

## CHAPTER I

### INTRODUCTION

The first chapter consists of: (1) the background of the research, (2) the problem of the research, (3) the limitation of the research, (4) research question, (5) research objectives, (6) the significance of the research, and (7) key term definition in the research.

#### 1.1 Background of Study

Teaching includes a wide range of activities meant to transfer information, skills, and understanding across all educational levels. The main goal of formal teacher-student contact is obtaining knowledge and skill acquisition. The goal of teaching is to ensure knowledge acquisition – if not, it has failed. Simply put, teaching goes beyond action. The focus is on students and their cognitive development. Intelligence, aptitude, attitude, interest, motivation, needs, and temperament vary among people. Thus, recognizing and embracing individual diversity is the first step to improving education (Killen & O'Toole, 2023).

In the present day, the teacher uses modern teaching technique where they utilize technology during teaching and learning process and focuses on student centered learning. Modern classrooms use speakers, internet streaming videos, interactive whiteboards, visualizers, response systems, CDs, projectors, and instructional software. These tools help teachers explain concepts to students and teach students more effectively. Teachers must use various modern teaching methods to interact with students (Vijayalakshmi, 2019). The teacher must develop and adjust their skill according to the time in order to teach the student in the modern era.

In line to it, teachers need to adapt their teaching methods to keep up with the time and the curriculum. Curriculum is an outline of educational contents, goals, and activities for a specific program. It guides school and teachers in directing students to develop knowledges and skills. A curriculum usually covers some subjects or topics, specifying the sequence and methods for teaching them. In Indonesia, Merdeka curriculum is implemented which focuses on freedom in learning, flexibility and development on critical thinking and creativity. This curriculum gives diverse learning that focuses on optimizing the content and providing sufficient time for the student to grasp the knowledge (Nasution, A. F. et al., 2023). Thus assist the implementation of modern assessment method such as differentiated assessment. And then, teachers must employ a suitable approach to train students in critical and creative thinking (Astari et al., 2023).

Additionally, the teacher's ability to gauge the student's level of comprehension is an important part of the learning process. It generates the necessary evaluations to collect data on students' abilities and knowledges. Assessment is when a teacher determines if a student has met learning objectives by comparing their performance on various tasks using a variety of factors. According to Aquino and Yambi (2020), assessments help teachers determine where their students excel and where they need improvement. It allows them to tailor their lessons to each student's unique needs. Further, it is essential to conduct diagnostic, formative, and summative assessments to measure learning. Astari et al., (2023) stated that assessment is an essential component in implementing the Merdeka curriculum. It is because assessment used to measure student learning outcomes and also monitor their progress. Therefore, teachers could use diagnostic, formative, and summative assessments to assess student competencies.

Furthermore, there are various approaches for evaluating students' knowledge and skills. However, not all of the assessment could accommodate student differences. Student comes from different learning background. Wormeli (2006) stated that student comes to the class with different readiness and learning styles. Assessing student using equal standard or one-size-fit-all assessment was not fair for all the students. Students' mastery might not always visible in the same way because it is multidimensional (Wormeli, 2006). Based on that statement, teacher need to annually redefine mastery for each topic and not assumed it based on previous habit. So, the assessment would be consistence, transparent, and relevant (Wormeli, 2006).

Therefore, differentiated assessment is one of the strategies that may be implemented to assess students which fulfil student's diverse learning need. According to Kaur (2018) and Alberta Education, n.d. (2010), differentiated assessment allows teachers to choose the strategies and tools to facilitate the same opportunities for students in showing their ability and provide learners from varied academic backgrounds to exhibit what they have learned. Varsavsky and Rayner (2013) explain that differentiated assessment is a framework for education that attempts to meet the needs of diverse student bodies by providing freedom in terms of the depth and breadth of students' knowledge and skill sets as well as the kinds of assessment tasks they complete.

