THE IMPLEMENTATION OF DIFFERENTIATED LEARNING TO DEVELOP COLLABORATION SKILLS AMONG FOURTH GRADE STUDENTS AT ELEMENTARY SCHOOL BERBEK NGANJUK IN SOCIAL STUDIES

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Abstract. *This study aims to gain a deeper understanding of the application of differentiated learning and its impact on the development of students' collaborative skills. The research method used is qualitative and a descriptive approach. The research subjects or informants were all fourth-grade students of Elementary School (SDN) Berbek Nganjuk. Research data were obtained through observation, interviews, and documentation. The results of the study indicate that the application of differentiated learning in social studies as an effort to develop the collaborative skills of fourth-grade students of SDN Berbek has a role in developing students' collaborative skills. Supported by research results that show developments from the first meeting to the second meeting. It was found that more than half of the number of students fell into the collaborative category, then less than half of the number of students fell into the very collaborative category, and a small number of students fell into the fairly collaborative category. The most visible development was when improvements in interaction and collaboration between students during learning illustrated that the application of differentiated learning had a direct positive impact on the development of their social skills as well*

Keywords: Differentiated Learning, Learner Collaboration Skills, Social Studies Learning

1. INTRODUCTION

One aspect that holds significance and needs to be recognized in life is education. Globally, education plays a central role because it functions as an entity that strives to shape and sustainably develop the future generations of a nation and state. Improving the quality and standard of education itself is inseparable from the demands for a successful learning process [1]. Moreover, entering the 21st century requires the preparation of human resources with the 4C competencies: critical thinking, creative thinking, collaboration, and communication [2]. These skills must be developed in students, one of which is collaboration skills. Students' collaboration skills play a crucial role in developing them so they can work together in groups to face 21st-century competition [3].

According to Laelasari et al. [4], collaborative skills refer to students' ability to communicate openly with the intention of exchanging ideas, views, and opinions. Therefore, collaboration can also be used to foster students' social attitudes by learning to exchange experiences and knowledge with one another. On the other hand, in the view of [5] it is stated that students can experience an increase in their understanding when participating in group discussions. Surya also argues that when one group member is actively involved, this stimulates the active participation of other members, which ultimately makes the learning process more interesting. A collaborative learning approach by working in groups is a strategy often used to stimulate discussion. In addition, with the ability to collaborate, students can develop critical thinking skills and improve communication skills. Some examples of collaborative skills include: playing an active role in group discussions, listening, and being able to contribute directly to group work. Collaboration also occurs when a friend has difficulty completing their assignment. In addition, students must also be able to appreciate and accept contributions from each member for their work [6].

Teachers play a role interconnected with learning methods and supporting resources, all three having a mutually influential impact on the teaching and learning process. These components play a central role in determining the success of a learning activity, which ultimately impacts students' ability to work together. Especially in the context of group learning, collaboration between students is a crucial element. It's not uncommon for some students to struggle with understanding the material. This is due to the tendency of students to be passive, which is further exacerbated by the implementation of teacher-centered learning methods. For example, research by Nurzaki [7] revealed that many educators still neglect concepts in learning activities, ultimately leading to a teacher-centered learning model, a concept that should be abandoned in today's education system.

In the current independent learning curriculum, a new paradigm of learning design through differentiated learning is an alternative for liberating students by making learning materials more engaging and enjoyable, with a student-centered approach [8]. This differentiated learning can be used as an effort to develop students' collaborative skills by adapting to each student's needs and learning readiness. Tomlinson [9] stated that this approach differentiated learning refers to a learning strategy that considers individual variations in meeting individual learning needs. A similar view was expressed by Herwina [10], who argued that a differentiated learning approach allows for the adaptation of learning approaches to students' interests and learning characteristics. This concept emphasizes the adaptation of diverse curricula, teaching materials, teaching techniques, and learning strategies, tailored to the needs, abilities, interests, and learning styles of students.

Based on initial observations and interviews conducted at SDN Berbek Nganjuk, it was found that in the social studies learning process, teachers have actually attempted to implement differentiated learning by not equating the abilities of individual students' tasks with each other. However, in group activities, teachers often find it difficult to design and organize group activities due to limited time and busy schedules. Furthermore, age factors and limited access to knowledge in preparing various learning tools and materials also make it difficult for teachers to organize group activities effectively. Therefore, teachers rarely conduct group activities. As a result, when study groups are formed, students are still less motivated and have difficulty working together with their members, so that students' collaboration skills in social studies learning are underdeveloped.

