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Research Article

The Effect of the Use of Direct Instruction, Inquiry Learning, and Project Base Learning Learning Models on the Character Value of Discipline of Students in Special Sports Class at SMA Muhammadiyah Wonosobo

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Abstract: This study examines the effects of three learning models Direct Instruction, Inquiry Learning, and Project-Based Learning on students' discipline character in the special sports class at SMA Muhammadiyah Wonosobo. It also aims to determine which model is the most effective. The research uses a quantitative experimental approach with a one-group pretest–posttest design. In this design, students are given a pretest to measure their initial discipline level, followed by treatment using the learning models, and finally a posttest to assess improvement. The difference between pretest and posttest scores is used to evaluate the impact of the treatments. The findings show that all three learning models positively influence students' discipline. The overall mean score increased from 114.03 in the pretest to 117.99 in the posttest. Direct Instruction improved discipline by 4% through structured and guided learning. Inquiry Learning increased discipline by 3% by encouraging independence and self-control through discovery-based activities. Project-Based Learning also showed a 4% improvement by engaging students in active and meaningful tasks. In conclusion, all three models contribute to enhancing discipline character values. These results suggest that teachers can choose appropriate character-based learning models to improve students' discipline effectively.

Keywords: Direct Instruction Learning Model; Discipline Character Values; Experimental Research**;** Inquiry Learning; Project-Based Learning

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1. Introduction

The National Education System Law No. 20 of 2003 Chapter II Article 3 emphasizes that education is an effort that is consciously and structured to create a learning process that allows students to actively develop their potential. The ultimate goal is to form individuals who believe and fear God Almighty, have noble morals, are healthy, knowledgeable, competent, creative, independent, and are able to become democratic and responsible citizens. Education is also seen as a basic human need in nation building, because the progress of a country is highly determined by the quality of its education; the better the quality of education, the greater the country's chances to develop, and vice versa (Nurliani et al., 2016). Education is closely related to learning, which is defined as the process of interaction between educators and students in an educational environment that is consciously designed to encourage changes in aspects of knowledge, understanding, and skills (Ubabuddin, 2019). Thus, learning can be interpreted as an effort made by educators to facilitate the improvement of the quality of student learning.

The success of the learning process is inseparable from the use of the right strategy. To achieve quality education, the role of teachers is crucial, especially in terms of the

competence of choosing and implementing learning models or strategies that are in accordance with learning objectives. Teachers are the main factor in determining the success of learning as well as the development of students (Solehatin, 2013). The learning strategy itself is a general component that includes a series of materials and procedures that are used jointly by teachers and students during the learning process. This strategy is prepared as a solution to various learning problems so that the final goal can be achieved optimally, and in practice is inseparable from the use of learning methods and models.

Previous research has shown that the choice of learning model has an influence on students' learning motivation. A study conducted by Ginanjar (2012) found that there was a difference in the level of learning motivation based on the learning model used, especially in the inquiry model which showed an interaction between the learning model and the level of student motivation. However, the results of observations in schools show that there are still teachers who are not appropriate in choosing learning strategies or models, so that it has an impact on the low discipline of students both during the learning process and in the school environment. The learning objectives themselves include three main aspects, namely knowledge, skills, and attitudes. The attitude aspect relates to behaviors that are based on values and beliefs, which are an important part of achieving educational goals. The success of learning can be seen from the achievement of these three aspects in a balanced manner, one of which is the discipline attitude of students.

Discipline as a character value reflects an individual's obedience to the rules and responsibilities he has. The role of discipline is very important in supporting the success of learning because it relates to self-control and compliance with applicable norms. Disciplined character is formed through a process that involves consistent self-control. Broadly speaking, the character values of discipline include cognitive, emotional, and behavioral aspects of moral life, which include understanding, care, and actions based on ethical values (Lickona et al., 2003). This shows that discipline is not only limited to understanding concepts, but also to its implementation in everyday attitudes and behaviors.

