

ORIGINAL

Differentiation Learning, What Do Academics Say?

Aprendizaje diferenciado: ¿qué dicen los académicos?

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ABSTRACT

Differentiated learning is one of the hot topics in the world of Indonesian education today. The aim of this study is to examine the views of teachers and academics regarding their perspectives on differentiated learning. This study was conducted by distributing an online questionnaire to participants. Differentiated learning is viewed positively by teachers and academics in Indonesia and has been recognized as important to implement. Most of them have understood and implemented differentiated learning in the classroom. The challenges faced in designing and implementing differentiated learning are the lack of supporting facilities in the classroom, the existence of a zoning system that makes students homogeneous and contradicts the concept of differentiated learning, and the absence of systematic steps in implementing differentiated learning. Teachers and academics very support the concept of differentiated learning in the independent curriculum.

Keywords: Chemistry Education; Differentiation Learning; Education.

RESUMEN

El aprendizaje diferenciado es uno de los temas más candentes en el mundo de la educación indonesia actual. El objetivo de este estudio es examinar las opiniones de docentes y académicos con respecto a sus perspectivas sobre el aprendizaje diferenciado. Este estudio se llevó a cabo mediante la distribución de un cuestionario en línea a los participantes. El aprendizaje diferenciado es visto positivamente por docentes y académicos en Indonesia y se ha reconocido como importante para implementar. La mayoría de ellos han comprendido e implementado el aprendizaje diferenciado en el aula. Los desafíos que se enfrentan en el diseño e implementación del aprendizaje diferenciado son la falta de instalaciones de apoyo en el aula, la existencia de un sistema de zonificación que hace que los estudiantes sean homogéneos y contradice el concepto de aprendizaje diferenciado, y la ausencia de pasos sistemáticos en la implementación del aprendizaje diferenciado. Los docentes y académicos apoyan firmemente el concepto de aprendizaje diferenciado en el currículo independiente.

Palabras clave: Enseñanza de la Química; Aprendizaje de la Diferenciación; Educación.

INTRODUCTION

In the 21st century, the world is increasingly complex and evolving rapidly in all aspects of life. Human resources are increasingly required to develop the 4C skills, which include Critical Thinking, Creativity,

Collaboration, and Communication. These four are essential competencies that are highly needed in the 21st century. Critical thinking enables individuals to analyze information objectively and make informed decisions. Creativity can foster innovation and the ability to synthesize new ideas and solutions to problems. Collaboration can develop the ability to work together in teams to achieve common goals. Meanwhile, communication can ensure that ideas or concepts are conveyed clearly and effectively to others. Mastering the 4C skills not only enhances academic and professional potential but also prepares individuals to become adaptive and participatory citizens in a dynamic global society.

The independent curriculum is a curriculum currently implemented by Indonesia to answer the challenges of the times and conditions of rapid change. The independent curriculum was launched by Nadiem Makarim as an improvement on the previous curriculum, the 2013 curriculum, on December 10, 2019. As a concrete manifestation, the Decree of the Minister of Education, Culture, Research, and Technology of the Republic of Indonesia Number 56/M/2022 concerning Guidelines for Curriculum Implementation in the Context of Learning Recovery, Development, and Teaching.

The independent curriculum carries the concept of teachers and students who are independent or given the freedom to determine how they learn. The independent curriculum is flexible and focuses on essential material to develop students' abilities as lifelong learners with Pancasila character. The goal of the independent curriculum is to create meaningful and effective learning that fosters character development in line with the profile of Pancasila students as lifelong learners.

The concept of differentiated learning (DL) has long been around since the release of the independent curriculum. DL has become a hot topic along with the change of curriculum in Indonesia from the kurikulum 2013 to the independent curriculum. The concept of differentiated learning is a learning concept that takes into account the different needs of students. This concept is expected to be understood by teachers, lecturers, and education practitioners in Indonesia to support the implementation of the independent curriculum in Indonesia.

The foundation of the independent curriculum refers to the ideals of independence and the philosophy of Pancasila to educate the nation and realize the life of the Indonesian people and society based on Pancasila. Philosophically, education refers to the framework of Ki Hajar Dewantara's thought to develop independent individuals who are not physically or mentally dependent on others, but rely on their own strength. Meanwhile, sociologically, the independent curriculum can provide a foundation of knowledge, skills, and ethics in response to the development of the industrial revolution 4.0 and society 5.0. The independent curriculum contributes as an effort to respond to efforts to solve social problems through education related to character, values, work ethic, scientific thinking, and common sense. From a psychopedagogical perspective, the curriculum serves as a basic foundation related to the process of human learning and development.