According to [11], differentiated learning should be able to create a learning environment that supports student collaboration, while collaboration in learning itself can be an effective tool to facilitate differentiated learning that suits students' needs. Differentiated social studies learning implies that each student needs to be

actively involved, have creativity, and demonstrate dynamics during the learning process. It is important to strive for systematic implementation of social studies learning in order to develop critical thinking skills, attitudes, abilities and fulfillment of needs in dealing with students' social lives [12].

If only a portion of students are actively involved in social studies learning, this will be an obstacle because the goal of implementing differentiated learning is to free students to achieve shared success in learning. Therefore, active and dynamic involvement is needed from all students in appreciating every material presented by the teacher and in collaborating in the learning space. On the other hand, teachers also have an important role in providing space for students to express themselves with full confidence, without doubt, inferiority, or fear. Therefore, based on these considerations, in this study, the researchers attempted to dig deeper into the application of differentiated learning in social studies as an effort to develop students' collaboration skills by adjusting and preparing varied learning and dividing study groups according to their learning needs. The implementation of this learning is expected to transform students who were initially passive in groups to become more collaborative and active, both for themselves, the teacher, their friends, and the learning environment.

2. RESEARCH METHODS

This study employed a qualitative, descriptive approach. The researcher acted as a key informant. As explained by J. Moleong [13], qualitative research methods are an effort to gain an in-depth understanding of the phenomena experienced by research subjects, such as actions, perception, motivation, behavior, and other aspects. In this study, the researcher was actively involved in the learning activities carried out by the research subjects. Through this active participation, the researcher also conducted an initial assessment of students regarding their learning styles. Then, the researcher implemented differentiated learning by integrating content, process, and product differentiation within the learning process. Furthermore, during the learning process, the researcher observed individual actions regarding students' collaboration skills and observed the communication that occurred, as well as participating in various ongoing activities.

The research subjects were all 26 fourth-grade students at Berbek Elementary School in Nganjuk. The class selection was based on purposive sampling, taking into account observations made by the social studies teacher during their teaching in the fourth grade last semester. Compared to other classes, this fourth-grade class more often ignored assignments given by the teacher and found it difficult for students to work together when formed into groups due to a lack of responsibility in completing assignments.

Data collection was conducted through direct observation with two meetings on the development of students' collaboration skills through observation sheets, unstructured interviews (free) because the researcher acted as a human instrument and documentation during the learning process. The data from this study were in the form of descriptions of the differentiated learning process and the results of the development of students' collaboration skills using observation sheets from 26 students related to student collaboration.

3. RESULTS AND DISCUSSION

Social Studies Learning Activity Process Through the Application of Differentiated Learning

Before beginning the research, the researcher conducted an initial diagnostic assessment of fourth-grade students using a questionnaire completed via Google Forms regarding their learning styles. This assessment was conducted after the Final Exam for the Even Semester on July 21, 2023, to accommodate and remap student needs. The researcher then created a learning plan by implementing differentiated learning in fourth-grade students on Theme 01, "Natural Resource Potential in Indonesia," in accordance with the current learning process. This began with determining the objectives to be achieved, preparing assessment instruments, and then designing learning steps.

According to Marlina [11], one aspect of content differentiation is preparing and compiling varied learning materials and resources. Therefore, in this study, researchers differentiated content by providing varied learning resources and media, such as PowerPoint presentations, videos, the school environment, and crossword puzzles. This is to accommodate the learning needs of each student through content differentiation by combining the material to be taught to students in class based on learning style indicators, including auditory, visual, and kinesthetic. According to Faiz & et al. [14], an important role of an educator is to understand students' tendencies in the learning process through the use of learning style tests. learning. This is useful for improving students' understanding of appropriate learning methods, so they can achieve optimal

learning outcomes. Furthermore, in the context of process differentiation, the focus is on how students are able to process the ideas and information they acquire. Given the variations in learning styles and preferences expressed by students, adjustments to the classroom setting are necessary to ensure that diverse learning needs can be effectively empowered [10]. Therefore, at this stage, researchers differentiate the process, beginning with providing motivation and apperception through provocative questions, then implementing flexible grouping by considering students' learning styles. According to Marlina [11], flexible grouping provides opportunities for learning in various groups based on interests, readiness, and learning styles. By dividing students into groups with similar learning styles, students are able to socialize, discuss, and exchange information, maximizing their potential, resulting in more effective learning. It cannot be denied that although the groups were formed based on similar learning styles, there were still differences, such as achievement, gender, and so on. Therefore, at the beginning of this lesson, some students still seemed uncomfortable with their group members. After grouping, the researcher then modified the learning activities by first presenting the learning material using PowerPoint, showing short videos, and observing the school environment. Then, the researcher invited students to complete interactive games through crossword puzzles and complete activities in the Student Worksheet (LKPD). This was done to optimize the students' learning experience.