In the context of learning, the application of learning models has an important contribution in shaping the discipline character of students. Various learning models such as direct instruction, inquiry learning, and project-based learning have characteristics that can support the formation of disciplines. The direct instruction model emphasizes structured and systematic learning so that it is able to create an orderly learning environment. Meanwhile, inquiry learning encourages students to actively ask questions, conduct investigations, and think critically and analytically, which is part of the formation of discipline. The project-based learning is an approach that emphasizes the active involvement of students in completing projects based on real experience, so that they can develop knowledge, skills, and attitudes as a whole (Efstratia, 2014). These three models are related to disciplinary aspects such as compliance, self-control, and responsibility in the learning process.

Based on the results of observations at SMA Muhammadiyah Wonosobo, several problems were found related to student discipline, such as late attendance in class or field, delay in collecting assignments, and assignment work that was not in accordance with the provisions. This condition shows an indication of low discipline of students in participating in physical education learning. The results of interviews with PJOK teachers also corroborate these findings, where there are still students who show undisciplined behavior during learning. The teacher stated that the selection of learning models such as direct instruction, inquiry learning, and project-based learning was adjusted to the material and learning needs, and was believed to be related to the formation of disciplinary character. However, in practice, gaps are still found that allow students to lack focus and be undisciplined, for example in the base learning project when not all students are actively involved in completing assignments.

This study aims to determine the influence of the use of direct instruction, inquiry learning, and project-based learning models on the discipline character of students, as well as determine the most effective learning model in shaping discipline in students in special sports classes.

Theoretically, this study is expected to provide an overview of the differences and influences of the three learning models on the formation of disciplinary character and enrich the study of relevant theories. Practically, this research is expected to be useful for students in increasing learning activity and creativity, for institutions as learning evaluation materials, for teachers as a reference in choosing effective learning models, for other researchers as a reference for advanced research, and for researchers themselves as valuable academic experiences.

Based on this description, further research is needed to examine the effect of the use of direct instruction, inquiry learning, and project-based learning models on the value of students' discipline character, especially in the special sports class at SMA Muhammadiyah Wonosobo.

2. Literature Review

Physical Education, Sport and Health

Physical education, sports and health is an educational process that is carried out consciously and systematically, both for individuals and members of society, through various physical activities to achieve physical growth, health, skills, intelligence, and balanced personality development. Basically, physical, sports and health education is an educational process that utilizes physical activity as a means to produce holistic changes in the individual, covering physical, mental, and emotional aspects. This field cannot be separated from the entire education system, which is evidenced by its existence as a subject at every level of education and the development of its curriculum which continues to be improved. Physical education has an important role in improving students' abilities through learning movement skills to develop aspects of knowledge, skills, and attitudes. Therefore, achieving physical education goals requires a learning process that is designed in a planned, systematic, measurable manner, and supported by appropriate methods and means.

According to Widijoto (2011), physical education, sports and health are psychomotor activities that are based on cognitive aspects and have an impact on the formation of individual behavior, both in the affective realm such as discipline, honesty, and confidence, as well as in the social realm such as cooperation and care. This shows that physical education provides balanced attention to the psychomotor, cognitive, and affective domains, so that it becomes part of the overall educational process (Urs, 2011). In addition, this field is also related to the study of human movement as well as physical and psychological development (Hartono et al., 2013), as well as providing opportunities for students to develop potential in physical, mental, social, emotional, and moral aspects (Paturusi, 2012). Dauer and Pangrazi (2013) emphasized that physical education contributes to the growth and development of students through movement experiences that are integrated in the education system. Meanwhile, Baley and Field (2013) explain that physical education includes the process of adaptation and learning in various aspects such as organic, neuromuscular, intellectual, social, emotional, and aesthetic as a result of the chosen physical activity. In another context, physical education is also related to sports education because it is able to represent the sports environment into the learning process (Alexander & Luckman, 2001). To be effective, physical education programs need to be designed in a fun and structured way, not only oriented to physical activity, but also to the development of life skills, fitness, and a healthy lifestyle (Mustafa et al., 2019). Physical education is also understood as a learning process through physical activity that aims to improve fitness, motor skills, knowledge, sportsmanship, and emotional intelligence (Kanca, 2017). Overall, physical education, sports and health are educational processes that are oriented towards the development of the whole human being through physical activity and health (Rosdiani, 2013), because it focuses not only on the formation of the body, but also on the formation of the human being as a whole (Husdarta, 2000). Thus, physical education is an important part of achieving educational goals that include aspects of knowledge, skills, and attitudes, so PJOK teachers need to understand these goals so that the learning process runs in harmony with the targets to be achieved.

