

Implementation of Learning and Facilitation of Differentiated Learning Approach for Primary School

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Abstract

This study aims to identify the level of knowledge of primary school teachers towards the primary schools' learning and facilitation (L&F) of differentiated learning approach and identify the level of implementation of L&F of differentiated learning approach among primary school teachers. The concept of Differentiated Instruction Pedagogy introduced by Carol Ann Tomlinson in 1995 was used as a basis for the implementation of this study. The design of this study used non-experimental survey research. The researcher used a questionnaire instrument in the form of a Likert scale in Google Form for this study. Three main factors were given priority in the study, namely, student readiness, student interests, and learning profile. The findings of this study show that the pedagogical implementation of differentiated learning is very high among primary school teachers. They are sensitive to the educational changes in Malaysia and are ready to fight to implement quality L&F.

Keywords: Different Learning Pedagogy, Differentiated Instruction Pedagogy Concept, Student Readiness, Student Interests, and Learning Profile

Introduction

21st-century skills are one of the government's efforts to ensure that students today can compete with other globalized countries. These 21st-century skills include reading skills, communication skills, counting skills, writing skills, interpersonal, intrapersonal, science and technology, and many others. To ensure that students master these skills, teachers and schools should implement a meaningful teaching and learning process for students. Sani and Lail (2012) argue that the quality of education value the expertise of competent teachers.

Teachers nowadays need to be aware of the differences of students involving socio-economic, cultural, language, religious, cognitive level, affective, interest, tendencies, gender, and background aspects so that teachers can implement the L&F process without any distractions to enhance the students' abilities and potential. Each teacher should focus on the potential and abilities of the students so that the L&F process can be carried out effectively and as planned (Zamri et al., 2018).

The way of learning for each student is different. The students have their distinctive abilities and style in deepening and appreciating the content delivered by the teacher during the L&F process (Danial Arif Abdul Muttalip, 2020). The diversity of these student characteristics can affect the teaching and learning outcomes implemented by teachers regardless of the potential and understanding of the students.

Therefore, teachers need to be sensitive in selecting the best and most appropriate teaching approach for the students to ensure that every student follows the L&F process implemented.

Differentiated Learning

According to Zurina (2021) in her study noted that (Bondie et al., 2019) thinks that the differentiated learning approach that is “one-size Fit-all” clearly proves that such an approach is not suitable to be implemented in the classroom consisting of students who have a diversity of potential. The “one size Fit-all” teaching method should no longer be implemented as segregation classes are not implemented starting in 2019 permanently unless it is carried out for the purpose specifics such as class segregation of a temporary nature are allowed (Ministry of Education, 2018).

Gardner (1993), states that there are nine types of intelligence for each person. Among them are verbal-linguistic intelligence, logical-mathematical intelligence, visual-space intelligence, kinesthetic intelligence, musical intelligence, interpersonal intelligence, intrapersonal intelligence, naturalist intelligence, and existential intelligence. This statement is supported by Nordin and Hussin, (2014) state that there are many studies conducted related to student intelligence and teachers’ teaching and learning methods in the classroom. The Curriculum Development Division (2018), states that every teacher should apply all types of intelligence in their teaching according to the diversity of students in the classroom.

Teachers will begin to assess and measure the students’ level of mastery through classroom assessment (PBD) for the subjects taught by them. The teacher involved will report on the development of the students' abilities and progress for each subject. The level of mastery is categorized into six levels of mastery of students according to the hierarchy: very limited, limited, satisfactory, good, very good, and excellent. Teachers should plan T&L for the students according to their level of mastery. They are not suitable for the same way of content delivery and input. Teachers who implement differentiated learning-based teaching and learning processes can focus on the students’ weaknesses in a specific area as well as optimally master the needs of students according to their level.

Therefore, different teaching approaches were introduced and it is one of the most effective ways to ensure that every student masters the skills set according to the Primary School Standard Curriculum (KSSR). Differentiated instruction allows students to learn optimally according to cognitive level and learning situations. At the same time, this method of teaching approach meets the learning needs and provides the same learning opportunities to each student (Zamri et al., 2018).

Differentiated pedagogy was first pioneered by Tomlinson in the United State of America and he argues that Differentiated Pedagogy is essential for teachers to practice where teachers will take into account the needs of different students in terms of readiness,

interests, and learning profile (Tomlinson, 1999).