Furthermore, to present the results of work in the Student Worksheet (LKPD) and to differentiate products, as stated by Fitriyah & Bisri [15], product differentiation is the work or performance that students must present to teachers (written reports, speeches, posters, etc.) or something tangible. The products provided include two things: (a) providing challenges and diversity or variation, and (b) giving students choices in how they can express their desired learning.

Here, the researcher gave each group the freedom to choose how to work and present their work according to their abilities, skills, and creativity. Then, they were encouraged to discuss and present their work in front of the class, and provide conclusions. This also aimed to give students the freedom to express their work according to their interests and to gain a deeper understanding of the material taught [8]. Furthermore, according to [14], there are two focus indicators in product differentiation: challenge and creativity. Therefore, at this stage, the researcher attempted to provide clear direction to students. Where students were directed to discuss, ask questions, and collaborate with the team to identify the potential natural resources from the island image provided. The results of the work were then written on manila paper provided by the researcher, giving group members the freedom to work according to their abilities, skills, and creativity. During the learning process, the researcher was assisted by two observers from fellow students who observed the collaboration abilities of each student in their respective groups.

At this stage, students appeared enthusiastic because they were given the freedom to work on the LKPD, so that learning could be completed well by accommodating the needs of student interests. Researchers also saw that based on the results of reviews and observations during class learning, encouraging interest and understanding of the material carried out through differentiated learning by involving students in varied and fun activities in learning turned out to have a very positive impact on students to be more interested in following the learning process from beginning to end. In addition, students were also encouraged to participate more actively in it.

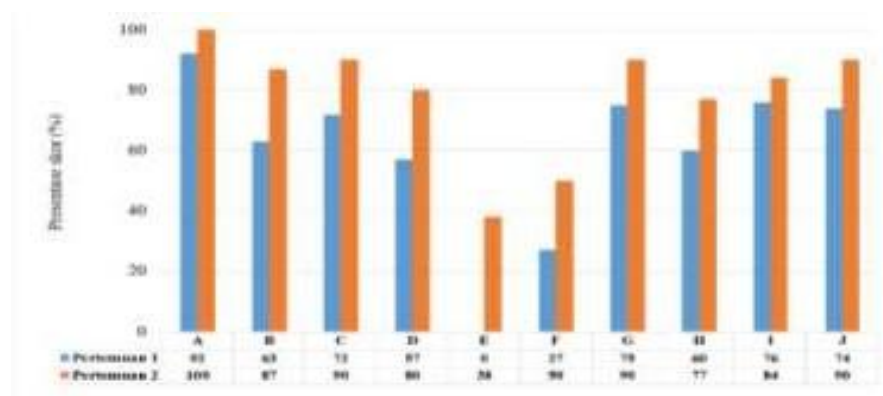### Development of Students' Collaborative Skills

The activity of observing the development of students' collaborative skills was carried out in the social studies learning process, specifically during the work on the worksheet by differentiating the products based on the interests of the discussion results of each group. The observation was carried out using an observation sheet instrument with the assistance of two observers in observing student collaboration. The researcher was assisted by two observers in collecting data from the results of the observations carried out using observation guidelines as in the following table. Then the benchmark assessment criteria (PAP) used in this study, as explained by Purwanto [16] in categorizing student skills, are as follows:

Table 1. Criteria for Student Collaboration Skills

Percentage	Category
86% - 100%	Very Collaborative
76% - 85%	Collaborative
60% - 75%	Quite Collaborative
55% - 59%	Less Collaborative
≤ 54	Very Less Collaborative

