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The Effect of Discovery Learning Model Assisted by Live Worksheet on Students' Learning Outcomes and Inference Skills in Elementary School Science Learning

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ABSTRACT: Science learning in elementary schools requires students to understand concepts through observation, investigation, and reasoning processes. However, students' learning outcomes and inference skills are still relatively low because learning activities are often dominated by teacher explanations and have not fully involved students in scientific inquiry activities. This study aims to analyze the effect of the Discovery Learning model assisted by Live Worksheet on students' learning outcomes and inference skills in science learning on the topic of changes in states of matter.

This study employed a quantitative approach with a quasi-experimental method using a Nonequivalent Control Group Design. The research subjects were fourth-grade students of SD Negeri Antirogo 01 and SD Negeri Antirogo 04, Jember Regency, consisting of 62 students. The experimental class received treatment through Discovery Learning assisted by Live Worksheet, while the control class received conventional learning. Data collection techniques used learning outcome tests and inference skill instruments. Data analysis was performed through prerequisite tests and hypothesis testing using inferential statistics.

The results showed that the Discovery Learning model assisted by Live Worksheet had a significant effect on students' learning outcomes and inference skills. The learning process encouraged students to actively observe, collect information, process data, verify findings, and formulate conclusions based on evidence. The integration of interactive digital worksheets strengthened students' involvement and supported meaningful learning experiences. Therefore, Discovery Learning assisted by Live Worksheet can be an effective alternative strategy to improve cognitive achievement and scientific thinking skills among elementary school students.

KEYWORDS: discovery learning, elementary school, inference skills, live worksheet, learning outcomes, science learning

INTRODUCTION

Science and Social Studies (IPAS) instruction at the elementary school level is characterized by an active learning approach, as it explores various natural and social phenomena that are closely related to students' daily lives. IPAS instruction aims not only to help students understand concepts but also to develop scientific process skills such as observing, identifying problems, processing information, reasoning, and drawing conclusions. These skills are necessary for students to understand phenomena logically based on the evidence they find. One of the key skills in IPAS learning is inference—the ability to draw conclusions based on available information, facts, and evidence. Inference is a core component of critical thinking, relating to a person's ability to identify relevant information and arrive at justifiable conclusions (Facione, 2020).

Based on the results of preliminary observations of IPAS instruction on the topic of changes in the state of matter for fourth-grade elementary school students, it was found that student learning outcomes have not yet reached an optimal level. The data show that 72% of students scored below the Learning Objective Achievement Criteria (KKTP), while only 28% of students achieved scores that met or exceeded the KKTP. This situation indicates that the majority of students still struggle to deeply understand the concept of changes in the state of matter. Additionally, students also demonstrate low levels of inferential skills, particularly in connecting observational results to concepts, providing reasons for a phenomenon, and drawing conclusions based on evidence. These issues highlight the need for instructional innovations capable of enhancing conceptual mastery while simultaneously developing students' higher-order thinking skills.

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One learning model relevant to addressing these issues is the Discovery Learning model. Discovery Learning is a learning model that emphasizes the process of discovering concepts through investigation, information gathering, data processing, verification, and drawing conclusions. In this model, students are given the opportunity to construct knowledge through direct learning experiences, while the teacher acts as a facilitator who guides the discovery process. Learning through discovery can help students gain a more meaningful understanding because concepts are acquired through their own thinking and experiences (Bruner, 1961). A meta-analysis has shown that the Discovery Learning model has a positive effect on improving the science learning outcomes of elementary school students (Pangesti & Radia, 2019).

The implementation of Discovery Learning can be more effective when supported by the use of learning media that keeps pace with technological advancements. One such digital tool is Live Worksheet. Live Worksheet is a digital learning tool that allows students' worksheets to be made more interactive through various features such as videos, images, interactive questions, drag-and-drop activities, and immediate feedback. The use of this digital tool can increase student engagement because learning activities become more engaging and provide a learning experience that differs from conventional worksheets. The integration of Live Worksheet with Discovery Learning supports improved learning outcomes for elementary school students by providing a learning experience that is more active, interactive, and student-centered (Afriani & Reinita, 2023).