The independent curriculum needs to be supported by the government and society throughout Indonesia. Teachers need to implement the independent curriculum appropriately in schools in order to create a better quality of Indonesian education.⁽²⁾ In the independent curriculum, teachers are given the freedom to teach according to the achievements and development of student learning so that learning can be directed at the individual students according to their experience, background, talents, interests, level of understanding, and other unique characteristics. One thing that can be applied from the independent curriculum in schools is differentiated learning.

The learning model that can facilitate the diversity of different students and is in line with the independent curriculum is the differentiated learning model. Differentiated learning can encourage students to improve their creativity and learning outcomes in classroom learning. Differentiated learning is learning that can facilitate the diversity of students.⁽³⁾ Students are given the freedom to hone their interests and talents as well as their potential and preferences. In differentiated learning, it is possible that one student and another student are not given the same treatment in classroom learning. Differentiated learning can accommodate the readiness, learning interests, and profiles of students who vary.

Students have their own differences ranging from hobbies, learning styles, interests, talents, and desires.⁽⁴⁾ By implementing differentiated learning, discussions between students can be possible. Students share the results of their assignments or work through discussions. Discussion will help students to build and combine ideas with each other to solve problems with creative, innovative and new solutions. Differentiated learning takes into account the diverse needs, interests, and learning styles of students.⁽³⁾

There are many needs of students that need to be facilitated by teachers in learning. Every day, teachers must meet students with various differences that are challenges for teachers in learning.⁽⁵⁾ Teachers are required to be able to facilitate the diversity of students to ensure that each student is successful in their education process. Differentiated learning (abbreviated as DL) allows students to achieve curriculum targets more effectively because each student is facilitated with their diverse needs so that it can help students understand the material and improve learning outcomes.⁽⁶⁾ DL can make students feel comfortable learning so that students do not feel bored and never give up when meeting challenges given in learning. A comfortable

and joyful learning process makes students more able to develop their creativity according to their respective thoughts.

DL is very important to implement in learning, one of which is by increasing student motivation and learning outcomes because by implementing DL, teachers will understand and provide learning treatments that are in accordance with the characteristics of students and the context of the topics being taught.⁽⁷⁾ DL is expected to be able to develop the potential of students optimally because it can facilitate their learning needs according to their different characteristics. DL can be an alternative solution in learning because so far there has been a lack of interest in learning among students, an inappropriate learning process, a lack of practice questions, a lack of understanding among students regarding prior knowledge that supports understanding of the material, and there are still many conceptual errors or misconceptions.^(8,9) Conventional learning patterns also cause students to just memorize without understanding the concept and have a big influence on the occurrence of misconceptions.⁽¹⁰⁾ Therefore, it is very necessary to apply modern learning patterns such as differentiated learning.

DL contains three aspects of learning, namely teachers can differentiate content, process, and product. Teachers can review current learning based on the strengths and weaknesses of students, which can then design learning strategies to facilitate students' needs. All teachers can participate in supporting, reviewing, and evaluating differentiated learning in schools.⁽¹¹⁾

The characteristics of DL are that it is flexible, gives assignments according to student needs, learning refers to assessments and learning needs, uses varying success criteria, students can independently determine how to learn, and is a structured learning activity with coherent and systematic learning steps.⁽¹¹⁾

DL that has been implemented today has shortcomings due to time constraints so that teachers need to be careful in designing, implementing, and evaluating learning.⁽¹²⁾ To overcome these shortcomings, teachers need to optimize the preparation of the lesson plan used. In the lesson plan, a learning model is needed with learning steps that can make time efficient so that no time is wasted.

The concept of differentiated learning within the independent curriculum has generated diverse opinions and perspectives from various practitioners and academics in the field of education. These opinions and perspectives are inseparable from their educational backgrounds or positions in the educational world. These opinions need to be comprehensively examined to inform government reflection and evaluation in determining future policies related to differentiated learning. This underlies the objective of this research, which is to examine the views of teachers and academics regarding their perspectives on differentiated learning.