In 1995, Coral Ann Tomlinson was the first person to introduce the Differentiated Pedagogy Concept in the United States of America (USA). This concept includes the results and content of the teaching of an active and accredited teacher in the implementation of curriculum content by diversifying teaching resources, diversifying teaching activities and techniques, and diversifying student assessment and evaluation to meet the objectives of the subjects as planned for students of various levels. The concept of Differentiated Pedagogy Instruction is designed according to the figure shown below.

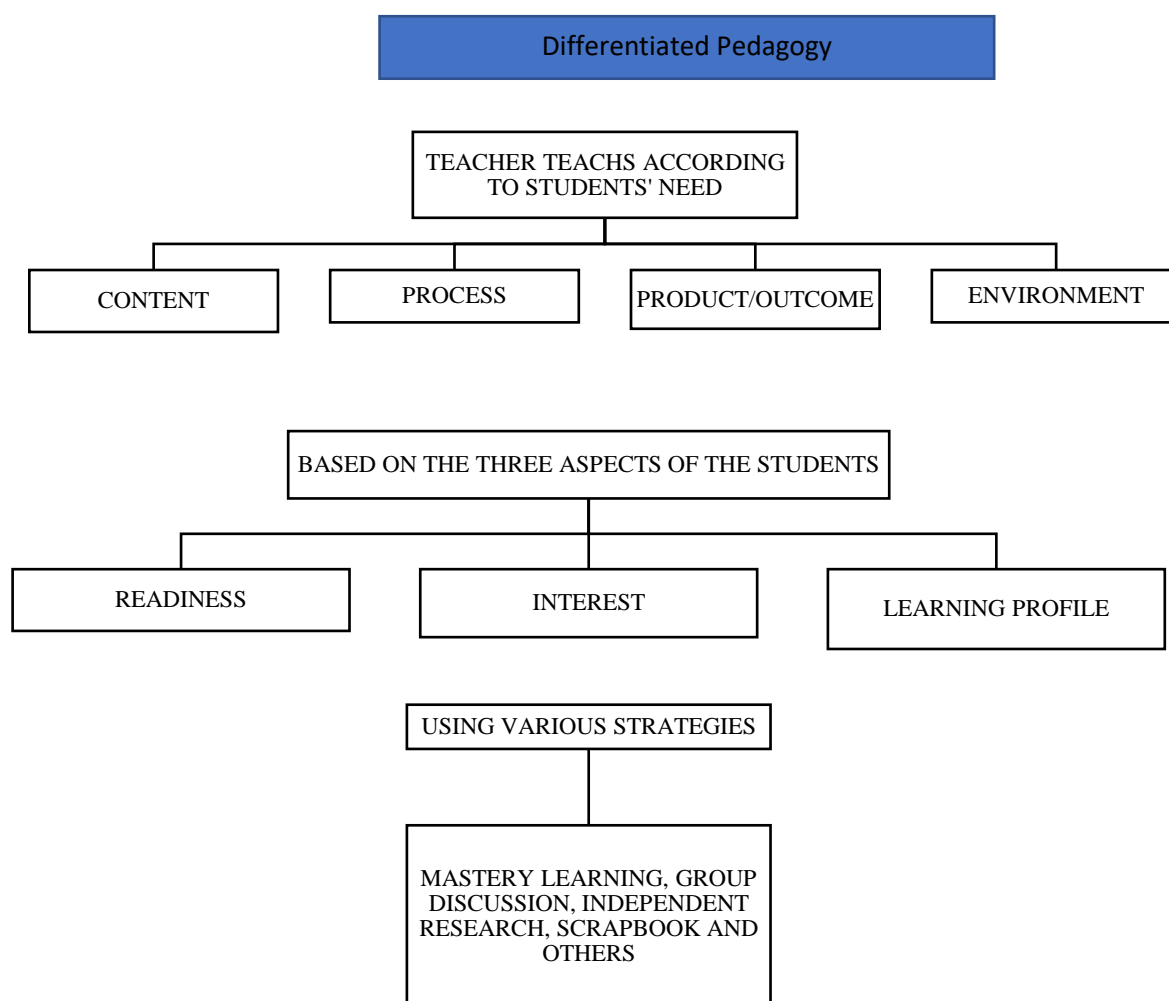


Figure 1: Differentiated Pedagogy Concept

The figure above explains the concept of Differentiated Instruction Pedagogy (1995) outlined by Carol Ann Tomlinson. This concept is designed based on the content, process, results, and environment to ensure that the students achieve their learning objectives without dropping out of any skills. It is also designed taking into account three main aspects, namely, student readiness, student interest, and learning profile.

