazwardi, 2017).

Diagnostic assessment within the independent curriculum is specifically conducted to identify students' characteristics, competency levels, strengths, and weaknesses in their learning approaches. This enables the design of learning experiences tailored to individual competencies and conditions (Kemendikbud, 2020). According to Nitko (1989), diagnostic decisions involve determining learning outcomes where students have not achieved the expected level of competence and identifying the causes of these learning gaps. There are two categories of

diagnostic assessment: cognitive diagnostic assessment and non-cognitive diagnostic assessment.

Cognitive diagnostic assessments serve the following purposes: 1) Identifying students' competency achievements, 2) Adjusting classroom learning to cater to the average student's competency level, and 3) Providing remedial classes or additional support to students with below-average competence. Non-cognitive diagnostic assessments, on the other hand, aim to measure students' psychological and emotional aspects before they begin learning. These assessments focus on students' psychological and emotional well-being. Non-cognitive assessments assess students' activities while studying at home while also considering their family conditions. Skilled questioning by teachers is essential in the preparation and implementation of non-cognitive diagnostic assessments to obtain comprehensive and in-depth information. At the beginning of the learning process, non-cognitive diagnostic assessments are administered to determine the following: 1) Students' psychological and emotional well-being, 2) Students' activities while studying at home, and 3) Students' family conditions. The non-cognitive diagnostic assessment goes through several stages, including preparation, implementation, and follow-up. In its implementation, students are asked to express their feelings during learning using methods such as storytelling, writing, or drawing. The purpose of non-cognitive assessment is to: 1) Understand students' psychological and social-emotional well-being, 2) Assess learning activities at home, 3) Determine student learning conditions, 4) Identify the social background of students, and 5) Understand students' learning style, character, and interests.

Formative assessment, as described by Boyle & Fisher (2007), is an assessment conducted during the learning process to support student learning, while summative assessment is a final evaluation of learning outcomes. Cowie & Bell (1999) define formative assessment as a collaborative process between teachers and students to recognize and respond to student learning. Popham (2008) explains that formative assessment is a planned approach where evidence of students' progress is used by teachers to adjust ongoing instructional strategies or by students to adapt their learning tactics. From these different perspectives, there are common aspects of formative assessment, including being carried out during the learning process, providing feedback to both teachers and students, and being utilized by both parties.

To ensure formative assessment is beneficial for students and teachers, teachers should consider several factors, such as: (1) Formative assessment should not be high-risk, meaning it should not heavily impact students' final grades or academic standings. Instead, it should focus on supporting learning and improvement, (2) Teachers can use various assessment instruments to gather information about student progress, understanding, and challenges, (3) Formative assessment can be seamlessly integrated into the ongoing learning process, offering continuous feedback and opportunities for improvement, (4) Employing straightforward assessment methods allows for quick feedback on student performance, (5) Formative assessment can be implemented at the beginning of learning to gauge students' prior knowledge

and identify their learning needs, (6) The assessment instruments used should not only highlight students' weaknesses but also provide insights into their strengths.

Formative assessment serves the purpose of monitoring and enhancing the learning process, as well as evaluating the achievement of learning objectives. It can be employed at different stages of the learning journey to identify students' needs and obstacles, offering valuable feedback to both students and teachers. For students, formative assessment fosters self-reflection, enabling them to track their progress, identify challenges, and devise strategies for continuous improvement. For teachers, formative assessments facilitate reflection on their teaching strategies and enable adjustments to meet students' individual needs. The results of formative assessment should be used to inform teaching practices, modify lesson plans, and offer tailored support to students. By focusing on individual progress and strengths rather than just assigning grades, formative assessment contributes to a more comprehensive and effective learning experience.

At the primary and secondary education levels, summative assessments serve the purpose of evaluating students' achievement of learning objectives and learning outcomes. These assessments are crucial as they form the basis for determining grade promotions or graduation from educational units. The assessment process involves comparing students' learning achievements against the set criteria for achieving the learning objectives. The summative assessment report includes information on learning accomplishments and may also include details about the child's growth and development. In early childhood education (PAUD), summative assessments focus on determining students' developmental achievements rather than serving as a means for grade advancement or graduation evaluation. Summative assessments can be conducted at different times, such as after the completion of a particular scope of material, at the end of a semester, or at the conclusion of a phase. However, specifically for the end of the semester, the summative assessment is optional. Teachers may choose to carry out an end-of-semester assessment if they require further confirmation or additional information to measure students' learning outcomes. If teachers believe that the assessment data obtained throughout the semester are sufficient, there might be no need for an assessment at the end of the semester.