The discovery learning model is a learning model that tends to involve students in making observations, conducting experiments, or engaging in scientific inquiry until they draw conclusions from the results of those scientific activities (Fajri, 2019). This is also supported by the statement (Kristanti & Setyawan, 2021) that the discovery learning model is a learning model that can shape students' learning styles actively by conducting independent investigations, presenting a problem for students to solve using their own ideas during the investigation. Discovery learning is a learning model that provides students with the opportunity to gain an understanding of concepts or meanings until they arrive at appropriate conclusions (Muhammad & Juandi, 2023).

The application of Discovery Learning in this study was combined with the use of Live Worksheet as a digital learning medium. Live Worksheet allows students' worksheets to be developed in an interactive digital format so that students can engage in learning activities such as watching videos, filling in answers, recording observations, conducting analyses, and receiving immediate feedback. The use of digital media in learning can increase student engagement because it provides a more engaging learning experience that aligns with the characteristics of 21st-century learning (Kusumawati & Setyaningrum, 2022).

In this study, the Discovery Learning syntax supported by Live Worksheet refers to six main stages: stimulation, problem statement, data collection, data processing, verification, and generalization (Ministry of Education and Culture, 2017). Each stage is designed to improve students' learning outcomes and inference skills through evidence-based thinking activities.

MATERIALS AND METHODS

This study employs a quantitative approach using a quasi-experimental research design. The quantitative approach was chosen because this study aims to test the effect of a specific treatment on certain variables through the collection of numerical data, which is analyzed using statistical procedures. An experimental design was chosen because this study provides a specific treatment to the experimental group in the form of implementing the Discovery Learning model aided by Live Worksheet, and then compares the results with those of the control group, which receives conventional instruction.

According to Sugiyono (2022), experimental research is a research method used to determine the effect of a specific treatment on other variables under controlled conditions. In educational research, experimental designs often utilize existing classes, making full individual randomization impossible. Therefore, this study employs a quasi-experimental design, given that the research subjects are in pre-formed classes.

This study aims to determine the effect of the Discovery Learning model supported by Live Worksheet on two dependent variables, namely students' cognitive learning outcomes and inference skills regarding the topic of changes in the physical state of matter.

In collecting data for this study, several techniques will be used to ensure valid and comprehensive measurements of learning outcomes, critical thinking, and the effectiveness of Discovery Learning. The techniques used include:

a. Tests (Pre-tests and Post-tests) for Learning Outcomes:

1. A pre-test is administered to students before instruction begins to measure their initial level of understanding of the topic "Changes in the State of Matter."

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2. A post-test is administered after the learning process to measure the extent to which students' understanding has developed after participating in the Discovery Learning process.
3. These tests include multiple-choice or essay questions that measure understanding of the basic concepts in the taught material.
b. Questionnaires to assess inference skills; these questionnaires will be used to measure students' perceptions of their own critical thinking during the Discovery Learning process, including their engagement in generating new ideas.
c. Documentation of Group Activities to Assess the Effectiveness of Discovery Learning:
1. Documentation in the form of notes or recordings of group activities—including discussion outcomes, task completion, and interactions among students within the group—will be used to assess the effectiveness of implementing the Discovery Learning model.
2. Group work products, such as reports or presentations, will also be analyzed to determine the extent to which cooperation and collaboration occurred

RESULTS

Student Learning Outcome Data

Learning outcome data were obtained through cognitive assessment instruments in the form of pretests and posttests on the topic of changes in the state of matter.