Other than the type of assessment that has been discussed, differentiated assessment, the sense of curriculum is also well-known for its terminology being proposed by the expert or institution. One of the most discussed types of curriculum might be Montessori, especially when the discussion is connected to education on young learners. Montessori is a method developed by Dr. Maria Montessori from Italy.

It focuses on developing student's independence, freedom within certain limits, and respect for the child's natural physical, psychological, and social development.

In line with Hanida et al., (2024) states that Montessori is a method that emphasizes the development of the individual as a whole and how to appreciate the differences in each child. The development includes cognitive, social-emotional, physical-motor, and religious-moral development. This approach gives students the freedom to learn and develop at their own pace. Implementing differentiated assessment in Montessori class is important so teacher could assess their student based on individual characteristic that give a detail description related their ability. In line with assessment, in assessing student in Montessori environment, teacher use differentiated assessment because the suitable concept that is about giving freedom to student and focusing on developing student ability based on their pace of learning.

The fact that differentiated assessment although it is beneficial, has not been popular to be applied in the setting of Singaraja. Singaraja is one of the biggest cities in Bali, whose identity is related to the city of education. according to the preliminary study done by the researcher on February 2025 to 4 schools in Singaraja. It turns out that 3 out of 4 schools has not implemented differentiated assessments. Differentiated assessment was finally observed to be applied only in 1 school named Singaraja Montessori School. Moreover, beside applying differentiated assessment, this schools also adapts Montessori curriculum which increases the value of uniqueness of this school.

Singaraja Montessori School (SMS) focuses on developing individual skills related to real-life skills and helps them learn to control their emotions. Moreover, the learning process is according to their interest by allowing them to explore many activities while still under teacher supervision. In this school, diagnostic assessment

was used to assess the student related their interest and talent, learning abilities, learning style, and intelligence. Therefore, based on Montessori method, the student in elementary level is divided into two classes. First, second and third grade level become one class meanwhile the fourth, fifth, and sixth grade level become one class.

Knowing that there was a school that applied differentiated assessment along with also adapted Montessori school in Singaraja. The second preliminary result was conducted at SMS on 18 March - 16 April 2025. The result of preliminary observation done in Singaraja Montessori School related to the implementation of differentiated assessment turned out that the teacher implemented differentiated assessment. The result of the prelim study showed: (1) the school emphasized student-centered learning which align with the concept of differentiated assessment, (2) the school applies two curriculums: Merdeka curriculum and Montessori curriculum, (3) SMS has unique system where three level of student become one class which makes the student in one class has different need, ability and knowledge because they are in different level of education, (4) student differences come from several aspect like origin, age, language, ability and mental state, (5) teachers apply differentiated assessment every day such as differentiated the level, variation product and activities.

Furthermore, the implementation of differentiated assessment needs a lot preparation from teacher and school. to maintain the proper planning, teacher ability in design material and manage time was needed (Ibrahim & Ali, 2015). The issue of this study raised from limited studies that exploring the implementation of differentiated assessment especially for elementary level in Singaraja. This study did not focus on exploring why other school still has not implement yet. Therefore, this study was conducted in order to explore the implementation of differentiated assessment in singaraja and investigate the challenges happen during the implementation. In addition,

the setting of this study adds a new pedagogical aspect in the form of applying the Montessori method. The result help to identify in understanding the indication of why other school still has not implement yet.

In addition, the urgency of conducting this study rely on the limited study that combined the implementation of differentiated assessment with Montessori learning method in singaraja. The study adds how Montessori method influences the implementation of differentiated assessment. Align with the issue of this study, conducted study related differentiated assessment implementation in terms of content, process, product and environment along with Montessori method is important in order to provide additional information for teacher in implementing these concepts. Moreover, this study might identify the reason of not implementing the assessment through challenges face by the teacher. so, the result could be a big view for other school to start implementing this assessment.

