

Implementation of Differentiated Learning as an Effort to Increase Teacher Capacity at SMA Negeri 1 Tibawa

Implementasi Pembelajaran Berdiferensiasi Sebagai Upaya Peningkatan Kapasitas Guru di SMA Negeri 1 Tibawa

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Abstract

The aim of this service activity is to increase the understanding of teachers at SMA Negeri 1 Tibawa regarding the implementation of differentiated learning. Differentiated learning is an attempt to adapt the learning process in the classroom to meet the individual learning needs of each student. It is important for differentiated learning to be implemented in schools, especially in schools selected as driving schools, so activities were carried out to increase teacher capacity in terms of implementing differentiated learning through workshop activities which were attended by all teachers from SMA Negeri 1 Tibawa, Gorontalo Province. Tibawa State High School 1 is one of the driving schools which has been running for the last 2 years since 2022. Service activities use lecture, discussion and games methods as well as active participation from the participants. There were 46 participants who took part in this activity, all of whom were teachers from the Tibawa 1 State High School (SMA), Gorontalo Regency. This service activity had a very positive impact on the participants who took part in this activity, the participants were very enthusiastic and increased the participants' understanding regarding the implementation of differentiated learning in the classroom.

Abstrak

Tujuan dari kegiatan pengabdian ini adalah untuk meningkatkan pemahaman guru SMA Negeri 1 Tibawa terkait implementasi pembelajaran berdiferensiasi. Pembelajaran berdiferensiasi merupakan usaha untuk menyesuaikan proses pembelajaran di kelas untuk memenuhi kebutuhan belajar individu setiap peserta didik. Pentingnya pembelajaran berdiferensiasi diterapkan di sekolah khususnya di sekolah yang terpilih sebagai sekolah penggerak, maka dilakukanlah kegiatan peningkatan kapasitas guru dalam hal implementasi pembelajaran berdiferensiasi melalui kegiatan workshop yang diikuti oleh semua guru dari SMA Negeri 1 Tibawa Provinsi Gorontalo. Sekolah SMA Negeri 1 Tibawa merupakan salah satu sekolah penggerak yang sudah berjalan selama 2 tahun terakhir sejak 2022. Kegiatan pengabdian menggunakan metode ceramah, diskusi dan games serta partisipatif aktif dari para peserta. Peserta yang mengikuti kegiatan ini berjumlah 46 orang yang semuanya merupakan guru dari Sekolah Menengah Atas (SMA) Negeri 1 Tibawa Kabupaten Gorontalo. Kegiatan pengabdian ini sangat memberikan dampak yang sangat positif bagi peserta yang mengikuti kegiatan ini, peserta sangat antusias dan meningkatkan pemahaman peserta terkait implementasi pembelajaran berdiferensiasi di kelas.

Keywords: *Implementation; Differentiated Learning; SMA Negeri 1 Tibawa*

1. Introduction

The concept of independent learning in the independent curriculum emphasizes the abilities and potential of students in building and developing their thinking. The role of teachers as educators, guides, mentors and facilitators is expected to be able to lead students to achieve their learning goals. Teachers help build students' thinking and understanding so that it is in line with the constructivist view. The teacher's role is to provide encouragement, stimulate students to be able to explore their own world, reflect, find their own way of thinking, discover knowledge, and think critically, not just as a teacher providing information. The teacher is not the center of learning but makes students the center of learning which is called student center learning. Teachers develop students' creativity and help

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students to develop independence, potential within themselves according to their learning needs, learning profiles and learning interests (Naibaho, D. P., 2023; Siringoringo, 2023).

Differentiated learning is an attempt to adapt the learning process in the classroom to meet the individual learning needs of each student. The adjustments in question are related to interests, learning profiles, and students' readiness in order to achieve improved learning outcomes. Differentiated learning is able to help students achieve optimal learning outcomes, because the products they produce match their interests. Through differentiated learning activities, all students' learning needs are accommodated according to their interests or learning profiles. The differentiated learning process can also provide ample space for students to demonstrate what they have learned so that differentiated learning indirectly encourages students' creativity. Apart from that, because creativity will continue to develop, differential learning is an approach that is highly recommended to be applied in learning to make it easier to achieve learning goals.