The observation sheet guidelines for collaboration skills used in this study included 10 descriptors, as follows: A) students accept and are willing to collaborate with their assigned groups; B) students actively participate in discussions with their groups; C) students are able to collaborate in finding learning resources to solve problems in the worksheet; D) students are able to accept and express opinions and ideas during discussions; E) students are able to present completed assignments to the class; F) students are able to draw conclusions at the end of the lesson and worksheet; G) students are involved and assist group members in completing the worksheet; H) students ask other groups or the teacher about assignments or material they don't understand; I) students are able to divide roles and tasks within the group; J) students are able to complete assignments on time and responsibly. Based on the analysis of observation data during the learning process, which included two meetings regarding students' collaboration skills, it was found that students' collaboration skills experienced development in each collaboration descriptor. Next, the data obtained from the development analysis results from the first and second meetings are presented in the following diagram;

Figure 1. Development of students' collaboration skills at each meeting for each descriptor

From the diagram, it can be seen that the collaborative skills of students from each descriptor in each meeting experienced development. In descriptor A; students accept and have the willingness to work together with the predetermined group, experienced development from the first meeting with a percentage of 92% to 100% in the second meeting, in these two meetings the very collaborative category was obtained. Descriptor B; students play an active role in discussing with their group members, experienced development from the first meeting with a percentage of 63% with a fairly collaborative category range to 87% with a very collaborative category range at the second meeting. Descriptor C; students are able to work together to find learning resource references to solve problems in LKPD, experienced development from the first meeting with a percentage of 72% with a fairly collaborative category range to 90% in the second meeting with a very collaborative category range. Descriptor D; students are able to accept and convey opinions and ideas during discussions, experiencing development from the first meeting with a percentage of 57% with a less collaborative category range to 80% with a collaborative category range at the second meeting. Descriptor E; students are able to present assignments that have been done in front of the class, experiencing development from the first meeting with a percentage of 0% with a non-collaborative category range to 38% with a very less collaborative category range at the second meeting, because in this descriptor only representatives present their work results in front of the class. Descriptor F; students are able to make conclusions at the end of the learning and LKPD, experiencing development from the first meeting with a percentage of 27% with a very less collaborative category range to 50% with a very less collaborative category at the second meeting,

because only a few are able to make conclusions at the end of the learning and LKPD. Descriptor G; students are involved and help each other in working on the LKPD, experiencing development from the first meeting with a percentage of 75% with a range of categories quite collaborative to 90% with a range of categories very collaborative at the second meeting. Descriptor H; students ask for assignments or materials that have not been understood to other groups or to the teacher, experiencing development from the first meeting with a percentage of 60% with a range of categories quite collaborative to 77% with a collaborative category at the second meeting. Descriptor I; students are able to divide roles and tasks in the group, experiencing development from the first meeting with a percentage of 76% with a collaborative category to 84% with a collaborative category at the second meeting. Descriptor J; students are able to complete assignments on time and responsibly, experiencing development from the first meeting with a percentage of 74% with a range of categories quite collaborative to 90% with a very collaborative category range at the second meeting.

There are several obstacles and challenges in implementing differentiated learning related to the development of student collaboration at this first meeting, namely; 1) there are several students who are less active in discussions, because when asked by researchers it turns out they are still confused in working, and there are also those who are less sure about their understanding, 2) most students still do not dare to express their ideas and ideas for working on LKPD, because they are in heterogeneous groups that are not from their social circle, which even though the group is formed with the same learning style of students, but of course there are still other differences such as; abilities, achievements, and gender, 3) coordination of students is lacking because students tend to use their own abilities in thinking and in completing LKPD, 4) class management becomes more complex, here the teacher does need extra time and physical effort to monitor and supervise each group to get the same attention.

From several obstacles and challenges in implementing differentiated learning, the researcher did several things at the second meeting to optimize student collaboration, namely; 1) monitoring feelings and monitoring the development of students in groups individually, by asking about their difficulties in working on the LKPD given, in addition the researcher also re-explained parts of the material that had not been understood by the students, 2) providing social-emotional support to students by giving directions to students to divide roles in groups to work on LKPD projects so that students also have confidence and their social involvement, 3) the researcher also encouraged students to peer tutoring in helping group members who had difficulty and were involved in completing LKPD, 4) the researcher tried to emphasize more on class management in order to create an inclusive environment and support student collaboration through the implementation of differentiated learning in the classroom by giving praise or rewards and encouragement to students who were successful and providing extra support to those who faced difficulties.

