THE APPLICATION OF DIFFERENTIATED LEARNING IN IMPROVING STUDENTS' LEARNING ACTIVENESS AND CREATIVITY

Rosalina Hutbah Ritonga[1], Halimatusyakdiyah[2]

[1]Fakultas Keguruan Ilmu Pengetahuan, Universitas Muhammadiyah Sumatera Utara, Indonesia.
[2]Fakultas Pendidikan Ilmu Pengetahuan Sosial, Universitas Pendidikan Indonesia, Indonesia.
[*]*Corresponding Author*: rosalinahutbahritongarosalina@gmail.com

Article Info	ABSTRACT

In the 21st Century, the independent learning curriculum is in the spotlight for the world of education, the learning process of students is required to be more active and teachers are required to be able to meet the needs of students and increase the potential of students such as talents, interests and creativity. One solution to meet the needs of students is the application of differentiated learning. Differentiated learning aims to provide facilities for the diversity of students based on the learning needs and characteristics of students. This study aims to determine whether the application of content and product differentiation learning can increase student learning activity and creativity. This type of research is Classroom Action Research (CAR) using a qualitative approach. The research results obtained are increased activity and creativity of students from the implementation of differentiated learning content and products using cooperative learning models, while judging from the results of observations, students as a whole are very actively involved during the learning process, making products to show the results of their discussions in front of the class.

***Keywords:** Differentiation learning; learning activeness; learning creativity*

1. INTRODUCTION

In the context of modern education, the main challenge faced by educators is how to increase students' learning activeness and creativity. This point is important because the development of technology and information has changed the way of learning and teaching in the classroom. According to data from the Ministry of Education and Culture (2023), only 40% of learners in Indonesia are active in classroom teaching and learning activities. This data shows that there are still many learners who are not actively involved in the

learning process, which ultimately has an impact on their creativity. Thus, an innovative and effective learning approach is needed to overcome this problem.

Differentiated learning has been widely recognized as one of the effective methods to increase students' learning activeness and creativity (Herwina, 2021; Faslia et al, 2023). Differentiated learning is a teaching strategy designed to meet individual learning needs by modifying content, processes, products, and learning environments (Tomlinson, 2014; Wahyuningsari et al, 2022; Barlian et al, 2023). This reasoning is supported by research results that show that this method is able to increase students' motivation and participation in learning. For example, a study by Subban (2006) found that differentiated learning can increase learning engagement by 25% and creativity by 30% (Ferdiansyah & Kaltsum, 2023; Yuniarti & Subekti, 2024). Based on these literature facts, it can be concluded that the application of differentiated learning has great potential to improve the quality of education (Haniya & Roberts, 2017; Valiandes & Neophytou, 2018; Gheyssens et al, 2020).

This paper aims to explore the application of differentiated learning in improving students' learning engagement and creativity. This point is important because a deep understanding of the application of this method can provide practical guidance for educators in facing educational challenges. This research also aims to present empirical evidence on the effectiveness of differentiated learning through case studies in several secondary schools in Indonesia. For this reason, this research is expected to contribute to the development of more effective and innovative learning strategies. In conclusion, this research is expected to provide new insights and practical solutions for educators in improving students' learning activeness and creativity.

The main hypothesis in this study is that the implementation of differentiated learning can significantly improve learners' learning activeness and creativity. This point is based on the argument that each learner has unique learning needs, and by adjusting teaching methods, educators can more effectively facilitate the learning process. This reasoning is supported by various previous studies that show a positive correlation between differentiated learning and increased learning engagement and creativity. For example, research by Geletu & Mihiretie (2022) showed that learners who learned with differentiated methods showed significant improvements in class participation and creative learning outcomes. Based on this evidence, it can be concluded that differentiated learning is a promising approach to improving the quality of education.

2. RESEARCH METHODE

This research uses a qualitative approach with the method of Classroom Action Research (PTK) which aims to increase the activeness and creativity of students' learning during the learning process. According to Kemmis in (Purwati et al., 2022), PTK can be carried out in several cycles, not just one time, to achieve the desired target of the researcher, namely increasing students' learning activeness and creativity through the application of differentiated learning.

This research was conducted in class X.5 SMA Negeri 14 Medan in the 2023/2024 school year with 37 students. The object of the research is students' learning activeness and creativity after the implementation of differentiated learning, both in content and product. This research includes four stages: 1) Planning, 2) Action, 3) Observation, and 4) Evaluation and reflection. Evaluation and reflection are carried out to identify weaknesses in the implementation of actions that have been taken (Sukendra et al., 2022). Data collection instruments and tools used in this research include interviews, observations during teaching and learning activities, and documentation.

