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THE EFFECT OF THE TPS (THINK PAIR SHARE) LEARNING MODEL ASSISTED BY ANIMATED VIDEO MEDIA ON THE LEARNING OUTCOMES OF CLASS VIII STUDENTS IN INFORMATICS SUBJECTS AT SMP I AL FATTAHIYYAH IN THE 2024/2025 ACADEMIC YEAR

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Abstract— In the world of education, learning models and learning media are very diverse, the right learning model will improve the quality of student learning outcomes. This study aims to determine the effect of the think pair share learning model assisted by animated video media on the learning outcomes of class VIII students of SMP I Al Fattahiyyah in informatics subjects. This study is an experimental study with a quantitative approach using a quasi-experimental method. The population consists of 232 class VIII students, with a sample of 55 students with sampling using a purposive sampling method. Because this study is experimental, there are control classes and experimental classes. The instruments used are tests (pretest and posttest) and observation sheets to determine the implementation of the TPS learning model. The techniques used include instrument testing (validity, reliability, difficulty level test and discrimination power test), prerequisite tests (normality test, linearity test, homogeneity test) and hypothesis testing. The results of the study indicate the influence of the think pair share learning model assisted by animated video on student learning outcomes (significance 0.000 less than 0.05). This research demonstrates the importance of appropriate learning models and innovative media in improving student learning outcomes.

Keywords—Learning Outcomes, TPS Learning Model, Animated Video.

I. INTRODUCTION

Education is a complete and interconnected system aimed at achieving its goal of transforming students into educated individuals [21]. In the context of the Independent Curriculum, learning is designed to be more flexible, focusing on essential material, and providing space for students to deepen concepts and improve their competencies [7].

One approach that aligns with the objectives of the Independent Curriculum is the Think Pair Share (TPS) learning model. This model effectively increases students' critical thinking skills and activities because it involves individual thinking processes, pair discussions, and group sharing [19]. TPS is also part of a cooperative learning strategy that fosters collaborative interactions in the classroom [28].

At SMP I Al Fattahiyyah, particularly in Information and Communication Technology (ICT) learning, several obstacles were encountered, such as low learning interest, minimal interaction between teachers and students, the use of boring lecture methods, and unappealing learning media. Furthermore, limited facilities, such as computer laboratories, also contributed to suboptimal learning outcomes, with most students failing to achieve the Minimum Competency (KKM) of 70.

To address this, innovation in learning models and media is needed. Animated videos, as a visual-audio medium, are considered effective because they present material in an engaging, clear, and easy-to-understand manner [2]. The combination of the TPS model and animated video media is believed to create an active, enjoyable classroom atmosphere and support the achievement of ICT learning objectives [23].

II. LITERATURE REVIEW

A. Learning Outcomes

Learning outcomes are changes that occur in students after the learning process, including in knowledge, attitudes, and skills [4]. These outcomes serve as indicators of teaching success, demonstrating the extent to which material is absorbed [3]. Rachmawati & Erwin (2022) emphasize that learning outcomes are evident in grades and changes in students' attitudes and behavior. Learning itself is a continuous and timeless process, while learning outcomes reflect changes within the individual, both cognitively, affectively, and psychomotorically [1].

According to Rohmaniah et al. (2021), learning outcomes reflect students' best abilities that emerge after the learning process. These outcomes include:

1) Cognitive (Knowledge), related to the ability to remember, understand, apply, analyze, and evaluate information (C1–C5). This domain encompasses mastery of concepts and logical thinking [22].
2) Affective (Attitude) relates to attitudes, values, and emotions demonstrated through interest, discipline, ethics, and responsibility [26].
3) Psychomotor (Skills) involves physical abilities and motor skills through body-brain coordination, which develop through practice.

Factors influencing student learning outcomes are divided into external and internal factors:

1) External Factors
   a) Learning environment: A clean, comfortable, and interactive environment will support student learning outcomes.
   b) Learning methods and the models used by teachers significantly influence student engagement and understanding.
2) Internal Factors
   a) Thinking skills and potential: each student has different understanding abilities.
   b) Intrinsic motivation: the higher the motivation, the better the learning outcomes.
   c) Learning styles: visual, auditory, and kinesthetic, which influence how information is received.

B. TPS Learning Model

The Think Pair Share (TPS) model is a cooperative learning model that engages students actively through three stages: independent thinking (think), pair discussion (pair), and sharing discussion results in class (share). TPS increases student interaction, courage, and understanding in learning [23]. The characteristics of the TPS model emphasize cooperative group work, which encourages students to think critically and actively participate [12]. This model provides space for students to exchange opinions and broaden their knowledge in a fun and personal way [18].