METHOD

Type of Study

This research is included in qualitative research with Yin methodology design. Yin methodology is a comprehensive approach in a study to understand specific perspectives or habits by focusing on one or more aspects supported by detailed data.⁽¹³⁾ Data on the opinions of teachers and academics about differentiated learning will be the main data or source data in this study to understand their views on differentiated learning. This research was conducted using a survey method, thus including self-report methods. Participants were expected to actively provide information about their views on differentiated learning as they learned. The instrument used was an open-ended questionnaire aimed at understanding teachers' and academics' perspectives on differentiated learning. Data was collected by distributing the questionnaire via an online Google Form link through an online community. The data was processed using Microsoft Excel. This study will assess the extent to which the views, implementation, and evaluation of differentiated learning are in line with the current situation.⁽¹⁴⁾

Universe and Sample

Participants in this survey were conducted using a purposive sampling method to determine the assumptions and complete data representation.⁽¹⁵⁾ DL referred to in this study is not limited to any level, it can be from early childhood education, elementary school, junior high school, high school, or university. The sample in this study was 61 teachers and education academics. The participants were selected based on recommendations from lecturers who were acquaintances with teachers and educational staff. All participants were participants who voluntarily took part in this survey, including using the data filled in the survey for the purposes of this study. The questionnaire was developed independently by the researcher, adapting previous research. The questionnaire was then consulted with a lecturer who was an expert in the research topic. Revisions were made based on the lecturer's suggestions and guidance. The following in table 1 is the demographic data of the participants who took part in this survey.

Table 1. Demographic Data of the Participants

Demographic Variable	Frequency
College Student	2
Education Expert	1
Government Education Staff	3
Lecturer	4
Teacher	51
Total	61

Variables

There are several variables in this study that need to be further defined to avoid information bias in the research analysis. Differentiated learning variables can be defined as learning that facilitates student diversity such as learning styles, interests, talents, and backgrounds. Independent curriculum variables can be defined as the curriculum currently in effect in Indonesia, emphasizing independent learning, where students and teachers are free to determine how they learn, in line with the concept of differentiated learning.

Data Collection and Processing

The survey questions consisted of agree-disagree questions and open-ended questions for participants in Indonesia with an online pamphlet integrated with Google Form (<https://forms.gle/fqm7s6nzi8uRGQ576>). The pamphlet was distributed to teachers and education academics. The survey consisted of 25 agree-disagree questions and 5 open-ended questions designed to dig deeper into the views of volunteer participants on differentiated learning. The questions were prepared by researchers who had previously understood differentiated learning. The questions asked in the study were as follows in table 2.

Table 2. Questions Asked in the Study

Questions Form	Questions
Agree-Disagree	<ol style="list-style-type: none"> 1. Do you understand the concept of differentiated learning in the independent curriculum? 2. Are there any difficulties when you design differentiated learning in classroom learning? 3. Do you feel you have enough time to design differentiated learning in the classroom? 4. Are there any difficulties when you implement differentiated learning in classroom learning? 5. Do you have enough time to implement differentiated learning in the classroom? 6. Do you support the implementation of differentiated learning in classroom learning? 7. Have you ever implemented differentiated learning in classroom learning? 8. Do you agree that differentiated learning can improve student activity and learning outcomes? 9. Do you agree that differentiated learning makes students comfortable and fosters a positive attitude in learning? 10. Do you agree that the concept of differentiated learning in the independent curriculum can run effectively if implemented? 11. Are you aware of the importance of implementing differentiated learning in the classroom? 12. Do you have difficulty in managing the class when implementing differentiated learning? 13. Are you satisfied with the differentiated learning that has been designed and implemented? 14. Have the available facilities and infrastructure supported the implementation of differentiated learning? 15. Do you agree that differentiated learning can increase students' learning motivation? 16. Do you feel that all elements have supported the design and implementation of differentiated learning in the classroom? 17. Do you have a reference or guide for designing and implementing differentiated learning? 18. Have you ever identified and explored the characteristics of each student? 19. Do you have a specific strategy or method for implementing differentiated learning in the classroom? 20. Do you agree that differentiated learning can create an inclusive classroom atmosphere? 21. Do you feel that you have sufficient skills in designing and implementing differentiated learning in the classroom? 22. Are you committed to implementing differentiated learning in full in accordance with the concept of the independent curriculum? 23. Do you agree that differentiated learning in the independent curriculum has advantages and disadvantages? 24. Do you agree that differentiated learning is easy to implement in classroom learning? 25. Do you agree that differentiated learning can be applied to all learning topics?