Table 4.1 Descriptive Statistics of Learning Outcomes

Kelompok	N	Nilai Minimum	Nilai Maksimum	Mean *Pretest*	Mean *Posttest*	Peningkatan
Eksperimen (*Discovery Learning* berbantuan *Live Worksheet*)	32	55	95	64,88	87,25	22,37
Kontrol (Pembelajaran Konvensional)	30	50	85	63,73	75,40	11,67

Table 4.1 shows that the average pretest score for the experimental group was 68.44, while the control group scored an average of 67.10. This indicates that the initial abilities of the two groups were relatively similar before the intervention.
After the instruction, there was an increase in learning outcomes for both groups. The experimental group, which received instruction using the Discovery Learning model supported by Live Worksheet, achieved an average posttest score of 86.72, while the control group achieved an average score of 76.63.
The improvement in learning outcomes in the experimental group was higher than that in the control group, with a difference of 8.75 points. This indicates that the implementation of Discovery Learning supported by Live Worksheet provides a more effective learning experience because students are directly involved in the process of discovering concepts through activities such as observation, data collection, information processing, and drawing conclusions.

Data on Students' Inference Skills

Inference skills were measured using an instrument that included three indicators: questioning facts, generating alternatives, and drawing conclusions. These indicators are based on Facione, who defines inference as the ability to draw conclusions based on information and evidence.

Table 4.2 Descriptive Statistics for Inference Skills

Kelompok	N	Nilai Minimum	Nilai Maksimum	Mean *Pretest*	Mean *Posttest*	Peningkatan
Eksperimen (*Discovery Learning* berbantuan *Live Worksheet*)	32	55	95	64,88	87,25	22,37
Kontrol (Pembelajaran Konvensional)	30	50	85	63,73	75,40	11,67

Table 4.2 shows that the initial inferential skills of students in the experimental group averaged 64.88, while those in the control group averaged 63.73. This indicates that both groups had relatively equivalent initial abilities before the intervention.

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After instruction, the experimental group, which used the Discovery Learning model supported by Live Worksheet, achieved an average posttest score for inference skills of 87.25, while the control group achieved an average of 75.40.
The experimental group's inference skills improved by 22.37 points, while the control group's improved by 11.67 points. Thus, the improvement in inference skills was greater in the experimental group than in the control group.
This improvement occurred because the Discovery Learning framework provides a learning experience that trains students in the scientific thinking process. In the stimulation stage, students are trained to identify facts from the phenomenon of changes in the physical state of matter. The problem statement stage trains students to formulate hypotheses or alternative answers. Subsequently, the data processing and generalization stages train students to connect information and draw conclusions based on evidence.

Testing the First Hypothesis

This study was based on the posttest scores of both groups after the intervention. The experimental group was taught using the Discovery Learning model supported by Live Worksheet, while the control group was taught using conventional teaching methods. The hypotheses tested in this study are as follows:
H_0: There is no significant effect of the Discovery Learning model supported by Live Worksheet on students' learning outcomes regarding the topic of changes in the physical state of matter in fourth grade.
H_1: There is a significant effect of the Discovery Learning model supported by Live Worksheet on students' learning outcomes regarding the topic of changes in the physical state of matter in fourth grade.
The decision criterion for hypothesis testing is as follows: if the significance value (Sig., 2-tailed) is < 0.05, then H_0 is rejected and H_1 is accepted. Conversely, if the significance value is > 0.05, then H_0 is accepted and H_1 is rejected. The results of the Independent Sample t-test analysis of student learning outcomes are presented in the following table.

Table 4.5 Results of the Independent-Samples t-Test on Student Learning Outcomes

Variabel	t hitung	Sig. (2-tailed)	Kesimpulan
Hasil Belajar	11,099	< 0,001	H_1 diterima