Therefore, based on the percentage results of the diagram, it shows that the collaborative skills of class IV SDN Berbek Nganjuk have developed. The final results of the study show that out of 26 students, there are 35% of students, which means less than half are in the very collaborative category, 42% of students, which means almost half are in the collaborative category, and 23%, which means a small portion of students are in the fairly collaborative category. This development is very visible when improvements in interaction and collaboration between students when working on LKPD where researchers encourage students to peer tutor with their group members, this illustrates that the application of differentiated learning also has a positive impact on the development of social skills as well.

This is also influenced by various factors, according to the view of Apriono [17] the factors that influence collaboration between students involve several aspects, namely: 1) the formation stage, which involves basic skills in forming groups during the learning process, in forming the groups themselves, in this study the researcher grouped students based on the students' learning styles, By having the same learning style in each group, students are able to socialize, discuss and exchange information and maximize their potential, so that learning will be more effective, where according to Khanal, et al., [18] revealed that knowledge about students' learning styles really helps teachers optimize students' abilities in participating in learning activities.

Students who are aware of their learning styles will be more responsible for their learning [19]; 2) the implementation stage, which includes group management skills so that tasks can be carried out efficiently, at this stage the researcher manages the group by monitoring each group's collaborative development and providing assistance to students who have difficulties individually so that students feel cared for and comfortable in learning; 3) the formulation stage, which includes mastery of concepts and strategies as skills,

at this stage the researcher ensures that students discuss clearly with the group, then divides roles and ensures that group members contribute actively; and 4) the development stage, which includes skills to stimulate rethinking by students, including cognitive aspects, conflict management, information seeking, and delivery of results in the form of conclusions, at this stage the researcher stimulates and encourages students to peer tutor with their group members to find the right sources and help each other with group members who have difficulties, then provides reinforcement for students to be brave and confident in presenting the results of their work in front of the class and providing conclusions.

In this study, active collaborative behavior refers to observable actions, including communication, team building, cooperation, problem solving, and managing diversity within the team. All of this can be observed when students engage in discussions and solve problems during the learning process [20]. By strengthening collaboration skills through the implementation of differentiated learning, students become more skilled at solving challenges collaboratively. This aligns with [21] that learning involving interaction between students facilitates student understanding due to the support of helpful classmates. Based on interviews with social studies teachers at the SDN Berbek Nganjuk, these collaborative skills are important because they are not only useful in the world of education but also in the business world. Not only is competition necessary but also requires good collaboration skills. These collaborative skills can also be acquired by developing students' character values through cooperative interactions and responsibility [22].

Research Findings;

Based on the research results that have been presented above, some of the findings from this research are as follows:

1) The application of differentiated learning in social studies has made a significant contribution to developing students' collaborative skills. This is evidenced by observations from two meetings that showed improvements in each indicator.
2) The encouragement of interest and understanding of the material carried out through differentiated learning by involving students in varied and enjoyable activities during learning has had a very positive impact on students to be more interested in following the social studies learning process from beginning to end. In addition, students are also encouraged to participate more actively in their groups.
3) Researchers need to encourage each student to peer tutor each other with their group members when working on LKPD, because some students in the group are still embarrassed to ask questions and express their difficulties.

4. CONCLUSIONS

Based on the research results and discussions described above, the researcher concluded that the application of differentiated learning in social studies as an effort to develop collaborative skills of students in grade IV of SDN Berbek Nganjuk has a role in improving the quality of learning and developing collaborative skills of students. This is also supported by the results of observations which show that more than half of the number of students fall into the collaborative category, then less than half of the number of students fall into the very collaborative category, and a small number of students fall into the fairly collaborative category. Student progress from the first to the second meeting provides concrete evidence that differentiated learning plays a role in developing collaborative skills. Observed developments include improvements in interaction and collaboration between students during learning, demonstrating that the implementation of differentiated learning has a direct positive impact on the development of their social skills. The implementation of differentiated learning also positively impacts students' ability to work together in teams. Through the experience of working in groups with members with different skills and strengths, students can learn to appreciate the role of each team member and contribute effectively. Classroom management, including managing time, providing group attention, and providing additional support to students, presents a unique challenge for teachers implementing differentiated learning. Therefore, its implementation requires thorough preparation and collaborative efforts from teachers to design and implement appropriate strategies and adequate support. Overall, the implementation of

differentiated learning in social studies in fourth grade at elementary school (SDN) Berbek Nganjuk shows great potential in developing students' collaborative skills and the overall quality of learning. With the right commitment and support, differentiated learning can be a valuable asset in preparing students for the challenges of the modern world that demand strong collaborative skills

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