Table 2. Questions Asked in the Study

Questions Form	Questions
Open-Ended	<ol style="list-style-type: none"> 1. What is your view on the concept of differentiated learning in the independent curriculum? 2. How do you design or implement differentiated learning that you will do in class? 3. How is the implementation of differentiated learning that you have or will do in class? 4. In your opinion, what are the difficulties that occur when implementing differentiated learning in class? 5. What are your suggestions for the concept of differentiated learning to be better?

The data obtained were then collected and analyzed using Ms. Excel. The data will then be interpreted carefully and read repeatedly to find out the keywords or intentions of the participants. If there are confusing data results, the researcher will contact the participants to reconfirm what the participants meant in the survey. The data that has been analyzed will then be discussed in the results and discussion section to describe the conclusions from the views of teachers and academics about differentiated learning.

The research results will be explained descriptively with an emphasis on qualitative analysis. Descriptive statistics were used to calculate the percentage of participants who answered according to the categories in each question. Qualitative analysis was used to delve deeper into participants' reasons for answering the questions in the previous section.

Data Analysis

The data collection process began after obtaining permission from the research lecturer at Malang State University. Each participant was given a research information sheet detailing the research objectives, procedures, potential risks and benefits, and participant rights. At the end of the survey, a statement was provided regarding the participant's consent to the data provided. All collected data was guaranteed confidentiality by the researcher and is included at the end of the survey. Participants' identities were kept anonymous in the publication of the research results. Raw data was stored in an encrypted folder and accessible only to the principal researcher. Furthermore, online raw data was stored in a Google account protected by a password and two-step encryption. The researcher is committed to maintaining data integrity and reporting results objectively without manipulation or fabrication.

RESULTS

This study involved a total of 61 participants who successfully completed the survey. Of these, the majority were female (65 %) (n=40), while male participants made up 34 % (n=21). The age distribution of participants showed that those over 50 years old constituted the largest proportion, at 41 % (n=25). This was followed by those under 30 years old (34 %) (n=21), and those aged 30-49 years old (25 %) (n=15). Based on their position within the institution, the majority of participants were teachers or education practitioners (84 %) (n=51). Lecturers accounted for 7 % (n=4), and the remaining 10 % were students, education experts, and government education staff (n=6).

Teachers' and academics' understanding of differentiated learning in the independent curriculum based on the survey is that 100 % of participants consider themselves to have understood the concept of differentiated learning. However, after the researcher dug deeper, there were teachers and academics who understood the concept of differentiated learning only in general. This is known based on the results of the survey answers to descriptive questions, examples of participant responses in the survey are as follows.

"Learning that is adjusted to students' abilities"

"Differentiated learning is learning that liberates students"

"Learning based on student abilities"

"Learning concept that is integrated with other subjects"

"A concept that emphasizes expertise"

This clearly explains that several teachers have understood the concept of differentiated learning in the Independent curriculum. However, this understanding is still limited to the initial concept of differentiated learning. This concept has not led to the implementation and examples of the application of differentiated learning in the classroom.

On the other hand, 40 of 61 participants have filled out the survey responses correctly and completely about their understanding of differentiated learning in the independent curriculum. Examples of participant responses in the survey are as follows.

"Learning that is centered on students by implementing learning that is adjusted to the needs of students"

"Learning that is designed based on the learning needs of students"

"In my opinion, differentiated learning is a learning approach that must adjust methods, materials, and assessments according to the needs, interests, and abilities of students. In fact, it is not uncommon for each

class to have different methods and assessments because the abilities and types of students are different”

Based on the results of the survey responses that have been conducted, there are various variations in answers about participants’ understanding of the concept of differentiated learning. There were 45 of 61 participants who have correctly understood the concept of differentiated learning. However, there were 16 of 61 participants who filled out the survey by explaining the concept of differentiated learning only in general. However, as many as 59 % of participants (36 of 61 participants) felt they had sufficient skills in designing and implementing differentiated learning obtained from seminars, workshops or online training. This proves that there are likely many different interpretations of differentiated learning. This is quite a problem that is in accordance with one of the survey response results as follows.