Several previous studies related to differentiated assessment were conducted, indicating that this topic indeed is academically accepted and researchable globally. A study by Kaur (2018) conducted research entitled “Exploring and evaluating differentiated assessment practices of in-service teachers for components of differentiation.” The result is about teacher explanation and recommendation ways to improve knowledge and the implementation of differentiated assessment. Moreover, Majuddin (2022) conducted research entitled Students’ Perspectives on the Use of Differentiated Assessment Tool: Results from an Explanatory Sequential Mixed-Method Pilot Study. This study was about PutraPacer, which was developed to help teachers implement differentiated assessments.

In addition, research entitled “Toward Differentiated Assessment in a Public College in Oman” by Ibrahim & Ali (2015). This study focuses on finding the potential

implementation of differentiated assessment in a public college in Oman. Additionally, Marlina et al. (2023) conducted research entitled Differentiated Learning Assessment Model to Improve Involvement of Special Needs Students in Inclusive Schools. The study focuses on developing differentiated learning assessment tools and tests the product using the ADDIE model.

From previous study, it portrays that the topic has already been researched. Unfortunately, there is an inclination indicating that was conducted in Singaraja especially with Montessori environment which employ two different curriculums. It makes there were limited study that connecting between differentiated assessment and Montessori approach which become the gap of this study. Furthermore, this study focuses on direct observation of teachers' practices and challenges in the context of a Montessori classroom. Additionally, the study conducted by Kaur (2018) and Ibrahim & Ali (2015) was using larger population and focuses on teacher who taught higher level student which employ questionnaire or survey as the data collection. Meanwhile this study focuses on deep interview related how the teachers prepare the assessment and the challenges they face in the implementation of differentiated assessment while adjusting with the curriculum and the diversity of student in everyday practice.

Moreover, the study conducted by Majuddin (2022) employ mix-method and then, the method from a study by Marlina et al. (2023) was conducted using Research & Development (model ADDIE) while, this study employs a qualitative research method with a case study as the research design. The setting is in Singaraja city, specifically at Singaraja Montessori School. Singaraja Montessori School became a strategic place to conduct this research because of the availability of data and ease of access. Therefore, to gather data related the assessment practice and teacher opinions related to the challenge and benefit on implementing differentiated assessment, this

research collects the data by using observation, interview, and survey. Besides, a few documents explore and investigate related studies about differentiated assessment in literature (Varsavsky & Rayner, 2013; Kaur, 2018).

These studies provide important insights, yet they have not addressed the implementation of differentiated assessment within a Montessori-based learning environment that integrates two curriculums and applies multi-grade classroom settings which becomes the focus of the present study. This study aims to observe the implementation of differentiated assessment as the strategy to assess the student. In addition, this study seeks to examine the challenges the teacher faces and the teacher' perspectives on differentiated assessment. It differs from the previous study, which took place in a setting with the highest level of students. This research focuses on fourth, fifth, and sixth-grade students. To be clear, the novelty of this study was exploring the influence of Montessori method on the implementation of differentiated assessment. Therefore, conducting this research would gain insight into the field of differentiated assessment.

In addition, Rick Wormeli is an American instructor with a national board certification. To be specific, Rick Wormeli launched a book entitled Fair is not Always Equal: Assessment and Grading in the Differentiated Classroom in 2006. Further, Wormeli (2006) served as the theoretical foundation for this research for some reasons. Rick Wormeli is an expert that explain about the concept of “differentiated assessment”, including practical strategies, principles of fair assessment, and their implementation in the classroom. meanwhile the famous expert in differentiation like Carol Ann Tomlinson was focuses on differentiated instruction. However, this study adapts the differentiation aspects by Tomlinson, those aspects were content, process, product and environment.