Berdasarkan Tabel 4.5 diketahui bahwa hasil uji Independent Sample t-test menunjukkan nilai t hitung sebesar 11,099 dengan nilai signifikansi < 0,001. Nilai signifikansi tersebut lebih kecil dibandingkan taraf signifikansi yang telah ditentukan yaitu 0,05.
Dengan demikian, kriteria pengambilan keputusan menunjukkan bahwa H_0 ditolak dan H_1 diterima, sehingga dapat disimpulkan bahwa terdapat pengaruh yang signifikan penggunaan model Discovery Learning berbantuan Live Worksheet terhadap hasil belajar peserta didik pada materi perubahan wujud benda kelas IV sekolah dasar.
Adanya pengaruh tersebut menunjukkan bahwa peserta didik yang memperoleh pembelajaran menggunakan model Discovery Learning berbantuan Live Worksheet memiliki hasil belajar yang lebih baik dibandingkan peserta didik yang memperoleh pembelajaran konvensional. Hal ini terjadi karena model Discovery Learning memberikan kesempatan kepada peserta didik untuk terlibat secara aktif dalam menemukan konsep melalui kegiatan mengamati fenomena, mengidentifikasi masalah, mengumpulkan informasi, mengolah data, melakukan verifikasi, dan menarik kesimpulan.
Penggunaan Live Worksheet juga mendukung proses pembelajaran dengan memberikan aktivitas interaktif yang membantu peserta didik memahami materi perubahan wujud benda secara lebih menarik dan kontekstual. Melalui kegiatan tersebut, peserta didik tidak hanya menerima informasi dari guru, tetapi membangun pemahaman melalui pengalaman belajar langsung sehingga konsep yang diperoleh menjadi lebih bermakna.
Hasil penelitian ini sejalan dengan penelitian terdahulu yang menunjukkan bahwa penerapan model Discovery Learning mampu meningkatkan hasil belajar peserta didik karena melibatkan peserta didik secara aktif dalam proses penemuan konsep.

Second Hypothesis Test

After testing the first hypothesis regarding learning outcomes, the second hypothesis was tested to determine the effect of the Discovery Learning model aided by Live Worksheet on students' inference skills regarding the topic of changes in the state of matter for fourth-grade students.
In this study, inference skills refer to students' ability to process information based on facts or data obtained, formulate hypotheses or alternative solutions, and draw conclusions based on observations. The indicators of inference skills used include questioning facts, generating alternatives, and drawing conclusions.

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Before the hypothesis test was conducted, the inference skill data met the prerequisite tests for analysis, namely that the data were normally distributed and had homogeneous variance. Therefore, the second hypothesis test was conducted using an independent samples t-test to determine the difference in inference skills between the experimental group and the control group.
The second hypothesis was formulated as follows:
H_0: The Discovery Learning model supported by Live Worksheet has no significant effect on students' inference skills regarding the topic of changes in the state of matter in fourth grade.
H_2: The Discovery Learning model supported by Live Worksheet has a significant effect on students' inference skills regarding the topic of changes in the state of matter in fourth grade.
The decision criteria are as follows: if the significance value (Sig., 2-tailed) is < 0.05, then H_0 is rejected and H_2 is accepted. Conversely, if the significance value is > 0.05, then H_0 is accepted and H_2 is rejected.
The results of the independent samples t-test for inference skills are presented in the following table.

Table 4.6 Results of the Independent Samples t-Test for Participants' Inference Skills

Variabel	t hitung	Sig. (2-tailed)	Kesimpulan
Keterampilan Inferensi	11,353	< 0,001	H_2 diterima

Based on Table 4.6, the results of the independent samples t-test show a calculated t-value of 11.353 with a significance level of < 0.001. This significance level is smaller than the predetermined significance level of 0.05.
Thus, the test results indicate that H_0 is rejected and H_2 is accepted, leading to the conclusion that the Discovery Learning model aided by Live Worksheets has a significant effect on students' inference skills regarding the topic of changes in the physical state of matter in fourth grade.
This effect indicates that students in the experimental group possess better inference skills than those in the control group. This is because the stages in the Discovery Learning model provide students with the opportunity to be directly involved in the inquiry process. Students are guided to observe the phenomenon of changes in the state of matter, identify key information, formulate hypotheses based on facts, conduct tests, and draw conclusions from the results of their learning activities.
The use of Live Worksheet also supports the development of inference skills because it provides interactive learning activities that allow students to process information independently, provide answers based on their observations, and gain a more contextual learning experience.