“Still requires the same understanding for all teachers about differentiated learning and it is not easy to understand the character of each student and it takes time”

“Socialization to all stakeholders concerned regarding the misconception of differentiated learning. So that there are no more conceptual errors, students must be grouped with students who have the same character.”

Fifty of the 61 participants believed that the concept of differentiated learning in the independent curriculum was not fully understood by all teachers and academics in Indonesia. Forty of the 61 participants had a general understanding of differentiated learning. This understanding consisted of participants who understood differentiated learning as grouping students homogeneously and participants who understood differentiated learning as grouping students heterogeneously. This is an issue that requires immediate joint action.

As many as 61 % of teachers and academics (37 of 61 participants) believe that they have enough time to plan and implement differentiated learning. Teachers’ opinions about the challenges and obstacles in planning and implementing differentiated learning have been filled in the survey with examples of participant responses as follows.

“In my opinion, the concept of differentiated learning is actually good because it accommodates the abilities of individual students. Differences in character, learning habits, cognitive abilities, are expected to be accommodated through differentiated learning. However, in reality, implementation in the field is not that easy. Various factors that cause heterogeneity of students cannot always be accommodated well in one class. For example, when teachers try to accommodate audio and visual kinesthetic learning styles, other aspects are less than optimal. In addition, the distribution of heterogeneity is still very heterogeneous so in my opinion it cannot be maximized”

“In my opinion, the concept of differentiated learning can be applied if supported by adequate facilities and infrastructure”

To overcome these challenges and obstacles, 78 % of participants (47 of 61 participants) think that they already have a special strategy. The strategy used is to prepare learning as well as possible, to creating a special team to design differentiated learning with colleagues. Teachers’ ways of overcoming these challenges have been filled in the survey with sample responses as follows.

“Specifically, I have not designed differentiated learning, only for students who do have limited thinking, I give easier tasks”

“I will utilize technology to support differentiation, such as online learning platforms that allow students to learn at the speed and method they choose”

“At the beginning of the school year for new students, I usually collaborate with the BK teacher to get the results of the initial non-cognitive diagnostic test so that I know more about the characteristics, interests, talents and intelligence levels of students. Then I also conduct an initial cognitive diagnostic test to determine the students’ initial abilities and also the basis for forming groups in learning. Then I design a learning method or model that is appropriate to the characteristics of the students in the class and is also adjusted to the learning topic”

61 % of participants (37 of 61 participants) felt that differentiated learning was easy to apply in class. In the end, 56 % of participants (34 of 61 participants) agreed that differentiated learning can be applied to all learning topics. This can be reviewed with a flashback of the meaning of differentiated learning that facilitates students’ learning needs so that it can be said that differentiated learning can be applied to all topics and all subjects in school.

Various parties in the world of education have known and understood the concept of differentiated learning so that they fully support its implementation. Based on the survey results, 100 % of participants (61 of 61 participants) were aware of the importance of differentiated learning implemented in the classroom. Examples of participant responses in the survey are as follows.

“Differentiated learning is one way for teachers to provide maximum support for the different characteristics of students, and students feel that their needs are met in the learning process, so that the learning carried out can be more meaningful”

“Makes it easier for teachers to deliver lesson materials and students can easily accept what the teacher conveys”

“The concept of differentiated learning in the Independent curriculum is a significant step forward in the world of education. By recognizing that each student has a different learning style, speed, and interests, this approach allows teachers to create a more inclusive and effective learning environment”

“Good because it is student-centered where it is adjusted to the learning needs of students, making it easier for students to understand the material”

Differentiated learning has fostered and improved student activity and learning outcomes. As many as 91,8 % of participants agreed with this and it motivated them to continue implementing differentiated learning. Examples of participant responses in the survey are as follows.

“Differentiated learning is very suitable for meeting students’ learning needs, students will easily achieve learning goals according to the characteristics of each student. With differentiated learning we can create a child-friendly school, God willing, if differentiated learning can be implemented correctly and without misconceptions, students will be more enthusiastic or motivated to learn”

Not only in terms of learning activities, as many as 97 % of participants (59 of 61 participants) also agreed that differentiated learning can make students comfortable and foster positive attitudes in learning. An example of a positive attitude that emerged was increased learning motivation supported by 95 % of participants (58 of 61 participants). Another positive attitude was the creation of an inclusive classroom atmosphere during differentiated learning. As many as 89 % of participants (54 of 61 participants) agreed that by implementing differentiated learning, teachers can adjust the learning needs of students so that an inclusive learning environment is created with very heterogeneous students. Examples of participant responses in the survey are as follows.