Ki Hajar Dewantara, as the father of education in Indonesia, explained that the concept of differentiated learning is an effort to adapt the learning process in the classroom to meet the individual learning needs of each student. Adjustments to the learning process involve adjustments to students' interests, learning profiles and readiness so as to achieve improved learning outcomes. Differentiated learning is also mentioned as a way of recognizing and teaching according to the talents and learning styles of different students (Morgan, 2014). Teachers facilitate students according to their needs, because each student has different characteristics, so they cannot be given the same treatment. Differentiated learning is not individualized learning (Marlina et al., 2019). Differentiated learning is more about learning that accommodates students' strengths and learning needs with independent learning strategies. The differentiated approach consists of three aspects, namely content differentiation, process differentiation and product differentiation. Content differentiation includes what students learn. Content relates to curriculum and learning materials. In this aspect, teachers modify the curriculum and learning materials based on students' learning styles and their disability conditions. The curriculum content is adapted to the conditions and abilities of students. Meanwhile, process differentiation is the way students process ideas and information. About students will interact with the material and this interaction becomes part of what determines students' learning choices.

Given the learning styles and learning style preferences shown by students, classes must be adjusted so that these different learning needs can be accommodated well. Lastly, product differentiation is about students showing what they have learned. Learning products allow teachers to assess material that students have mastered and provide subsequent material. Students' learning styles also determine what students' learning outcomes will be shown to the teacher. Theories regarding differentiated learning are nothing new in the world of education, but research on the practice or implementation of differentiated learning in the classroom is still very limited. Existing literature reviews mostly explain concepts, components and strategies rather than practices in differentiated learning (Herwina, 2021; Taylor, 2017). In Indonesia, there are still very few literature reviews that examine differentiated learning. There is no literature review that specifically examines the application of differentiated learning in science learning. Therefore, researchers are interested in conducting a literature review regarding the application of a differentiated approach in science learning, both in the aspects of content differentiation, process differentiation and product differentiation. The purpose of writing this literature review is to (1) describe the application of a differentiated approach, (2) explain the results of applying a differentiated approach, and (3) analyze opportunities for implementing a differentiated approach in science learning.

Several related aspects of differentiated learning are based on the results of literature review analysis carried out by previous researchers. According to Sarafati (2023) explains that 1) differentiated learning has been implemented at the secondary school level; 2) differentiated learning can improve student learning outcomes; 3) differentiated learning can be applied in all learning by accommodating students' learning needs, 4) The instruments used in differentiated learning research are more dominant for measuring student learning outcomes. Meanwhile, according to the results of a literature review analysis from Wahyuni (2022), it is clear that the differentiated approach can be integrated with several learning models such as problem based learning, Blended Learning's Station Rotation, project based learning and paying attention to students' learning styles. Apart from that, implementing a differentiated approach can improve student learning outcomes. A differentiated approach can be applied in science learning because it is able to accommodate students' learning needs by taking into account students' interests, profiles, learning styles and learning readiness.

It is so important for differentiated learning to be implemented in schools, especially in schools that were selected as driving schools, so activities were carried out to increase teacher capacity in terms of implementing differentiated learning through workshop activities which were attended by all teachers from SMA Negeri 1 Tibawa, Gorontalo

Province. The Tibawa 1 Public High School is one of the driving schools which has been running for the last 2 years since 2022. It is hoped that through this workshop activity, teachers will be able to implement differentiated learning in the classroom according to the learning profile, learning needs and readiness to learn and ask students to learn in school.

2. Methods

This activity will be held on Thursday 28 September 2023 located at Undersunset Beach Molotabu, Bone Bolango Regency. Service activities use lecture, discussion and games methods as well as active participation from the participants. There were 46 participants who took part in this activity, all of whom were teachers from the Tibawa 1 State High School (SMA), Gorontalo Regency. The resource person who provided the material was Herinda Mardin, S.Si., M.Pd. who is a school facilitator for Class 3 of 2023 as well as a biology lecturer at the Faculty of Mathematics and Natural Sciences, Gorontalo State University. This activity began with an opening and continued with providing material related to the implementation of differentiated learning by teachers in schools and secondly providing material regarding the development of teaching modules for the project to strengthen the Pancasila student profile (P5).