Therefore, this study is more suitable to adopt Wormeli as theoretical foundation because the theory focuses on assessment same as the focus of this study. Further, the content of the book stressing on the fairness of assessment that no need to giving the same test. The principle is suitable for the study which observe assessment practice in the class. Moreover, the book states the real practice related how teacher can customize assessment based on readiness, interest, and learning profile. Hence, this book can be a guidance in developing instrument related differentiated assessments. Last but not least, the theory of Rick Wormeli is in line with the Merdeka curriculum and the Montessori method by emphasizing formative, flexible, and reflective assessment. To be precise, the theory was used because it supports the assessments that promote student growth, not just a final grade which make the theory is suitable to be the foundation of this study.

To reiterate, evaluating students is a way to know the progress of their ability in the learning process. Differentiated assessment attends to assist the diversity of students and fulfill their needs in the learning process. It allows various academic backgrounds to have a chance to demonstrate effectively their ability and knowledge. It is supported by several studies related to the potential of implementing differentiation at each level of education. In alignment, this study seeks the implementation of differentiated assessment at Singaraja Montessori School. Therefore, there is limited study that explore and investigate the implementation of differentiated assessment in elementary school in Singaraja specifically in the Montessori classroom which combined two curriculums (Merdeka Curriculum + Montessori), two languages (Indonesia and English) and multi-age classes along with their diverse cultural backgrounds. Further, the purpose of this research is to describe how fourth, fifth, and sixth-grade students at

Singaraja Montessori School are being assessed using differentiated assessment strategies.

## 1.2 Problem Identification

The issue of this study raised from empirical study. Previous studies have explored the implementation of differentiated assessment, yet the attention given to the setting Montessori school in Singaraja, Bali, has been none identified. The problem was not raised from the school issue. Furthermore, there are no research has yet connected differentiated assessment approach with the Montessori method. The school was chosen in order to fulfil the data needed which is about differentiated assessment that was implemented along with Montessori method. This study focuses on direct classroom observations and teacher interviews for small amount of population in lower level of education specifically elementary level, unlike Kaur (2018) and Ibrahim & Ali (2015), who used surveys with larger populations and higher-level students. Moreover, three out of ten studies use case study as the research design, however two out of three focus on differentiated instruction rather than assessment.

It indicates a lack of research specifically exploring the implementation of differentiated assessment through case study. It makes the there is no depth finding that explore how teacher implement differentiated assessment and how Montessori affect the implementation of the assessment. Therefore, this study conducted case study which focus on the implementation of differentiated assessment in the classroom context, particularly within a Montessori setting.

In addition, the different learning styles of each student become a challenge for the teacher to create the content and activities in the learning process. Moreover, students have different pace of learning in varied topics. Even more, the students' need

to adjust the flow and pattern of learning according to the class situation. Diversity in learning might be the solution to the teaching and learning process. Implementing differentiated assessment is still rare in Singaraja. In addition, Indriyani (2021) observes four schools in Singaraja about the assessment instrument types used by the teacher. It turns out that the teacher mostly implemented project and performance, part of authentic assessment. Therefore, the limited implementation of differentiated assessment in Singaraja leads to lack of knowledge and skill.

This study has been conducted observation to small number of schools in Singaraja. Based on observing four schools in Singaraja, there found two teachers that did not know about differentiated assessment, and the rest of the teacher that knew about differentiated assessment stated that they employed differentiated assessment if they could manage the kids to follow the activities. The size of the class really matters because the teacher explain that manage all the student to implement differentiated assessment is difficult.

Even in special need school, the teacher stated that they hardly communicate with the student, even though they have to implement differentiated assessment, the teacher prefers to adjusting the easiest strategies to all the student as long as the student could understand the material. Moreover, the strategy that teacher employ is giving worksheet about matching picture. Unfortunately, the result of this small observation cannot be generalized because the limitation of school that has been observe. However, these schools have shown that implement differentiated assessment in the class is inclined to be rare.