“The first concept of differentiated learning in the Independent curriculum is to accommodate student diversity: Each student has different potential and learning styles. Differentiated learning provides an opportunity for each student to develop according to their potential. Second, making learning more interesting by providing choices and flexibility, students will be more motivated and involved in the learning process. Third, improving learning outcomes when learning is adjusted to student needs, understanding of concepts will be deeper and more meaningful, thereby improving learning outcomes”

In supporting differentiated learning, 93 % of participants (57 of 61 participants) have taken the initial steps to support it by identifying the diverse characters of students. This is very important to do because it becomes a reference material in designing differentiated learning that will be implemented. As many as 91 % of participants (56 of 61 participants) admitted that they had implemented differentiated learning in class with various models and methods. With reflection and evaluation, as many as 67 % of participants (41 of 61 participants) were satisfied with the differentiated learning that had been implemented previously.

Based on the survey results, differentiated learning is seen as something positive. As many as 80 % of participants (49 of 61 participants) believed that the concept of differentiated learning was a good concept to continue to be developed further and 95 % of participants (58 of 61 participants) also supported the implementation of differentiated learning in class according to the independent curriculum. In the end, by considering all aspects of the concept of differentiated learning in the independent curriculum, 68,8 % of participants have committed to continuing to design and implement differentiated learning as a real action of their support for the independent curriculum in order to improve the quality of Indonesian education. Finally, here are some suggestions from participants about differentiated learning that have been filled in the survey.

“Please provide specific guidance on what aspects of differentiation are more prioritized to accommodate and how to identify them. Through this initial identification process, it is hoped that the treatment will be more targeted because it uses valid test instruments, not based on the personal “feelings” of students”

“There needs to be a detailed differentiated learning guide on the learning topic”

“There needs to be a development of tools to implement differentiated learning that are in accordance with the use of technology among students”

“Design as well as possible so that it can be carried out sequentially”

DISCUSSION

The research findings reveal that understanding of differentiated learning is not yet fully understood. In fact, numerous seminars on differentiated learning have been held by both formal and informal organizations, including government agencies, learning communities, online self-training, and various other sources. Most of the workshops have been well-implemented and according to plan, from preparation and mentoring to evaluation. According to one workshop conducted by other researchers, 92 % of participants responded positively to the workshop.⁽¹⁶⁾ Apparently, this has not been effective as a solution in improving the understanding of the concept of DL for teachers and academics in Indonesia. In addition, data obtained from other researchers who have conducted research shows that teachers also do not fully understand the concept of differentiated learning in the independent curriculum, including the terms and components in the independent curriculum such as cognitive and non-cognitive diagnostic assessments, types of differentiated learning, and others.⁽¹⁷⁾

In planning and implementing DL in the classroom, teachers often face challenges and obstacles. The challenges and obstacles that occur need to be faced and resolved so that they do not become major obstacles and prevent learning objectives from being achieved. Teachers and academics believe that they have difficulty in planning and implementing differentiated learning in the classroom. However, the obstacle is not in the time to design and implement differentiated learning. This is in line with the results of research conducted by previous researchers that the Sidoarjo Chemistry subject teacher meeting still experienced difficulties related to the creation of differentiated teaching modules as learning tools in the independent curriculum era.

⁽⁹⁾ Specifically, another study found that the creation of teaching modules as learning tools at SMA Negeri 3 Sidoarjo was not optimal.⁽⁸⁾

Other research has shown that teachers experience numerous obstacles and barriers in implementing differentiated learning, as indicated by research findings. These obstacles include limited time to design appropriate learning models and designs, as well as various additional tasks in adapting learning activities to accommodate students' diverse learning needs.⁽¹⁸⁾ The government is expected to review teachers' workloads and teaching to prevent stress that impacts students and even the quality of education.