According to Lestari et al. (2020), the steps of the TPS learning model involve three stages:

1) Think: The teacher provides material and questions to be worked on individually.
2) Pair: Students discuss in pairs to consolidate their answers.
3) Share: Students present their discussion results to the class.

This step provides an opportunity for students to think, answer questions, and help each other (Sadipun B, 2020).

The advantages of the TPS learning model include:

1) Opening opportunities for individual thinking and asking questions [9].
2) Trains students to understand concepts and respect the opinions of their peers [14].
3) Increases active participation and courage in expressing opinions.
4) Teachers find it easier to guide students' learning process.

Disadvantages of the TPS learning model. According to Lestari (2016) and Latifah & Luritawaty (2020), the disadvantages of TPS include:

1) Not all students can actively participate.
2) Difficulty resolving conflict in discussions.
3) The classroom atmosphere can be less conducive.
4) Some students lose focus during presentations.
5) Some students still lack confidence in expressing their opinions.

C. Animated Videos

The use of innovative learning media, such as animated videos, is crucial for creating engaging and enjoyable learning, especially in today's era of technological advancement [8]. At SMP I Al Fattahiyyah, limited technological tools led researchers to choose animated videos as a tool in the Think Pair Share (TPS) learning model. The combination of TPS and animated videos can increase student interest in learning because these media present moving images, sound, and text concisely and clearly. This media can help teachers explain material more easily and enable students to focus and understand it more quickly [17]. Thus, animated videos are an effective medium for increasing student engagement and understanding in the learning process.

D. Informatics Subject

The Social Impact of Informatics (DSI) is the influence of information technology use on the structure and social interactions of society, both positively and negatively [20].

Characteristics of DSI

1) Social transformation: technology changes the way people communicate, work, and learn [13].
2) Openness of information: rapid access to information increases social awareness [5].
3) Widespread dissemination: information spreads quickly and globally, creating new social dynamics [29].
4) The digital divide: unequal access to technology creates social inequality [27].

DSI Classification

1) Positive Impacts
   a) Access to information, facilitating the learning process [6].

b) Quality education, enabling inclusive online learning [23].
c) Social interaction: easier and broader communication through digital media [13].

2) Negative Impacts
a) Technology addiction: deteriorating mental health and social interaction [11].
b) Social isolation: excessive use leads to loneliness [5].
c) Hoaxes: False information spreads quickly and causes conflict [27].

III. RESEARCH METHODOLOGY

This research is a quantitative quasi-experimental study with a nonequivalent control group design (Sugiyono, 2021). Two classes were used: the experimental class, which used the TPS model with animated videos, and the control class, which used conventional learning. The instruments used were tests to measure learning outcomes (pretest and posttest), and non-tests in the form of observation sheets to determine the implementation of the TPS model. In this study, there were two research variables: the independent variable, the TPS learning model with the aid of animated videos (Sugiyono, 2021), and the dependent variable, student learning outcomes.

A. Population and Sample

According to Sugiyono (2021), a population is a generalized area consisting of objects/subjects with certain quantitative characteristics determined by the researcher to be studied and then conclusions drawn. The population was all 8th-grade students at Al Fattahiyyah Islamic Middle School, totaling 232 students. The sample size was 24% of the population, or 55 students. Class 8B (27 students) served as the experimental class and Class 8C (28 students) served as the control class (the determination followed Arikunto's criteria in Bate'e, 2019). The sampling technique used was purposive sampling, considering the same average daily test scores for grades 8B and 8C (64) (Sugiyono, 2021).

B. Data Collection Techniques

Data collection techniques are a strategic step in research because they aim to obtain valid data (Sugiyono, 2021). This study used two techniques:

1) A multiple-choice test to measure students' cognitive learning outcomes on the Social Impact of Informatics (DSI) material. A pretest was conducted before the lesson to determine initial abilities, consisting of 15 questions, and a posttest was conducted after the lesson to assess understanding after implementing the TPS model, with the same 15 questions as the pretest.
2) Observations were used to observe the implementation of the TPS model in grade 8 of SMP I Al Fattahiyyah. The observation sheet included the TPS steps and was filled in with a check mark (✓) if implemented.

One approach that aligns with the objectives of the Independent Curriculum is the Think Pair Share (TPS) learning model. This model effectively increases students' critical thinking skills and activities because it involves individual thinking processes, pair discussions, and group sharing [19]. TPS is also part of a cooperative learning strategy that fosters collaborative interactions in the classroom [28].

At SMP I Al Fattahiyyah, particularly in Information and Communication Technology (ICT) learning, several obstacles were encountered, such as low learning interest, minimal interaction between teachers and students, the use of boring lecture methods, and unappealing learning media. Furthermore, limited facilities, such as computer laboratories, also contributed to suboptimal learning outcomes, with most students failing to achieve the Minimum Competency (KKM) of 70.