Readiness

Student readiness is very important in the success of the T&F process. This is because it will give a great impact on the teaching process implemented by the teacher, even if the teacher plans the teaching content that is thoughtful and robust. Santangelo and Tomlinson (2008) state that one of the important factors for teachers in modifying teaching is the

readiness of the students. The readiness of students can be seen from the factors that students learn with different levels of background knowledge, different aspects of the student experience, and different levels of skills in the learning content taught by the teachers.

Furthermore, for the process of physical, mental, and emotional adaptation in the performing of an action, readiness is the most important element. This statement is also supported by Abd Halim (2015), who agrees that the readiness of students is a very important factor in the learning process. Confusion and lack of understanding of the content of the lesson taught by the teachers are the causes of unpreparedness among the students.

According to Habibah and Rahil (1990), the existing knowledge in the students is very important as this allows the students to master the content of the learning. At the same time, it can also streamline the process of learning and student learning. Meanwhile, students are ready to receive new information on new learning topics. Thus, it is evident that before starting the T&F session, teachers should ensure the readiness of each student to receive new knowledge.

Interest

The findings received by Yulianingsih and Lumban (2019) from their study showed that easily students easily the learning even though the learning activities are complex and difficult to understand if the student is interested in something. This will create a positive feeling toward learning activities.

In addition, the students' interest is a very important factor in planning and implementing T&F sessions in schools. Interest will be the assessment level for teachers in planning content issues for the subjects taught by them. At the same time, the interest of these students should be taken into account in planning the T&F process so that the objectives of learning planned according to the level of mastery of the students can be achieved.

This statement is similar to the findings of Noor Erma and Leong (2014) who showed that there was a significant relationship between the students' interest and the Mathematics achievement gained by the students. The findings showed that students who were interested in pursuing Mathematics subjects would result in high Mathematics achievement. On the other hand, students who are not interested in Mathematics subjects will affect their Mathematics achievement at a low level.

Learning Profile

A teacher should know and ensure a student's learning profile before planning the content of their daily teaching. Santangelo and Tomlinson (2008) list the factors involved in the student's learning profile. Among them are students who differ in terms of learning styles, different learning choices such as learning in groups or individually, and differences in terms of desire for the way teachers teach and different learning environments such as noisy situations or otherwise.

The Curriculum and Assessment Standard Document recommends teachers apply diversity intelligence in the T&F process to students of different potentials in the classroom

(Curriculum Development Division, 2018).

Whereas, according to Tomlinson's study (2017), the factors that form the learning profile are the learning style, intelligence preference, gender, and culture. Thus, the differences in students' learning profiles can affect the students' learning. Therefore, this factor should be emphasized by a teacher to ensure that no students drop out of the learning process.

Problem statement

The Ministry of Education announced the abolishment of the examination system for primary school students based on the Release Letter Number 14 of the Year 2018 (Ministry of Education, 2018a) which suggested that primary school students will no longer sit for the examination to assess their level, they will be assessed holistically by teachers. The Education Director has announced that there will be no more streaming classes and students will be in mixed classes (Ministry of Education, 2018a).

A classroom in each school must be filled with the uniqueness of students from a variety of different backgrounds. These differences are not only assessed in terms of academic level. It is measured in terms of culture, language, acceptance, and cognitive and learning preferences, which is a tendency in a subject (Zamri et.al., 2015). This causes teachers to practice different T&F according to the students' ability to ensure that all students master the skills taught by the teacher according to the prescribed curriculum.

Therefore, the researcher wanted to study the implementation and effectiveness of students' involvement in T&F of differentiated learning approach for primary school.

Research Objectives

In general, this study aimed to examine the implementation of learning and facilitation of a differentiated learning approach for primary school. Therefore, the objective of this study is to:

1. Identify the level of knowledge of primary school teachers towards learning and facilitation of differentiated learning approach for primary school.
2. Identify the level of implementation of learning and facilitation of differentiated learning approach among primary school teachers.

Research Questions

The research questions of this study are to identify:

1. What is the level of knowledge of primary school teachers towards learning and facilitation of differentiated learning approaches for primary school.
2. What is the level of implementation of learning and facilitation of differentiated learning approach among primary school teachers.

Research Methodology

Research methodology refers to the most suitable method for conducting research and determining effective procedures for answering research problems.