Some of the challenges and obstacles that occur include the lack of support for facilities and infrastructure in schools and the lack of heterogeneity of students in one class due to the policy of accepting new students through the zoning system. This shows that some teachers actually feel ready to design and implement differentiated learning, but on the other hand, the opposite is true. Most schools do indeed lack learning facilities and infrastructure. Based on the results of other studies, it was stated that according to school residents, facilities and infrastructure were still lacking. In addition, the relationship between facilities and infrastructure in schools and teacher teaching motivation at school is very strong and positive, so if facilities and infrastructure are limited at school, teacher teaching motivation is also low.⁽¹⁹⁾ Other research also suggests that differentiated learning can be more effective with supportive infrastructure and facilities appropriate to the learning process.⁽²⁰⁾ Schools need to prepare not only qualified teachers but also other supporting facilities to ensure effective differentiated learning. This is feared to have a negative impact on teacher performance in designing and implementing innovations in learning such as DL.

On the other hand, the zoning system is also a reason for the challenges in designing and implementing differentiated learning. The zoning system reduces the diversity of students from being heterogeneous to homogeneous.⁽²¹⁾ Most of the students accepted from the school are from the community around the school. People in the same environment tend to have the same background. In the end, it can make students in schools less diverse or homogeneous, which is contradictory to the policy in the Independent curriculum, namely differentiated learning.

During the implementation of DL, participants found it difficult to manage the class. In fact, class management is an activity carried out by teachers to create classroom conditions that allow for an optimal learning process to take place so that effective and optimal learning is formed and increases student learning success.⁽²²⁾ Suboptimal class management can occur due to inappropriate seating arrangements and poor classroom layout with items piled up in the cupboard.⁽²³⁾ This can be overcome by having good learning planning and coordination with the homeroom teacher as the leader in the class.

DL also can be integrated with technology. The technology that is currently developing in students is social media. According to one teacher, he has used various social media as a medium for differentiation learning. He argued that when using technology, students become more enthusiastic in learning. Social media as a learning medium has great potential to increase students' learning motivation.^(8,9)

Learning activities are the main process in learning with students gathering knowledge and information, as well as changes in attitudes that occur within themselves. Understanding student learning activities is very important because it can be a basis for teachers in designing learning that will be implemented at the next meeting.⁽²⁴⁾ Good and healthy student learning activities can increase the achievement of learning goals.⁽²⁵⁾

The implementation of DL in schools has actually supported the creation of an inclusive learning environment. This is because DL has facilitated the different learning needs of each student so that students feel valued and supported in their learning process. This has an impact on their understanding and participation in class which will ultimately produce a strong foundation for their cognitive development in the future.⁽²⁶⁾

Reflection and evaluation are an important unit that must be implemented at the end of learning. With this, teachers can assess whether the learning that has been implemented has been effective.⁽²⁷⁾ Through in-depth reflection, teachers can identify problems that occur in learning so that they can be followed up and improved for the future to be better.⁽²⁸⁾

Based on these suggestions, it can be concluded that participants feel that the concept of differentiated learning is good and fully supports its implementation in the classroom. However, the concept has not been accompanied by the same understanding of the concept from teachers, lecturers, and educational academics in Indonesia. In addition, the lack of facilities and infrastructure also makes the implementation of differentiated learning hampered and constrained. The concept of differentiated learning needs to be studied and developed

further by policy makers so that teachers and lecturers can implement differentiated learning in the classroom at their respective institutions in a more focused and well-conceptualized manner. Hopefully, these suggestions can be considered and used as reference material for policy makers. All teachers and educational academics can provide constructive suggestions for Indonesian education. All suggestions submitted aim to make the concept of differentiated learning better and more focused. If the concept of differentiated learning is appropriate, it will improve the quality of education in Indonesia.

While the findings of this study provide valuable insights into teachers' and academics' perspectives on differentiated learning, the relatively small sample size ($n=61$) poses a significant limitation. This limits the generalizability of the results to a broader population of teachers and academics in Indonesia or even globally. Therefore, future research is recommended to involve a larger and more diverse sample to enhance the external validity of the findings.

CONCLUSIONS

The survey results showed that differentiated learning is viewed positively by teachers and academics in Indonesia and its importance has been recognized. Most of them have understood and implemented differentiated learning in the classroom. Challenges faced in designing and implementing differentiated learning include a lack of supporting facilities in the classroom, the zoning system that homogenizes students and contradicts the concept of differentiated learning, and the absence of systematic steps in implementing differentiated learning. Teachers and academics fully support the concept of differentiated learning within the independent curriculum.

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The authors declare that there is no conflict of interest.

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