3. RESULT AND ANALYSIS

In learning activities as a professional educator teacher certainly has a very important role, as with its function as a facilitator, inspirer, and teacher is able to create an interesting, varied, fun, safe, comfortable learning atmosphere and of course in favor of students and able to meet the needs of diverse students. Learning activities that are interesting, learner-centered and meet the needs of learners need to be implemented by teachers with a plan (planning) such as strategies that will be implemented through the application of differentiated learning. The stages of this planning are in the form of formulating learning outcomes and objectives. Furthermore, the implementation process on the application of differentiated learning in cycle I and cycle II can be seen in table 1:

Table 1. Table of Implementation Process Steps of Differentiated Learning

No	Differentiated Learning Steps	Description
1.	Researchers as teachers map the learning needs of students.	Mapping is done based on learning readiness, learning interest and learner learning profile.
2.	Researchers as teachers design differentiated learning implementation plans.	Teacher selects (Approach, strategy, model, method, media and material to be delivered to students).
3.	Researcher as a teacher conducts reflection and evaluation activities.	There is feedback on the implementation of differentiated learning that has been implemented.

Source: Modified from (Susanti, et al., 2023).

In the implementation of mapping the learning needs of teachers using diagnostic assessments, as in this case it is important to do in knowing the diverse characteristics of students in class X.5 as a research site in implementing differentiated learning applications which are then carried out in stages consisting of a pre-cycle to find out the diagnostic assessment then 2 cycles on the application of differentiated learning. The information mapping carried out contains the learning readiness of students through diagnostic assessments in the form of initial cognitive tests at the time before the research cycle (pre-

cycle) then in this assessment contains the interests and learning styles of students through non-cognitive diagnostic assessments. So the initial assessment carried out by the researcher becomes a reference in the initial process of implementing differentiated learning in class X.5. This is in line with the view (Mastuti, 2022) which explains that differentiated learning is learning that has careful and full planning and is able to meet the needs of students in learning.

In teaching and learning activities, of course, in this case the abilities are different from one another which cannot be beaten equally in students as we know that everyone has diversity, this is in line with the views conveyed by Muhajir Efendi in Faiz et al, (2022). Furthermore, at this stage the researcher also conducted a brief interview with students by asking directly about who likes to learn by looking at pictures? Who likes learning by watching videos? And who likes learning by reading? Then the researcher also conducted a brief interview with the student teacher as the teacher of Civics subjects in class X.5 as a research class where researchers applied differentiated learning. So with this, the interview results obtained that in class X.5 at SMA Negeri 14 Medan, the students are still not very active because some students are only those who are active in the classroom during the learning process then in learning activities still tend to use power point (PPT) only as learning media and learning tasks produced by students only in the form of notes and papers. Therefore, Civics Pamong teachers also provide advice on integrating technology in the implementation of learning by varying according to the needs of students balanced with the various interests and learning styles of students so that learning is fun and students are actively involved and the products produced by students vary according to what they are interested in. In this case, in learning activities, students are given freedom in accordance with the independent learning curriculum.
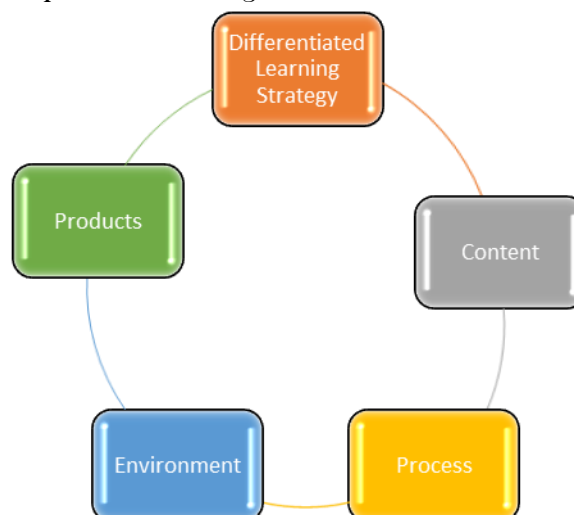

Figure 1: Differentiated Learning Strategy

In Figure 1 regarding differentiated learning strategies, researchers use differentiated learning strategies (content and products), then researchers choose (Approach, model, media and material), namely the student centered learning (SCL) approach, Cooperative Learning model, Website Media containing (Power Point, Article papers, Learning Videos according to the material taught). So with that, the researcher applied

differentiated learning with the group discussion method with the material of the boundary dispute case. The learning model and method used by this researcher aims to increase the involvement of students in understanding the topics taught in class, so in this case students can learn in the right way to understand the conflict problems that researchers present, then students can organize the problem, collect some identified data information, collect what problems occur, then students find the right solution and attitude to a conflict problem by arguing individually or in collaboration with the group.