Research Design

Afrina (2019) research design is a data processing procedure that is collected based on specific

and systematic planning of the concept of the formation of a network of relationships between the variables involved in a study. The design of this study used non-experimental survey research.

Research Sample

The research population consisted of randomly selected 40 primary school teachers. The researcher selected this sample to obtain data for his studies so that this study can lead to the researcher's objective, which is to identify the level of knowledge of primary school teachers towards the T&F of differentiated learning approach of primary school and also identify the level of implementation of the T&F of differentiated learning approach among primary school teachers. Based on the targeted selection sample, a total of 40 teachers were randomly selected to obtain responses to the objectives of this study.

Research Instruments

The researcher used a questionnaire instrument in the form of a Likert scale in Google Form for this study. The Danial Arif Abdul Muttalip's questionnaire (2020) was adapted and modified to obtain information and data for the researcher's study. This Google Form allows the searcher to receive online respondent feedback accurately and quickly. This Likert scale-based questionnaire instrument consists of three main sections. Section A relates to the demographic information of the respondent. Section B involves the level of knowledge of primary school teachers towards the T&F of differentiated learning approach among primary school teachers. Section C is related to the implementation of T&L of a differentiated learning approach among primary school teachers. Respondents need to respond on a scale of 1 to 5 by selecting the statements strongly disagree, disagree, moderately disagree, agree, and strongly agree.

Data Analysis

The flow process and implementation of the study were taken and adapted from the flowchart of the process of obtaining research information Nurul Amla Bt Abdullah study, 2016. The data and information for this study were collected using a questionnaire in the form of Google Form. The questionnaire link was given to 40 respondents, among the primary school teachers who were willing to cooperate. Respondents will be given a questionnaire link based on the Likert scale personally in the form of Google Form and asked to answer all the questions in the questionnaire. Responses to the survey conducted will be neatly collected and will automatically be expressed in the form of a chart. Moreover, the data collected can be viewed and analyzed in more detail in the link provided. Next, the data were analyzed descriptively. Excel software is used to analyze the data of the given questionnaire. The data were analyzed to find the frequency, mean, and percentage. The mean score scale guidelines used by Nunnally and Bernstein (1994) were used to measure the level of the mean value scale.

Table 1

Likert Scale

Scale	Statement	Points
1	Strongly Disagree	1
2	Disagree	2
3	Moderately disagree	3
4	Agree	4
5	Strongly Disagree	5

Table 2

Mean Score Scale

Mean Score	Mean Score Scale
1.00 – 2.00	Low
2.01 – 3.00	Moderately Low
3.01 – 4.00	Moderately High
4.01 – 5.00	High

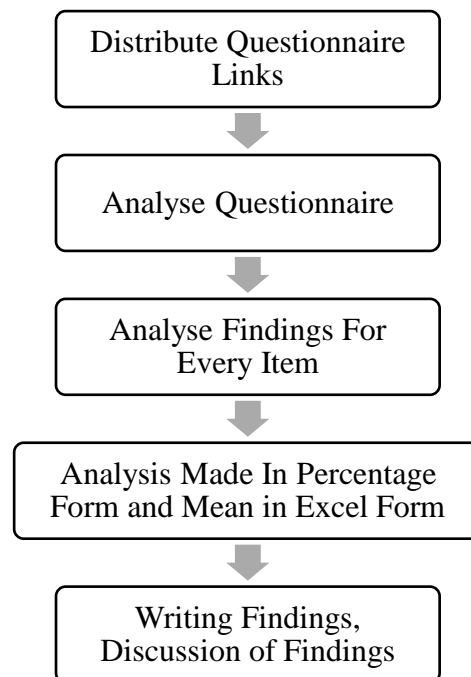


Figure 2: Taken and adapted from the flow chart of the process of obtaining information from Abdullah, 2016

Research Findings

The researcher will explain the findings of this study in stages by the research questions. Overall, there are two research questions planned in this study. The researcher will detail the demographics of the respondents first and will continue with the data findings of this study.

Demographic Profile of Respondents

Table 3

Demographic Profile of Respondents

	Criteria	Frequency (N=40)	Percent (%)
Gender	Man	12	30
	Woman	28	70
Age	24 – 30 years	10	25
	31 – 40 years	13	32.5
	41- 50 years	9	22.5
	51 – 60 years	8	20
Academic qualification	Diploma	0	0
	Bachelor of Teaching	19	47.5
	Bachelor of Education	14	35
	PhD	7	17.5
Experience	Less than 3 years	8	20
	4 – 10 years	11	27.5
	11 – 15 years	13	32.5
	16 years and above	8	20

Table 2 is a descriptive display of the demographic information of the respondents involved in this study. This study involved 40 teachers as respondents of the study consisting of 12 male teachers representing 30 % and 70 % which is a total of 28 female teachers who serve in primary schools.