It is important to note that summative assessments can employ various techniques and instruments, not limited to traditional tests. Teachers can use methods like observation and performance assessments, which may involve activities like practice, project completion, product creation, or portfolio evaluation. While the Independent Curriculum places emphasis on formative assessments to provide feedback and monitor student progress, summative assessments remain valuable in determining whether learning objectives have been achieved. The feedback derived from summative assessments helps measure student progress and informs teachers in designing activities for future lessons.

2. Method

This research utilized a qualitative approach to investigate the subject matter. The research subjects included teachers, students, and school principals, who were selected purposively. The study was conducted at Elementary School Mover in Buleleng Regency. To gather data, the researchers employed various techniques, including observation, in-depth interviews, and documentation. The collected data were then analyzed using a qualitative descriptive approach, which involved several stages such as data collection, data reduction, data presentation, drawing conclusions, and interpretation. The data analysis process followed the principles proposed by Sugiyono (2011) and Miles Huberman (1984). It consisted of data reduction, which involved selecting, focusing, simplifying, and summarizing the data, followed by data display to organize and present the findings. Lastly, data conclusion drawing or verification was performed to draw meaningful conclusions based on the analyzed data. In summary, this research utilized a qualitative approach, involved teachers, students, and school principals as research subjects, took place at Elementary School Mover in Buleleng Regency, and employed observation, in-depth interviews, and documentation as data collection techniques. The data were then analyzed through qualitative descriptive methods, using the principles of data reduction, data display, and data conclusion drawing/verification..
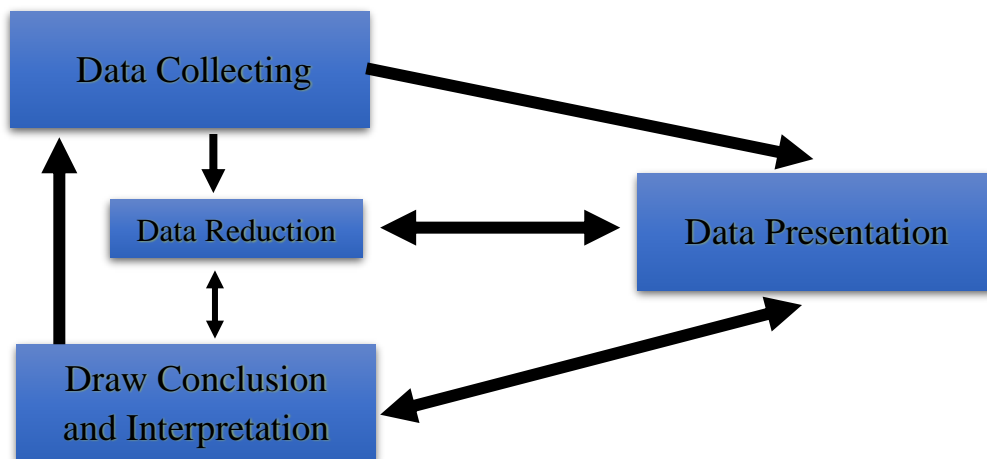

Figure 1. Research flow diagram

3. Results and Discussion

The Elementary School Mover in the Buleleng district, as a formal education unit, has made efforts to improve overall quality, such as through seminars, and workshops, accommodating various learning models, and technology, and conducting authentic assessments. The above efforts are in line with the characteristics and characteristics possessed by the Mobilization Elementary School as well as being advantages, namely: 1) Improving the

quality of learning outcomes; 2) Increasing the ability of teachers and school principals; 3) Accelerating school digitization; 4) Accelerating change for other educational units; 5) Increasing the achievement of the Pancasila Student Profile; 6) Become a Change Agent; 7) Become a coach; 8) Encouraging the academic quality of students. Quality improvement is based on the developed learning principle that learning is designed according to the stages of student development, inclusiveness, the Pancasila Student Profile, supports the development of competence and character, context, and is sustainable.

The Elementary School Mover in the Buleleng district faces significant challenges while striving to improve the curriculum implementation and overall quality of education. Some of these challenges include the lack of adequate infrastructure, a shortage of qualified human resources in the field of information technology, and limited cooperation with various stakeholders. These obstacles directly impact the teachers' ability to create student-oriented learning environments and foster creativity, productivity, and innovation in their students. Moreover, these challenges also affect the teachers' role as agents of change within the education system. To address these challenges and ensure meaningful learning, the school focuses on implementing a harmonious, integrated, and collaborative learning process. The learning process is seen as a means to educate the nation's children and instill character in students. An essential aspect of the meaningful learning process is authentic assessment, and one of the assessment methods used is diagnostic assessment.