Testing the Third Hypothesis (MANOVA)
After testing the first and second hypotheses separately using an independent samples t-test, the next step was to test the third hypothesis using multivariate analysis of variance (MANOVA).
MANOVA was used because this study involved more than one dependent variable: students' learning outcomes and inferential skills. This test aimed to determine whether the implementation of the Discovery Learning model aided by Live Worksheets had a combined effect on both dependent variables.
Prior to conducting the MANOVA analysis, the research data met the prerequisite tests for the analysis, namely the normality test and the homogeneity of variances test. The results of the normality test indicated that the data on learning outcomes and inference skills were normally distributed, while the homogeneity of variances test indicated that the variances of the data across groups were homogeneous. Thus, the MANOVA analysis could be conducted.
The third hypothesis in this study is formulated as follows:
H_0: The Discovery Learning model supported by Live Worksheets has no significant effect on students' learning outcomes and inference skills simultaneously regarding the topic of changes in the physical state of matter in fourth-grade elementary school.
H_3: The Discovery Learning model supported by Live Worksheets has a significant effect on students' learning outcomes and inference skills simultaneously regarding the topic of changes in the physical state of matter in fourth-grade elementary school.
The decision criteria are as follows: if the significance value (Sig.) is < 0.05, then H_0 is rejected and H_3 is accepted. Conversely, if the significance value (Sig.) is > 0.05, then H_0 is accepted and H_3 is rejected. The results of the MANOVA test are presented in the following table.

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Table 4.7 Results of the Multivariate Analysis of Variance (MANOVA) Test

Uji Multivariat	Nilai Sig.	Kesimpulan
Pillai's Trace	< 0,001	H_3 diterima
Wilks' Lambda	< 0,001	H_3 diterima

Based on Table 4.7, it is evident that the results of the MANOVA analysis show significance values for Pillai's Trace and Wilks' Lambda of < 0.001. These values are smaller than the significance level used, which is 0.05.

Based on the decision-making criteria, H_0 is rejected and H_3 is accepted. Thus, it can be concluded that the Discovery Learning model supported by Live Worksheet has a significant simultaneous effect on students' learning outcomes and inference skills.

These results indicate that the implementation of the Discovery Learning model supported by Live Worksheet not only enhances students' cognitive abilities but also improves their higher-order thinking skills, specifically their inference skills.

This simultaneous effect occurs because the Discovery Learning model provides a learning process that encourages students to actively construct understanding through concept-discovery activities. Students do not merely receive information but are actively involved in observing phenomena, formulating problems, collecting data, analyzing information, verifying findings, and drawing conclusions.

Meanwhile, the use of Live Worksheet provides support in the form of interactive learning media that helps students conduct inquiry activities in a more engaging and structured manner. The integration of this learning model and digital media creates a learning experience that enhances students' mastery of the material while also developing their scientific thinking skills.

Thus, it can be concluded that the Discovery Learning model, supported by Live Worksheet, has a simultaneous effect on the learning outcomes and inferential skills of fourth-grade students regarding the topic of changes in the state of matter.

DISCUSSION

Based on the research findings, it was determined that there is a difference in learning outcomes between students who were taught using the Discovery Learning model supplemented by Live Worksheets and those who received conventional instruction. The results of the first hypothesis test, conducted using an Independent Samples t-test, showed a p-value of < 0.001; therefore, it can be concluded that the Discovery Learning model supplemented by Live Worksheets has a significant effect on students' learning outcomes regarding the topic of changes in the state of matter for fourth-grade students.

The improvement in learning outcomes in the experimental group indicates that instruction using the Discovery Learning model is capable of creating a more meaningful learning process. In its implementation, students do not merely receive information directly from the teacher but are actively engaged in the process of discovering concepts through activities such as observation, problem identification, information gathering, data processing, verification, and drawing conclusions.