As a result of the demographic distribution of the respondents, the researcher obtained information on the age of the teachers who are the respondents of the study to avoid the age gap as a factor for the findings of this study. The researcher categorized the respondents according to 4 age levels. A total of 10 teachers are in the first category, which is in the range of 24 to 30 years, which is equivalent to 25%. Meanwhile, a total of 13 teachers from the range of 31 to 40 years, which is 32.5%. In addition, a total of 9 people from the 3rd category were in the range of 41 to 50 years, representing 22.5%. Finally, a total of 8 teachers in the range of 51 to 60 years, representing 20% of the respondents to obtain data for this study.

Analysis of the data shows that none of the respondents represented the category of diploma-level education. All respondents have a degree and above. The large education category of 19 teachers representing 47.5% of the respondents for this study had a Bachelor of Education. Meanwhile, a total of 14 teachers representing 35% of teachers have an education equivalent to a bachelor's education. In addition, a total of 7 people, equivalent to 17.5% of teachers have the highest education, namely Ph.D.

In addition, from the data obtained, 8 people representing 20% of teachers are just beginning to serve as teachers. They are in an environment with less than 3 years of experience. Meanwhile, 11 respondents representing 27.5% of teachers have served from 4 to 10 years. In addition, the respondents of teachers who served from 11-15 years were 13 representing 32.5%. Finally, 8 people, equivalent to 20% of teachers, have served as teachers

for more than 16 years.

Demographic distribution data proves that all of the respondents to this study differed in terms of gender, age, qualification, and experience. Thus, the data received can be generalized to represent the teacher's views and perceptions of differentiated learning.

Level of Knowledge of Primary School Teachers Towards Differentiated Learning Approaches

Table 4

Knowledge Level of Primary School Teachers

	Item	Percent (%)					Mean
		SD (1)	D (2)	MD (3)	A (4)	SA (5)	
1.	I have my learning style	0	0	7.5	32.5	60.0	4.53
2.	EACH STUDENT HAS DIFFERENT LEARNING CHARACTERISTICS	0	0	2.5	15	82.5	4.80
3.	Each student has their own learning intelligence	0	0	0	17.5	82.5	4.83
4.	I knew about the differentiated learning before this	0	0	17.5	17.5	65.0	4.48
5.	Differentiated instruction is a new method in today's world of education	0	0	7.5	20.0	72.5	4.65
6.	My teacher used to practice differentiated instruction during T&F in the classroom	20	17.5	30.0	15.0	17.5	2.93
7.	Differentiated instruction can help students to master the teaching and learning outcomes accurately	0	0	5.0	17.5	77.5	4.76
8.	Differentiated instruction helped me as a teacher to recognize the diversity of students in school	0	0	2.5	20.0	77.5	4.75
	Overall Mean						4.47

Based on Table 4, the analysis shows that the majority of respondents are aware and agree that each teacher has his learning style to carry out the T&L process in school. According to the table above, the highest item is shown in the 3rd item which is *"each pupil has their own learning intelligence"* with a mean value of 4.83. The 6th item *"My teacher used to practice differentiated instruction during T&F in the classroom"* is the item with the lowest mean of mean which is mean=2.93.

In summary, the teacher's level of knowledge of differentiated learning is at a high level. According to table 4, the overall mean is mean=4.47 showing that most teachers are sensitive and highly knowledgeable about the changes in education in Malaysia from holistic learning to differentiated learning.

Level of Implementation of T&F Differentiated Learning Approach Among Primary School Teachers

Table 5

Implementation level of Differentiated Learning Approach

	Item	Percent (%)					Mean
		SD (1)	D (2)	MD (3)	A (4)	SA (5)	
1.	I categorize students according to their level of mastery	0	0	7.5	20	72.5	4.65
2.	I DESIGNED T&F BASED ON THE DIVERSITY OF STUDENTS IN THE CLASSROOM	0	0	7.5	17.5	75	4.67
3.	I DETERMINE THE OBJECTIVES OF THE LESSON AND THE CRITERIA OF SUCCESS ACCORDING TO THE LEVEL OF MASTERY OF THE STUDENTS	0	0	7.5	22.5	67.5	4.63
4.	I determine the content of the lesson based on the level of diversity of the students	0	0	7.5	22.5	70	4.63
5.	I carry out different learning activities according to the level of diversity of the students	0	2.5	5	20	72.5	4.63
6.	I assess students' learning outcomes based on student diversity level	0	2.5	5	17.5	75	4.65
7.	I can achieve the learning objectives planned according to the level of diversity of students	0	2.5	5	22.5	70	4.6
	Overall Mean						4.63