Diagnostic assessment is carried out by teachers to specifically identify students' competencies, strengths, and weaknesses during the learning activities. By conducting this assessment, teachers can design learning activities tailored to the students' competencies and conditions. It takes place at the beginning of the learning process to assess competencies and continuously monitor students' learning progress. The results of the diagnostic assessment help map students' learning needs, enabling teachers to determine appropriate learning strategies based on students' conditions and competencies. Diagnostic assessment is categorized into two types: cognitive diagnostic assessment and non-cognitive assessment. Cognitive diagnostic assessment is conducted both at the beginning and end of the learning process to monitor students' understanding of the ongoing theme. It is essential to carry out cognitive diagnostic assessments continuously, before and after learning activities.

On the other hand, non-cognitive diagnostic assessment focuses on gathering information about students' social, psychological, and emotional characteristics that are not directly related to their intellectual abilities. This assessment addresses emotional aspects, social aspects, and developments that go beyond students' academic capabilities. In summary, the Elementary School Mover faces challenges in improving education quality but endeavors to create a meaningful learning process through authentic assessment, specifically using diagnostic assessment to tailor learning strategies based on students' competencies and needs. The school emphasizes the importance of both cognitive and non-cognitive aspects in understanding and supporting students' overall development.

An illustration of this non-cognitive diagnostic evaluation involves assessing students' emotional maturity, social skills, emotional regulation, adaptability, and interpersonal abilities. In practical terms, this evaluation can be conducted through various methods, such as tests, observations, and interviews with the students themselves or individuals close to them. The primary aim of this non-cognitive diagnostic assessment is to understand how students handle their emotions and social interactions in the classroom, as these aspects significantly impact their emotional and social intelligence. The results of this evaluation can be utilized to support students in enhancing their social and emotional competencies. Furthermore, this assessment proves valuable in preparing students to tackle future challenges.

A genuine depiction of both cognitive and non-cognitive diagnostic assessments conducted on five subjects by teachers at Elementary School Mover in the Buleleng district.

Table 1. Independent curriculum

No	Subjects in the Independent Curriculum	Class	Cognitive diagnostic assessment instrument	Non-cognitive diagnostic assessment instrument
1	Mathematics	I-VI	Test (written and verbal)	Interview
2	Indonesian Language	I-VI	Test (written and verbal)	Interview
3	Science	I-VI	Test (written and verbal)	Interview
4	Religion and Manner Education	I-VI	Verbal	Interview
5	Civic Education	I-VI	Test (written and verbal)	Interview

The independent curriculum grants educators the autonomy to design a high-quality learning experience that aligns with the students' competencies, needs, and learning environment. At Elementary School Mover in the Buleleng district, teachers have embraced the independent curriculum alongside cognitive and non-cognitive diagnostic assessments. A significant majority, 95% of the teachers, are familiar with and recognize the importance of the independent curriculum. Of these teachers, 78% conduct cognitive diagnostic assessments, while 72% carry out non-cognitive diagnostic assessments in their unique approaches.

The teacher's assessment proves invaluable in understanding students' competency levels, psychological and social-emotional well-being, learning conditions, social backgrounds, learning styles, character, and interests. These data are highly beneficial for selecting appropriate strategies in the learning process, such as differentiated learning and tailored instruction, which are integral to effective teaching preparation.

In line with Kusairi's research (2012), formative assessment allows grouping students based on their learning difficulties or misconceptions. Brummitt (2020) defines diagnostic assessment as a pre-assessment tool enabling teachers to identify individual students' strengths, weaknesses, knowledge, and skills before commencing teaching. Its primary purpose is to diagnose student challenges and guide lesson planning and curriculum development.

Research by Ulfa Laulita, Marzoan, and Fitriani Rahayu (2022) reveals aspects of teacher readiness regarding diagnostic assessments, showing that 63.64% of teachers are already familiar with diagnostic assessments, 45.45% have conducted diagnostic assessments, 40.91% feel they lack a strong understanding and have never performed diagnostic assessments, and 77.27% have never participated in any socialization or training related to diagnostic assessment.

4. Conclusion

The independent curriculum offers educators greater flexibility to enhance the quality of education, tailoring it to match students' competencies, psychosocial development, and backgrounds. As the curriculum is put into action, a seamless integration akin to an orchestra is required in the learning process. To gauge the success of this harmonious and meaningful learning orchestra, authentic assessment becomes essential. Within the Elementary School Mover in the Buleleng district, as a formal education institution, both cognitive and non-cognitive diagnostic assessments have been implemented. These diagnostic assessments serve the purpose of designing methods and learning strategies that align with students' competencies and needs. Considering the varying competencies and needs of students, different approaches and strategies are necessary for effective learning support. These encompass differentiated learning and teaching at the appropriate level, which hold the potential to offer remedial and enrichment instruction with promising results.

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