This activity was carried out in order to increase the capacity of teachers at SMA Negeri 1 Tibawa as one aspect of the implementation of driving schools. Teachers are the spearhead of successful learning so efforts are needed to maximize teacher potential and competence in terms of implementing differentiated learning-based learning. Through this activity, it is hoped that teachers' understanding of the implementation of differentiated learning in the classroom will increase and the quality and quality of learning will increase. Some of the preparations made include preparation of the activity location, invitation of resource persons, tools and materials such as PPT material, LCD, Plano paper, sticky notes, markers and a sound system. Activities are carried out in the morning from 08.00 WITA to 16.00 WITA in the afternoon. The opening activity was the initial activity and continued with the core activities, namely the provision of material by the resource person as well as a question and answer session and discussion. Then it continued with games and quiz sessions and ended with closing and a group photo session.

3. Result and Discussion

The activity began with an opening by the Head of High School Education from the Gorontalo Provincial Education Office, followed by the presentation of material by the resource person. The activity of providing material was interspersed with providing ice breakers and games so that the workshop process ran well and smoothly. The following is an illustration of the provision of material by resource persons at the activity location.



Figure 1. Providing Material By Resources Persons

The final session was a question and answer session and discussion between the resource person and the participants and at the end of the closing event continued with a group photo. Some of the questions that arise after providing the material are how examples of differentiated learning are and how to include them in the teaching modules for each subject that have been prepared. Teachers who design teaching modules as learning tools in the classroom of course adapt to the conditions and abilities of the teacher in implementing differentiated learning. Several things that teachers must pay attention to before designing learning tools to implement differentiated learning are students' learning profiles, students' learning readiness, their learning interests and the teacher's readiness to implement

differentiated learning in the classroom. It is important for teachers to determine a learning model that suits the characteristics of the material, approach and strategies and methods used, student worksheets and how the teacher designs assessments that suit students' learning needs. Differentiated learning includes 3 things in the aspects of content differentiation, process differentiation and finally product differentiation. The session ended with a group photo, below is a picture of the group photo after the question and answer session was over.



Figure 2. Group Photo

A differentiated approach can be an alternative approach that can be applied in the classroom to deal with the diverse learning needs of students. This is in line with research by Demir (2021) which shows that the differentiated approach to science subjects applied at elementary school level by paying attention to learning styles is more effective in increasing students' motivation and understanding of science learning than traditional teaching methods. Students support the implementation of differentiated learning. . Meanwhile, the differentiated approach is also suitable if applied at the junior high school level because it has a positive influence on students' learning outcomes, learning achievements and critical thinking abilities (Al-Shehri, 2020; Suwartiningsih, 2021). The implementation of a differentiated approach can also be carried out at the high school level in science learning. The research results show that the application of differentiated learning using the blended learning's station rotation method can improve student learning outcomes in hydrostatic pressure material (Ferlianti, Mu'iz, & Chandra , 2022).

From the research above, it can be understood that there are many positive things about implementing differentiated learning, so it is very suitable to be applied in science learning. Differentiated learning can provide sufficient space for initiative, creativity and independence in accordance with students' talents, interests and physical and psychological development (Marlina et al., 2019). Through differentiated learning, all students' needs in studying science can be accommodated according to their interests or learning profile. Differentiated learning helps teachers to recognize and design learning that is in accordance with the nature of science, namely by paying attention to the differentiation of content, processes and products. Content differentiation carried out by teachers aims to modify the curriculum and lesson materials according to students' learning styles and learning profiles. Process differentiation by paying attention to readiness and learning styles, helps students process ideas, information and interact with material in science learning. The product differentiation provided by the teacher is able to help students demonstrate what they have learned. Students have the opportunity to demonstrate understanding according to their preferences, for example through posters, writing, songs, poetry or videos. A comfortable learning environment also influences students in the science learning process, so that they are able to achieve optimal learning outcomes.

Differentiated learning is able to increase the knowledge and skills of individual students in each class. Differentiated project-based learning has a positive effect on learners' perceptions, encouraging self-identification with hitherto undesirable coursework. The differentiation strategy aims to boost the achievement of all students, both those who fail to meet the expected educational level and those who are at the top of their class. This proves that all students in different classes who require differentiation strategies or instruction need to utilize diverse intelligence so as to enable more students to participate in classroom learning. This is in line with the view that teachers are responsible for adapting the various developmental needs and different levels of each student (Brungel et al., 2020).