Based on Table 5, the analysis shows that the majority of respondents agree that each student has their own learning style and the teacher should not conduct the same teaching for all students. According to the table above, the highest item is shown in the 2nd item which is *"I designed T&F based on the diversity of students in the classroom"* with a mean value of mean=4.67. The 7th item *"I can achieve the learning objectives planned according to the level of diversity of students"* is the item with the lowest mean of 4.

In conclusion, the implementation level of the Differentiated Learning Approach is at a high level. According to table 5, the overall mean is 4.63 shows that most teachers are sensitive and highly knowledgeable about the changes in education in Malaysia from holistic learning to differentiated learning. At the same time, they conduct T&F sessions based on different learning approaches so that no students drop out of a specific skill.

Discussion

Based on the findings of this study, it is proven that the implementation of differentiated learning pedagogy is very high among primary school teachers. They are sensitive to the changing education in Malaysia and are ready to implement quality T&F. At the same time, they understand much better the characteristics of the diversity of students and how to teach them.

Differentiated learning pedagogy is one of the government's effective efforts where teachers need to modify the content of the lessons delivered to the students according to their level of mastery of the students. Teachers will plan T&F sessions according to the diversity of students in terms of interests, readiness, and learning environment of the students. The proposed improvement of this study will provide ideas or input to future researchers to study based on this topic.

Problems or Constraints Faced by Teachers in Implementing T&L Session using Differentiated Approach-Based

The Ministry of Education (MOE) has introduced many learning approaches that can attract students to learn. However, Muhseirn (2021) stated that the diversity factor of the students in the classroom causes the students to lack in mastering the content of the lessons. Therefore, the government introduced the Differentiated Pedagogy to eliminate the “one-size-fits-all” teaching style, which is the same teaching and learning for every student.

However, Muttalip (2020) stated that the pedagogy of this differentiated instruction is still not much been highlighted in the world of education in Malaysia as a whole when teachers are seen to know that differences exist among students, but the differentiated instruction practices have not yet been practiced.

According to Atika (2021), among the problems that exist are related to teachers, administrative students, ABM, BBM, and parents. This problem has affected the process of implementing the different approaches to be applied in T&L, especially in the learning of the Malay language. Fairus et. Al., (2017) in their study stated that exposure to the knowledge of these skills is quite foreign to teachers, however without them realizing that these different teaching practices are practiced in the classroom.

In conclusion, many educators think that they are a source of knowledge in the classroom. There are many methods that teachers can use that allow students to enhance their learning. If a differentiated approach can be implemented without any interruptions, then an effective and smooth T&F process can be carried out for all students. Thus, the academic achievement of the students can also be improved from time to time.

Conclusion

The role of a teacher is an enormous trust and responsibility. Parents and guardians send their children to school with the hope that their teachers will be guide them in producing a new generation of quality. As teachers, they should carry out an interesting teaching and learning process by implementing different learning methods so as to captivate their hearts.

The education system in Malaysia always ensures and gives priority to every student to receive the knowledge, skills, and values by the current circulation to meet the challenges faced in the educational era. The Ministry of Education (MOE) is constantly benchmarking the existing curriculum to ensure that the current school curriculum can compete with global education.

The Malaysian Education Development Plan (2013-2025) sets out that every student

has access to education to achieve their potential to face the future. However, the challenges and obstacles that teachers often face today are that each student has different capabilities and needs in the T&F process. Because every student is entitled to the opportunity to pursue education to be able to compete globally, differentiated learning is one of the effective approaches to ensure that every student gets an education according to their level and potential of mastery.

The findings of this study show that teachers nowadays value the diversity of students in their T&L sessions. In addition, most teachers have an in-depth knowledge of differentiated learning pedagogy. It is evident that they are aware of this differentiated instruction is a new method in the teacher's teaching approach. Authorities such as MOE, JPN, PPD, and IPGM should conduct workshops or courses that provide extensive exposure to teachers on this differentiated learning approach to produce competent and accredited teachers.

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