The Essence of Learning

Learning is a continuous process and is a fundamental element in every level of education (Djamaludin & Wardana, 2019). Meaningful learning occurs when students are able to relate new information to the knowledge structure they already have, so that this knowledge is systematically arranged in individual cognition (Ausubel, 2022). Learning can also be understood as a process of behavioral adaptation that takes place gradually and produces relatively permanent changes as a result of experience (Djamaludin & Wardana, 2019). Based on this view, learning is an individual's effort to achieve change for the better, both from a state of ignorance to knowing and from limited abilities to being more developed. In practice, the learning process can involve more than one individual, resulting in interactions that are then known as learning.

Learning itself is a process of interaction between educators, students, and learning resources in a learning environment that allows the transfer of knowledge, skills, and attitudes (Djamaludin & Wardana, 2019). Through learning, educators provide assistance so that

students are able to gain knowledge, master skills, and form attitudes and values. This process demands the role of a competent teacher, not only in understanding the concept of learning, but also in choosing the right learning model. In the context of physical education, teachers have a professional role that requires special skills according to the competency standards that have been set (Sukintaka, 2014). PJOK teachers are required to understand the field of physical education, the characteristics of students, and be able to design, implement, and evaluate learning effectively. In addition, teachers must also be able to develop students' motor potential, create a healthy learning environment, and identify students' sports potential.

Furthermore, the role of physical education teachers is not only as a teacher, but also as a coach and mentor. As teachers, teachers are in charge of transferring knowledge related to various physical activities. As coaches, teachers focus on improving students' physical abilities and motor skills. Meanwhile, as a supervisor, teachers provide direction in developing potential and assisting students in various activities, including those related to character development (Irawan, 2021). Thus, learning can be understood as a process of interaction and knowledge transfer that aims to help students achieve optimal development, while teachers play the role of designers, implementers, and evaluators in the process.

Learning Objectives

Learning objectives are targets to be achieved in the learning process and have characteristics such as very specific, outcome based, measurable, and describing student behavior. These goals include achievements that must be achieved in a certain period of time, both short-term and long-term, and can be measured through various indicators such as the level of success, time, and quality of work results. In addition, the learning objectives also describe the development of students' behavior, both in academic, social, thinking skills, and communication skills. Learning objectives function as a reference in determining the direction of learning to take place effectively and efficiently, as well as being the basis for choosing learning methods and media (Nurfadhillah, 2021).

In general, learning objectives include three main aspects, namely acquiring knowledge, developing skills, and forming attitudes (Sadirman, 2019). Knowledge acquisition is related to improving thinking skills, while skill development includes both physical and spiritual abilities acquired through the process of practice and experience. The formation of attitudes is related to the internalization of the values that shape the character of students. In this case, teachers have a responsibility not only in transferring knowledge, but also in shaping the attitude and character of students, including discipline and other moral values.

Learning Strategies

Learning strategy is a method or approach used to present learning materials through appropriate methods so that learning goals can be achieved optimally (Asrori, 2016). In the learning process, teachers need to have the right strategy so that students can learn effectively and efficiently. Learning strategies are not limited to activities in the classroom, but can also be carried out in various situations and conditions as needed (Siagian, 2021). This strategy is a common approach used by teachers in determining learning methods that are relevant to the goals they want to achieve (Liansari & Untari, 2020).

Learning strategies can also be understood as a series of activities designed by teachers and students to achieve learning goals effectively and efficiently (Ngalimun, 2017). In the context of physical education, a learning strategy is a plan prepared by teachers to optimize the learning process through various approaches (Suryobroto, 2018). This strategy includes several important elements, namely determining learning objectives, choosing an effective approach, determining learning steps or procedures, and determining success criteria. Thus, learning strategies can be interpreted as designs used by teachers in managing the learning process in order to create a conducive learning environment and support the success of students.