Tabel 3.1 Research Instrument Indicators

Variabel	Indicator	Instrument Indicators
TPS Learning Model (Berty, 2020)	Steps of the think-pair-share learning model: 1) Think: The teacher provides students with worksheets with instructions to work individually. 2) Pair: Within a specified time, the teacher asks students to exchange their ideas with a partner. 3) Share: Students present their discussion results to the class. Observation Sheet	Observation Sheet
Student Learning Outcomes in the Cognitive Domain (Y)	Pretest and posttest results for the informatics subject on the DSI (Social Impact of Informatics) element.	Pretest and posttest questions

C. Instrument Validity, Reliability, Difficulty Level, and Discriminatory Power of the Questions.

Validity testing aims to determine the extent to which the instrument is able to measure what it is supposed to measure. In this study, validity testing was conducted using the item-total correlation technique using SPSS 22.0, and compared with the r-table of 0.361 (N = 30, α = 5%). The results showed that all pretest and posttest items had a calculated r > r table, thus being declared valid.

A reliability test was used to measure the consistency of the instrument. Calculations were made using the Cronbach's Alpha formula in SPSS 22.0. The results showed alpha values of 0.843 (pretest) and 0.884 (posttest), both greater than the r table of 0.361. Thus, the pretest and posttest items were declared valid and reliable, and suitable for use as research instruments.

The difficulty level of the 15 pretest and posttest items was analyzed using SPSS 22.0. The results showed that each test consisted of 11 items categorized as very easy, 2 items as medium, and 2 items as very difficult. This indicates that the majority of the items were considered easy.

The discriminatory power of the items was also analyzed using SPSS. In the pretest, 4 items were categorized as fair and 11 items as good. Meanwhile, in the posttest, 1 item was categorized as fair, 12 items as good, and 2 items as very good. This means that most of the items were able to differentiate students' abilities well.

D. Hypothesis Test Data Analysis

This prerequisite test involves several tests to prove the hypothesis. However, before the hypothesis test is conducted, there are prerequisite tests for the hypothesis. These prerequisite tests include the normality test, linearity test, and homogeneity test.

IV. RESEARCH DATA RESULTS

A. Presentation of Research Data

This study aims to determine the effect of the think-pair-share learning model assisted by animated video media on the learning outcomes of eighth-grade students of SMP I Al Fattahiyyah in informatics. This is an experimental study with a quantitative approach using a quasi-experimental method. The population consisted of 232 eighth-grade students, with a sample of 55 students drawn using a purposive sampling method. Due to the experimental nature of this study, there were two control classes and one experimental class. The instruments used were tests (pretest and posttest) and observation sheets to determine the implementation of the TPS learning model.

B. Hypothesis Data Analysis

This study used an Independent t-test at a significance level of $\alpha = 0.05$ to assess the effect of the TPS learning model assisted by animated videos on the learning outcomes of eighth-grade students at Al Fattahiyyah Islamic Middle School. The results table shows a significance value of 0.000, meaning $0.000 < 0.05$, thus H_0 is rejected and H_a is accepted. Therefore, it can be concluded that there is a significant effect of the TPS model assisted by animated videos on student learning outcomes.

C. Discussion of Research Results

This study involved all eighth-grade students of Al Fattahiyyah Islamic Middle School in the 2024/2025 academic year (232 students). The purposive sample consisted of classes 8B (control class with 27 students) and 8C (experimental class with 28 students), which had comparable initial abilities. The independent variable was the Think Pair Share (TPS) learning model assisted by animated videos, and the dependent variable was learning outcomes. The pretest and posttest questions were tested for validity and reliability using SPSS 22.0, resulting in 15 usable items. Prior to the t-test, the data met the assumptions of normality (Shapiro-Wilk SIG >0.05), linearity (pretest SIG 0.505 and posttest SIG 0.976), and homogeneity (pretest SIG 0.823 and posttest SIG 0.862). The average pretest score for the experimental class increased from 63.96 to 88.43 after the TPS-video learning, while the control class's score increased from 68.44 to 78.44. The t-test showed a significance level of 0.000 (<0.05), indicating a significant effect of video-assisted TPS on learning outcomes. This finding aligns with similar studies that have confirmed the effectiveness of animation-assisted TPS in improving student learning outcomes.

CONCLUSION

Based on the research tests described above, it can be concluded that the average pretest score in the experimental group (n=28) was 63.96, which increased to 88.43 in the posttest, while the control group (n=27) increased from 68.44 to 78.44. The t-test results showed a significance value of 0.000 (<0.05), so H_0 is rejected and H_a is accepted. This proves that the TPS learning model assisted by animated videos significantly improves the learning outcomes of eighth-grade students at SMP Islam AlFattahiyyah.

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