Then the learning process of these 2 cycles, based on the results of interviews and also these observations, also shows that students prefer learning that uses varied learning media, and exemplifies the problems in real learning. The results of research (Wahyuni, 2022) show that students do not like conventional learning. That way researchers use web-based learning content by providing differentiated content, with a cooperative learning model of discussion methods in the classroom, then students can provide the results of group discussions from identifying conflict problems given by researchers as teachers through the syntax of cooperative learning, namely the presentation of the final report.

Figure 2: Content differentiation through varied web-based learning media

In cycles I and II in teaching and learning activities that implement content differentiated learning, researchers as teachers facilitate students with visual learning styles by providing material in the form of pictures, power points (PPT), articles. As for students who like audiotory and audiovisual teachers provide a variety of learning videos related to the material. As in class X.5 based on the results of interviews and diagnostic assessments obtained that students in class X.5 there are 2 learning styles, namely visual and audiotory alone, no students with kinesthetic learning styles were found.

In the application of differentiated learning in cycle I and II, the teacher uses Cooperative Learning syntax. Then the learners are divided into groups according to the interests and learning styles of the learners, the teacher provides orientation to the conflict problem to be discussed and identified, each group plans the tasks and products to be made according to the chosen topic, then conducts investigations by searching for information in identifying cases, making preparations for making the final report, and students present the final report on the results of group discussions by identifying

problems in the selected case, but in every learning process the teacher still guides students from the beginning to the end of learning activities.

Figure 3. Learning Activeness of individual learners after implementing content and product differentiated learning

In Figure 3 above, it can be seen that the learning activities of students with a differentiated learning approach, students are more active in developing their learning creativity.

Figure 4: Students' Learning Activeness and Creativity during Group Presentation after the implementation of differentiated learning

In Figure 4 above, it can be seen that students are very active in developing their learning creativity, as the visual and audiotory groups above complete tasks by identifying problems properly and on time and producing products in the form of infographics and videos, besides that in other groups there are also those who make power points, infographics, mad mapping, and videos. So in this case, the results obtained by students have increased learning creativity which previously only produced notes and papers, but after doing differentiated learning, students can develop their activeness and learning creativity by making products as a form of discussion results with groups according to their interests and learning styles.

Furthermore, in the closing activity during learning activities between cycles, the researcher as a teacher conducts reflection and evaluation activities, after implementing this differentiated learning, the researcher as a teacher reflects with students about the learning that has been carried out with various questions, including: Is learning fun?, is there a suitability for learning in your interests and learning style?, What understanding is obtained regarding the material learned today?, Is there material that you have not understood at today's meeting? (Communicating activities). After the closing reflection

activity, the researcher as a teacher provides learning motivation for students to maintain learning activeness and creativity in further learning and students will feel happy and feel that they are directly involved and their existence is considered in the classroom. Finally, the teacher evaluates learning activities as a form of improving learning at the next meeting.

The challenges and obstacles in implementing the application of differentiated learning are the teacher's limitations in managing time because the learning hours begin after recess and finish before the dzuhur prayer as well as Friday prayers so that before the learning hours are finished 20 minutes before the learning must be completed. With that, the reflection at the end of the lesson is very important and needs to be done by the teacher to improve in improving quality learning in the next lesson, including whether there is more interesting learning that students want to be implemented in the next lesson and others, with the consideration of the results of the reflection, it will create learning that is in accordance with the characteristics of students so that the learning needs of students can be met and students feel happy and motivated and actively involved in participating in learning until completion.

4. CONCLUSION

Based on the results and discussion of this class action research (PTK), the researcher can conclude that students experience an increase in individual learning activeness in the learning process after understanding the material through the content provided by the researcher as a teacher then the learning activeness of students in groups when understanding the material through various content presented on the website facilitated by the teacher as a learning medium and the products produced by the group as a form of discussion results poured by the group in the form of infographics, power points, mad mapping, learning videos. The product differentiation is adjusted to the results of mapping the learning needs of students through diagnostic assessments and short interviews in the form of basic questions related to students' interests and learning styles. Thus, differentiated learning is realized by taking into account the characteristics and learning needs which include interests, initial abilities, learning styles. Differentiation of content and products will achieve learning objectives if it goes through the stages of planning, then conducting observation and in the final activity, namely reflection. So that after that the teacher can do a follow-up on differentiated learning related to what has not been implemented, which in this case the teacher is able to design lesson plans with these considerations.