Learning Model

A learning model can be understood as a teaching plan that is structured based on a certain pattern and contains a systematic procedure to carry out the learning process. This is in line with the opinion of Briggs (1978) who stated that a model is a set of procedures that are arranged sequentially to realize a process. In the context of education, the learning model is also interpreted as a conceptual framework that is used as a guideline in organizing learning experiences to achieve certain goals (Winataputra, 2001). Thus, the learning model functions as a systematic guide for teachers in designing, implementing, and evaluating learning. Joyce and Weil (1986) explained that a model is a pattern or plan used in curriculum preparation, material arrangement, and direction in learning activities. This is reinforced by Knirk &

Gustafon (2013) who stated that the learning model is a design that helps students learn new abilities or values through systematic stages.

The characteristics of the learning model include scientific procedures, specific learning outcomes, structured learning environment, clear behavioral criteria, and detailed implementation mechanisms (Juliantine et al., 2013). The learning model also includes the integration of learning approaches, strategies, methods, techniques, and tactics (Suryobroto, 2018), and serves as a guideline for teachers in managing learning activities (Djamaludin & Wardana, 2019). In practice, there are various learning models used in PJOK, such as direct instruction, cooperative learning, inquiry teaching, and project base learning (Metzler, 2011). However, in the implementation of the curriculum in Indonesia, some of the recommended models include scientific models, cooperative learning, inquiry/discovery, problem learning, project base learning, and eclectic models (Suroto, 2017). Based on this, this research focuses on three models, namely direct instruction, inquiry learning, and project base learning.

The direct instruction model is a teacher-centered learning model with structured and systematic delivery of material. This model emphasizes knowledge transfer through demonstrations, explanations, and questions and answers involving the entire class (Juliantine et al., 2013). The main goal of direct instruction is to maximize students' learning time and ensure the achievement of learning goals in a clear and measurable manner (Nuryuana, 2024). This model has characteristics such as structured, results-oriented learning, providing direct feedback, and relating the material to the real-world context (Maulana, 2023). The implementation process consists of several stages, namely the delivery of objectives, material demonstrations, practice guidance, understanding checks, and the provision of advanced training. This model has advantages such as time efficiency, ease of material control, and is suitable for large classes (Anori et al., 2013; Sidik, 2016). However, this model also has limitations, such as the lack of student activity and dependence on teachers' abilities in managing learning (Nurhasanah, 2019). Thus, direct instruction is an effective model for structured learning, especially in the mastery of declarative and procedural knowledge.

The inquiry learning model is a learning model that emphasizes the critical and analytical thinking process of students through investigation activities. This model is also known as indirect teaching, problem solving, exploration teaching, and guided discovery (Metzler, 2000). In its application, students are faced with a problem that must be solved through the process of information collection, analysis, and drawing conclusions (Masek & Yamin, 2011; Stephani et al., 2014). This model focuses on the development of cognitive aspects, but can also support psychomotor development in physical education learning. The inquiry learning process involves several stages, such as problem formulation, hypothesis, experimental design, data collection, analysis, and drawing conclusions. In addition, there are other stages such as exploration tutorials, self-directed learning, review tutorials, consolidation tutorials, and plenary tutorials that encourage students to learn independently and collaboratively. Thus, inquiry learning not only improves thinking skills, but also encourages students' independence and problem-solving skills.

The project-based learning model is a learning model that focuses on solving projects or real problems through a scientific approach. This model actively involves students in the learning process by integrating knowledge, skills, and attitudes in one meaningful activity (Ngalimun, 2012). In its implementation, learning starts from a problem which is then solved through the process of investigation, information collection, and presentation of results. This model also encourages students to think at a high level and improve communication and cooperation skills. The learning process of project-based learning includes several stages, namely problem orientation, student organization, investigation, development of works, and evaluation (Aunurrahman, 2010). This model has advantages such as increasing learning motivation, critical thinking skills, and providing a contextual learning experience (Hamidah et al., 2020). However, this model also has challenges such as time constraints, complexity of group management, and the need for careful planning. Overall, project base learning is an effective model in developing 21st century skills and student learning independence.