After observing some school, Singaraja Montessori School (SMS) become the chosen one. Based on the observation in SMS, the school implement differentiated assessment that was combine with Montessori method. The students are the

combination of fourth until sixth grade level, also they come from different country that made the teachers need to deliver the material using English. The combination of differentiated assessment and Montessori method are not yet widely research. Therefore, this research aimed to find out the implementation of differentiated assessment in Montessori environment in terms of content, process, product, and learning environment for fourth-, fifth-, and sixth-grade students and the challenges faced by the teacher. Moreover, seeking out about teacher' perspectives on the benefits of implementing differentiated assessment was also investigated.

### **1.3 Limitation of Study**

This study focused on observing the implementation of differentiated assessment in terms of content, process, product, and learning environment for fourth, fifth, and sixth-grade students in Singaraja Montessori School academic year 2025/2026. Additionally, the challenges faced by the teacher in implementing differentiated assessment and the teacher's perspective on the benefits of implementing differentiated assessment were deeply investigated through observation, interview, and survey. This study carried out data related differentiated assessment practice which also align with the differentiated instruction. Assessment needs to reflect on how students were taught so, instruction becomes a crucial component in learning because it impacts the assessment process.

This study was also limited by the setting selected for the research, that was Singaraja, Bali. It has become an ideal setting for observing the implementation of modern educational approaches, such as differentiated assessment. Moreover, the ideal setting of this study need to implemented not only differentiated assessment but also Montessori method with multi-age classes which has diverse student.

Moreover, Montessori learning is one of approaches that focus on student development, this is suitable to implement for small grade such as elementary school. Montessori learning environments are built to give the students the freedom to choose what they want to learn and also develop their daily habits and independence. Singaraja Montessori School is the only school in singaraja that provide Montessori learning environment which could provide a unique view related to the implementation of differentiated assessments. Additionally, the school has implemented this strategy and the headmaster already state that this school apply differentiated assessment by showing the assessment plan. The setting is fit for the purpose because the school employ two curriculums with the availability of diverse student in the class.

Therefore, conducting research at Singaraja Montessori School made it easier to collect data because of the school's wealth of experience. The students in this school come from diverse backgrounds, culturally, socially, and academically, and there are many things to observe regarding how the teacher implements the differentiated assessment to fulfill their needs. This strategy's constraints would help other schools design more effective training, support, and policies. Therefore, it is essential to know how the student accepts and responds to the strategy because this strategy is made to fulfill their needs. Their perspective might help the teacher to adjust assessment approaches to be more effective and humanistic.

## 1.4 Research Questions

Based on the described research problem and limitation above, three formulated questions were drawn, as follow:

1. How do the investigated teachers implement differentiated assessment in terms of content, process, product, and learning environment for fourth-, fifth-, and sixth-grade students at Singaraja Montessori School academic year 2025/2026?
2. What are the investigated teachers' challenges in implementing differentiated assessment at Singaraja Montessori School academic year 2025/2026?
3. How is the investigated teachers' perspective on the benefits of implementing differentiated assessment at Singaraja Montessori School academic year 2025/2026?

## 1.5 Research Objectives

This study was expected to reach several main objectives, including:

1. To explore and analyze how investigated teachers implement differentiated assessment in terms of content, process, product, and learning environment for fourth-, fifth-, and sixth-grade students at Singaraja Montessori School in the 2025/2026 academic year.
2. To investigate the investigated teachers' challenges in implementing differentiated assessment at Singaraja Montessori School in the 2025/2026 academic year.
3. To investigate the investigated teachers' perspective on the benefits of implementing differentiated assessment at Singaraja Montessori School in the 2025/2026 academic year.