References

Barlian, U. C., Yuni, A. S., Ramadhanty, R. R., & Suhaeni, Y. (2023). Implementasi pembelajaran berdiferensiasi dalam kurikulum merdeka pada mata pelajaran bahasa inggris. ARMADA: Jurnal Penelitian Multidisiplin, 1(8), 815-822.

Faiz, A., Pratama, A., & Kurniawaty, I. (2022). Pembelajaran Berdiferensiasi dalam Program Guru Penggerak pada Modul 2.1. Jurnal Basicedu, 6(2), 2846–2853. https://jbasic.org/index.php/basicedu%0A.

Faslia, F., Aswat, H., & Aminu, N. (2023). Pelibatan Model Projek Based Learning pada Pembelajaran Ilmi Pengetahuan Sosial (IPS) Menuju Pelajar Pancasila pada Jenjang Sekolah Dasar. Jurnal Basicedu, 7(6), 3895-3904.

Ferdiansyah, D., & Kaltsum, H. U. (2023). Teacher's strategy in growing student creativity through the pancasila student profile strengthening project. Jurnal Ilmiah Sekolah Dasar, 7(1), 46-54.

Gheyssens, E., Consuegra, E., Engels, N., & Struyven, K. (2020, June). Good things come to those who wait: The importance of professional development for the implementation of differentiated instruction. In Frontiers in Education (Vol. 5, p. 96). Frontiers Media SA.

Geletu, G. M., & Mihiretie, D. M. (2022). The effects of primary school teachers' professional development activities on differentiated instructional practices and possibilities of elevating students' learning engagement. Education 3-13, 1-16.

Haniya, S., & Roberts-Lieb, S. (2017). Differentiated Learning: Diversity Dimensions of e-Learning. In e-Learning Ecologies (pp. 183-206). Routledge.

Herwina, W. (2021). Optimalisasi kebutuhan murid dan hasil belajar dengan pembelajaran berdiferensiasi. Perspektif Ilmu Pendidikan, 35(2), 175-182.

Kementerian Pendidikan dan Kebudayaan. (2023). Data Keaktifan Peserta Didik dalam Kegiatan Belajar Mengajar di Kelas.

Mastuti, A. G., Abdillah, & Rumodar, M. (2022). PENINGKATAN KUALITAS PEMBELAJARAN GURU MELALUI WORKSHOP DAN PENDAMPINGAN PEMBELAJARAN BERDIFERENSIASI. JMM (Jurnal Masyarakat Mandiri), 6(5), 3415–3425. http://journal.ummat.ac.id/index.php/jnm

Purwati, E., Samiu, T., & Ika, T. (2022). Implementasi Discovery Learning Berbasis Lesson Study Untuk Meningkatkan Kemampuan Berpikir Kritis Peserta Didik Pada Masa Pemulihan Pembelajaran Di SMKS Pembangunan Ternate (Penelitian Tindakan Kelas XI Teknik Komputer dan Jaringan Mata Pelajaran PKn. 13(2).

Sukendra, I. K., Muliana, I. W., Juwana, I. D. P., & Surat, I. M. (2022). Widyadari. Upaya Peningkatan Hasil Belajar Mahasiswa Prodi Pendidikan Matematika Pada Mata Kuliah Aljabar Linier Dengan Pembelajaran Daring Menggunakan Model Pembelajaran Problem Solving, 23(2), 270–281. https://doi.org/10.5281/zenodo.718 9724.

Susanti, et al., (2023). Optimalisasi Pembelajaran Berdiferensiasi Kontem dan Proses pada Perencanaan Pembelajaran PPKn. Jurnal Ilmu Kependidikan, 15 (2).

Tomlinson, C. A. (2014). The differentiated classroom: Responding to the needs of all learners. Ascd.

Valiandes, S., & Neophytou, L. (2018). Teachers' professional development for differentiated instruction in mixed-ability classrooms: investigating the impact

of a development program on teachers' professional learning and on students' achievement. Teacher Development, 22(1), 123-138.

Wahyuningsari, D., Mujiwati, Y., Hilmiyah, L., Kusumawardani, F., & Sari, I. P. (2022). Pembelajaran berdiferensiasi dalam rangka mewujudkan merdeka belajar. Jurnal jendela pendidikan, 2(04), 529-535.

Yuniarti, R., & Subekti, H. (2024). Transforming Learning Experiences: Student Perspectives on Differentiated Learning in Guided Inquiry. JOELI: Journal of Educational and Learning Innovation, 1(1), 20-31.