3. Research Method

This type of research includes experimental research with a quantitative approach. According to Sugiyono (2015), experimental research is a method used to compare one or more variables in two or more different groups, or at different times. This study applied pre-experimental design with the One-Group Pretest-Posttest Design model. In this design, one group is given a pre-test (O), then receives a treatment (X), and ends with a post-test, so that

the effect of the treatment can be known more accurately through a comparison of results before and after treatment. In its implementation, the initial stage of the research is to determine the sample, followed by a pre-test to find out the initial condition of the students, then the treatment is given using a predetermined learning model, and ends with a post-test to see the changes that occur after the treatment is given.

The research procedure began with a preparatory stage which included observation activities and interviews with physical education teachers related to the learning process in a special sports class at SMA Muhammadiyah Wonosobo. Furthermore, a literature study is carried out to obtain a relevant and up-to-date theoretical foundation in accordance with the research problem. The researcher then determined a research sample consisting of three different classes, each given a different learning model, namely direct instruction, inquiry learning, and project base learning. The research instruments were prepared based on indicators in the literature review, including question grids and scoring criteria. The instrument is then validated by experts and tested for validity and reliability. At the implementation stage, the research begins with a pre-test, followed by the provision of treatment according to the predetermined learning model, and ends with a post-test. The data obtained is then processed and analyzed to draw conclusions from the study.

This research was carried out in a special sports class of Muhammadiyah Wonosobo High School located at Jl. KH Ahmad Dahlan No.10, West Wonosobo, Wonosobo Regency, Central Java, in the period of July 14, 2025 to September 14, 2025. The research population is all students of a special sports class totaling 103 students. According to Arikunto (2015), the population is the entire subject of the study. The sample in this study uses a total sampling technique, where all members of the population are used as a sample because the number is less than 100. All students from classes X, XI, and XII were used as samples, then given a pre-test, treated with three different learning models in each class, and ended with a post-test.

The variables in this study include direct instruction, inquiry learning, and project base learning models, as well as disciplinary characters. Direct instruction is a learning model that focuses on delivering information or skills directly by teachers to students with structured and goal-oriented learning. Inquiry learning is a learning model that encourages learners to think analytically through content exploration. Meanwhile, project base learning is a learning model that involves students in solving problems through the stages of scientific methods. The character of discipline in this study is defined as orderly behavior and obedience to applicable rules.

Data collection techniques are carried out through observation, pre-test, treatment, and post-test. At the observation stage, the researcher conducts direct observation at school and takes care of research licensing. The pre-test stage is carried out by distributing a questionnaire to all samples before the treatment is given. Furthermore, the treatment stage was carried out for 8-12 meetings with the application of different learning models in each class. The last stage is post-test, which is the giving of a questionnaire again to find out the effect of treatment on the discipline character of students. This study uses the Likert scale to measure respondents' attitudes, opinions, and perceptions of the social phenomena studied (Sugiyono, 2019).

The instrument used is in the form of a closed questionnaire that is systematically arranged so that respondents can provide answers easily. The preparation of the instrument refers to the steps proposed by Sugiyono (2013), namely defining constructs, identifying factors, and arranging question items. The validity test was carried out to ensure the accuracy of the instrument using product moment correlation through the help of SPSS, while the reliability test was used to determine the consistency of the instrument with Cronbach's Alpha coefficient. A reliability value of 0.660 indicates that the instrument is in the category of sufficient and acceptable (Sugiyono, 2013; Sekaran, 2003).

Data analysis techniques in this study include descriptive statistics, prerequisite tests, and hypothesis tests. Descriptive statistics are used to describe data as it is without generalizations (Sugiyono, 2013). The prerequisite test consisted of a normality test using the Kolmogorov-Smirnov method and a homogeneity test using the F test to ensure the similarity of variance between groups. Hypothesis testing was carried out using a T-test of two independent samples with the help of SPSS to determine the differences between groups (Sugiyono, 2019). Thus, the entire series of analyses is used to obtain valid and reliable conclusions related to the influence of learning models on the discipline character of students.