Differentiated learning is a series of activities in the form of decisions according to common sense prepared by the teacher in order to carry out learning that is pro-student, and oriented towards the students' learning needs. These

decisions relate to the following things, namely: how to create a learning environment for students, defining learning objectives, a continuous assessment process so as to create an effective class.

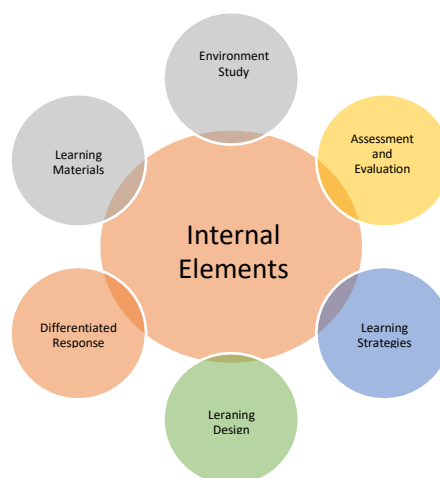


Figure 3. Elements Learning

Learning needs are based on students' interests and talents. One of the goals is to increase learning motivation, students have different interests and talents, for example in the fields of art, sports, mathematics or science and so on. Then a mapping of learning needs is carried out from the aspect of students' learning profiles with the aim of providing opportunities for students to be able to learn actively, efficiently and naturally. Factors that influence a person's learning include: environment, culture, visual, auditory and kinesthetic, so it is important for teachers to vary learning strategies and methods (Fitra, 2022; Gusteti, 2022; Faiz, 2022; Pratama, A., 2022).

From a progressivism perspective, education is in accordance with current developments and is student-oriented, so one of the strategies is differentiated learning. Differentiated learning can be implemented in 4 ways, namely first, content differentiation, which is related to the curriculum and what material is studied by students. Examples of content differentiation can include several activities, namely a) Providing reading materials/literature at various levels of readability; b) Providing a variety of teaching materials presented through modules, tapes, videos or practice; c) Using a vocabulary table to determine the level of students' readiness; d) Present ideas audio, visual or both; e) Using a reading partner; f) Using small groups or peer tutoring. Second, process differentiation, is the way students process information and ideas. Examples of activities for differentiated learning processes are a) Using tiered activities with varying levels of challenge, support and complexity; b) Exploring students' potential by providing a center for interests and talents; c) Prepare a personal agenda or list of tasks that must be completed during the time determined by the teacher; d) Providing direct support for students who need it; e) Facilitate the availability of time to complete tasks. Third, product differentiation, is an interpretation of what students have obtained/learned. Examples of activities could be a) giving students a choice of ways to express their learning needs or present their learning results, for example in writing, pictures, videos or narratives; b) Using rubrics/assessment standards that are suitable and expand the diversity of students' skill levels. Fourth, the learning environment, is the condition, feelings and way students work in learning. Examples of these activities include a) Having a room or environment where students can collaborate; b) Providing material that depicts real social and cultural aspects; c) Help facilitate students who like to move with students who like to sit quietly; d) Develop routines or habits that allow students to get help when educators or teachers are busy with other students (Ambarita, 2023; Purnawanto, 2023).

Differentiated learning of course has a goal, including helping the learning process for all students. Teachers can reflect and increase awareness of students' abilities so that all students can achieve learning goals. Students' motivation and learning outcomes can increase because teachers understand and provide guidance based on the level of difficulty of the material and students obtain learning outcomes that are appropriate to their abilities and level of difficulty of the material. Establishing a harmonious and harmonious relationship between educators and students. The relationship between teachers and students becomes stronger and stronger with this differentiated learning, so that students become enthusiastic about learning. Apart from that, being able to differentiate learning helps students to

be more confident and independent and explore students' potential and abilities (Marlina, 2019; Handiyani, & Muhtar, 2022; Kamalia, 2023).

4. Conclusion

The conclusion from this service activity is that differentiated learning is an inseparable part of the independent curriculum because differentiated learning is the spirit that underlies independent learning so that students learn according to their learning needs, learning profile, learning readiness and learning interests. Teachers are able to provide enjoyable and meaningful learning experiences for students so that learning objectives can be achieved. This service activity had a very positive impact on the participants who took part in this activity, the participants were very enthusiastic and increased the participants' understanding regarding the implementation of differentiated learning in the classroom.

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