## **1.6 Research Significance**

### **1.6.1. Theoretical Significance**

This study significantly contributes to the development of differentiated assessment theory, particularly in the context of education at the elementary level. Differentiated assessment is one assessment theory developed based on the understanding that students have different learning needs. Unfortunately, there are more resources related to differentiated instruction than differentiated assessment, even though differentiated assessment is still aligned with differentiated instruction. However, in practice, this strategy is still complicated to implement, especially in heterogeneous classes. It is indicated by some observations on different school at Singaraja that showed 3 out of 4 school did not implement differentiated assessment – leaving only 1 school that really implement differentiated assessment, Singaraja Montessori School. The school that did not implement differentiated assessment have more than 30 students in one class. Meanwhile, the other schools that implement differentiated assessment had less than 20 students in one class. Unfortunately, there were two schools that not really implement the differentiated assessment. The reason of not or rarely implementing differentiated assessment vary from the lack of information, training, facility and class size.

The findings of this study provide descriptions of differentiated assessment applied by the teachers for fourth-, fifth-, and sixth-grade Students of Singaraja Montessori School academic year 2025/2026. The result provide novelty related to the implementation of differentiated assessment in elementary schools. In addition, the findings also have the potential to enrich the literature on ways to implement this assessment strategy with various levels of students.

Moreover, it provides information regarding the challenges faced by the teacher who implements this strategy. Further, it provides information about the strengths and weaknesses of the strategy from a student perspective. Overall, the findings of this study can enrich the understanding of how differentiated assessment theory functions in practice and provide a basis for further development in research related to the implementation of differentiated assessment.

### **1.6.2. Practical Significance**

Several practical significances have also been drawn, including:

1. This study provides information related differentiated practice in Singaraja context which is can be reference for Singaraja teacher to design suitable assessment to assess the student.
2. This study provides vital component in order to implement differentiated assessment in local setting.
3. The finding provides additional information about a strategy to assess students in English teaching and learning that customizes assessment methods based on differences in students' abilities, interests, and learning styles. In addition, it gives insight into the challenges of implementing this strategy and how to handle them.
4. The findings of this study can serve as a valuable reference for further studies on differentiated assessment, particularly in Montessori or alternative educational settings, where research on this topic remains limited.

## 1.7 Definition of Key Study

### 1.7.1. Conceptual Definition

#### 1. Differentiated Assessment

Teachers can use several approaches to assess students' abilities. One of these approaches is differentiated assessment. Kaur (2018) defines differentiated assessment as a method to assess students effectively and fairly by giving them the freedom to choose how they want to show their knowledge. This allows the students to demonstrate their knowledge better. Moreover, Wormeli (2006) states that differentiated assessment aims to remind students of important knowledge and skills as well as provide rapid and timely feedback. In addition, Ibrahim & Ali (2015) define differentiated assessment as a form of formative assessment because it promotes continuous assessment that assist teacher to recognize student's ability.

#### 2. Montessori Method

Montessori is an educational method grounded in scientific pedagogy that emphasizes the natural development of children through self-directed activity, independence, and interaction with a carefully prepared environment. Montessori (2012) stated that, learning occurs most effectively when children are given freedom to choose meaningful activities that correspond to their developmental needs. The teachers function primarily as observers and facilitators rather than direct instructors. This approach supports the student development in terms of cognitive, social, emotional and physical by giving hands-on experiences with flexible learning environment.

### **1.7.2. Operational Definition**

#### **1. Differentiated Assessment**

Differentiated assessment is a formative assessment strategy used by teachers to facilitate diverse learners. The diversity of student here is from the origin of student. The student came from different country with different academic background which also have different culture. Moreover, the students have different level of education ranging from fourth until sixth grade level. The teachers implement differentiated assessments to assess students' knowledge and ability during class. The term "differentiated assessment" throughout this resource represents both graded and non-graded activities implemented by the teacher. The assessment observed was based on student's academic performance. However, this study also explains a little bit related student behavior.

#### **2. Montessori Method**

Montessori method in this study was defined as the instructional and assessment practices implemented at Singaraja Montessori School. that reflect core Montessori method, as evidenced through: mixed-age classroom, Teacher roles as facilitators, Student-centered learning activities, Observation-based assessment practices, and Flexible assessment implementation. Montessori in this study can be viewed as a facilitating framework for the implementation of differentiated assessment.