4. Results and Discussion

Research Results

The findings of this study were obtained from two main types of data, namely pre-test and post-test scores. Pre-test scores are collected before treatment, while post-test scores are obtained after treatment is given. The measurement was carried out using 45 questions with a score range of 1–4. The purpose of this measurement is to identify the effect of treatment on improving the learning outcomes of students in special sports classes at SMA Muhammadiyah Wonosobo. Based on the overall descriptive analysis, the pre-test data showed a maximum value of 137, a minimum value of 68, a mean of 114.03, and a standard deviation (SD) of 9.56. Meanwhile, the post-test results showed an average of 117.99 with a minimum score of 82, a maximum score of 135, and a standard deviation of 8.52. The data showed an increase in the average value as well as a decrease in data variation after the treatment was given. Furthermore, the analysis was described based on each class and variables in the study regarding the influence of the use of direct instruction, inquiry learning, and project base learning models on the value of students' discipline characters.

In class X with the direct instruction learning model, the results of the analysis showed an increase in scores after treatment. The average score increased from 125 in the pre-test to 132.5 in the post-test. The minimum value has also increased from 118 to 130, and the maximum value from 132 to 135. In addition, the standard deviation decreased from 7 to 2.5, which indicates that students' learning outcomes are becoming more homogeneous. The distribution of the pre-test percentage shows that most students are in the low category, while in the post-test there is a shift even though it is still dominated by the low category. Analysis per item shows that most of the indicators are in the high and very high categories, which reflects students' positive attitudes towards discipline, responsibility, and compliance with rules. Behaviors such as praying before and after learning, not cheating, wearing uniforms according to the provisions, and completing tasks on time are included in the very high category. An average score above 3.25 indicates that the behavior has become a strongly ingrained habit. Overall, there was an increase in the average from 114.03 to 117.99, which indicates a positive effect of treatment on learning outcomes, as well as a decrease in standard deviation from 9.56 to 8.52 which shows that the data is increasingly homogeneous.

In class XI that used the inquiry learning model, the results of the analysis showed an average increase from 108.5 in the pre-test to 112.5 in the post-test, with a difference of 4 points. The standard deviation decreased from 7.5 to 4.5, which indicates that the data distribution has become more even. The minimum score increased from 101 to 108, while the maximum score was from 116 to 117. The overall percentage shows an increase of 3%. The distribution of categories in the pre-test showed a very high and high category dominance, while in the post-test there was an increase in the number of students in the very high category. Analysis per item showed that most of the indicators were in the high, medium, and very high categories, which showed an increase in students' attitudes and understanding after the application of the inquiry learning model.

In grade XII with the application of the project-based learning model, the results showed an increase in the average score from 87 in the pre-test to 95 in the post-test. The standard deviation decreased from 19 to 13, which indicates the data is increasingly homogeneous. The minimum value increases from 68 to 82, and the maximum value from 106 to 108. The overall percentage increase reached 4%, which indicates an increase in student learning achievement. The distribution of categories in the pre-test was dominated by the high category, while in the post-test there was a significant increase in the very high category. This shows that the implementation of project base learning is able to increase students' understanding and positive attitude towards learning materials.

Normality tests are performed to find out whether the data is normally distributed or not, using Shapiro–Wilk tests through SPSS programs or Python statistical analysis. The test results showed that the significance value (p) < 0.05 in the pre-test and post-test data, so it can be concluded that the data is not normally distributed. However, since the number of samples is more than 30 ($n = 103$), the analysis can still be continued using a parametric test, i.e. a paired sample t-test.

The reliability test aims to determine the consistency of the research instrument. The test was carried out using Cronbach's Alpha coefficient through the SPSS program version 26. The results of the analysis showed a Cronbach's Alpha value of 0.660 for 45 statement items. Based on the opinion of Sekaran (2003), the alpha value in the range of 0.60–0.70 is

included in the category of sufficient or acceptable. Thus, this research instrument is declared to have an adequate level of reliability and is suitable for use in data collection.

The results of the paired sample t-test showed a calculated t-value of –4.248 with a significance of 0.000 (< 0.05). This indicates a significant difference between pre-test and post-test scores. The mean difference of –3.961 indicates that the post-test score is higher than the pre-test, so it can be concluded that there is an improvement in learning outcomes after the treatment is given. Thus, the research hypothesis that states differences before and after treatment is accepted.

These findings show that the learning model applied has a positive influence on improving student learning outcomes. The treatment provided has proven to be effective in helping students understand the material better than before the treatment. This result is in line with the opinion of Sugiyono (2015) who stated that experimental research aims to determine the effect of a treatment on other variables through a comparison of conditions before and after treatment. Theoretically, this improvement in learning outcomes shows that the learning model is able to create a more active, effective, and enjoyable learning process. In addition, the direct involvement of students in the learning process also contributes to increasing conceptual understanding and critical thinking skills.

The difference in results between pre-test and post-test also showed that the interventions carried out had a positive impact on student motivation and participation. These results reinforce previous research that states that innovative learning models can improve learning outcomes. Therefore, it can be concluded that the learning model applied in this study is effective in improving student learning outcomes in accordance with the research objectives.

In general, more than 70% of the items were in the high and very high categories, which indicates that learners have a good level of discipline, responsibility, and a positive attitude in learning activities. Differences based on gender do not show significant differences, so it can be concluded that positive character values have been embedded equally in all students.

Discussion

The value of discipline character can be interpreted as an attitude of individual obedience to the values that are believed in and a form of personal responsibility. Discipline has a very important contribution to the success of the learning process. The achievement of the discipline aspect is basically the result of a long process that begins with good self-control skills. Broadly speaking, the character values of discipline include cognitive, emotional, and behavioral dimensions in moral life, which include understanding, care, and actions based on ethical values. In the context of education, the application of the learning model has a strategic role in shaping the disciplinary character of students. Especially in physical education today, various learning models have developed along with their development innovations that support the character formation process.

This study uses three main learning models, namely direct instruction, inquiry learning, and project-based learning. The initial stage of research is carried out through a pre-test to find out the initial condition of students before being given treatment in the form of the application of a predetermined learning model. Furthermore, students are given treatment according to their respective learning models. After that, a post-test is carried out to measure changes and differences in results after treatment is given. The results of the study show that the three learning models have a positive influence on the value of the discipline character of students at SMA Muhammadiyah Wonosobo. This can be seen from the increase in the average score from 114.03 in the pre-test to 117.99 in the post-test, as well as the results of the t-test which showed a significant difference ($p < 0.05$). In addition, the decrease in standard deviation from 9.56 to 8.52 indicates that students' learning outcomes become more homogeneous after the treatment is given.

In line with the overall analysis results, in the analysis based on each class and research variable, it was also found that there was an increase after treatment. In class X using the direct instruction model, there was an increase of 4%, class XI with the inquiry learning model increased by 3%, and class XII with the project-based learning model showed an increase of 4%. Thus, it can be concluded that the application of the direct instruction, inquiry learning, and project base learning learning models in the Special Sports Class of Muhammadiyah Wonosobo High School has a positive impact on improving the value of students' disciplinary character.

5. Conclusion

Based on the results of the research and discussion in Chapter IV, it can be concluded that the direct instruction, inquiry learning, and project base learning learning models in the Special Sports Class of Muhammadiyah High School have a positive influence on the value of the students' disciplinary character. Based on the results of the Paired Sample t-Test, the value of $p = 0.000048$ ($p < 0.05$) was obtained, so that the null hypothesis (H_0) was rejected and the alternative hypothesis (H_1) was accepted. This means that there is a significant influence of treatment on the improvement of students' disciplinary character values. The treatment or method used is effective in improving learning outcomes. The decrease in standard deviation values from pre-test to post-test also showed that participants' learning outcomes became more uniform after the intervention was given. Overall, this study proves that the treatment applied has succeeded in significantly improving learning outcomes.

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