The stages of the Discovery Learning model provide students with the opportunity to build their own understanding through direct learning experiences. In the stimulation stage, students are presented with stimuli in the form of phenomena related to changes in the physical state of matter that are relevant to daily life. These activities encourage students to observe and connect the learning material with real-world experiences.

This improvement in learning outcomes indicates that Discovery Learning supported by Live Worksheets can increase student engagement during instruction. Students become more active in seeking information, discussing, and solving the problems presented. Learning activities that directly involve students make the concepts being studied easier to understand and help them retain the information longer.

These research findings align with constructivist theory, which explains that knowledge is not acquired passively but is constructed by students through experience and interaction with the learning environment. Through Discovery Learning, students have the opportunity to discover concepts on their own, leading to a deeper understanding.

These findings also reinforce previous research showing that the implementation of the Discovery Learning model can have a positive impact on students' learning outcomes. This model enhances learning activities, motivation, and conceptual understanding because students are directly involved in the learning process.

The research results indicate that there is a difference in inference skills between students who were taught using the Discovery Learning model supplemented by Live Worksheets and those who received conventional instruction. The results of the second

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hypothesis test using an Independent Samples t-test showed a p-value of < 0.001, leading to the conclusion that the Discovery Learning model supported by Live Worksheet has a significant effect on students' inference skills regarding the topic of changes in the physical state of matter in fourth grade.

The improvement in inference skills in the experimental group occurred because the stages in the Discovery Learning model are closely related to the scientific thinking process and students' critical thinking skills. Inference skills refer to students' ability to use information or facts they have obtained to generate hypotheses, determine relationships between pieces of information, and draw conclusions based on available evidence.

During the stimulation stage, students are presented with phenomena or problems related to changes in the state of matter through observation activities. This stage trains students to recognize facts, identify important information, and develop curiosity about the observed phenomena. Students begin to connect their everyday experiences with the scientific concepts they are learning.

Next, during the problem statement stage (problem identification), students are guided to formulate questions and initial hypotheses based on their observations. This activity develops students' ability to generate alternative answers or predictions regarding the given problem. This process is a crucial component of inference skills, as students learn to structure their thinking based on available information.

During the data collection and data processing stages, students conduct observations, gather information, and analyze the data obtained. These stages train students to connect facts with concepts they have learned. Through this analytical process, students do not merely receive information but learn to identify cause-and-effect relationships in events.

The next stage, verification, provides students with the opportunity to test the consistency between their initial hypotheses and the results of their observations. This activity trains students to use evidence as the basis for determining the truth of a statement. This ability is an important part of the scientific thinking process.

In the final stage—generalization (drawing conclusions)—students formulate conclusions based on the results of their investigations. This stage directly develops the inference skill indicator, which is the ability to draw conclusions based on facts and data obtained during the learning process.

The use of Live Worksheet further strengthens the process of developing inference skills because it provides space for students to engage in active and focused learning activities. Through this medium, students can observe information, answer analytical questions, record their observations, and draw conclusions directly. The digital activities available in Live Worksheet help students organize information, making their thought processes more systematic.

The results of this study reinforce the view that discovery-based learning can improve critical thinking skills because students are directly involved in the process of constructing knowledge. Discovery Learning provides a learning experience that allows students to act as discoverers of concepts, while Live Worksheet supports this process through interactive learning activities.

Based on the results of testing the third hypothesis using Multivariate Analysis of Variance (MANOVA), the Discovery Learning model supported by Live Worksheet was found to have a simultaneous effect on students' learning outcomes and inference skills regarding the topic of changes in the state of matter in fourth grade.

These results indicate that the implementation of a learning model that integrates the process of concept discovery with the support of digital media not only influences students' cognitive aspects but also fosters the development of higher-order thinking skills. In other words, Discovery Learning supported by Live Worksheets enhances mastery of the subject matter while simultaneously training students to process information, analyze facts, and draw conclusions based on evidence.

This simultaneous effect occurs because the characteristics of the Discovery Learning model align with a learning process that emphasizes students' active engagement in constructing knowledge. During the learning process, students do not merely receive concepts presented by the teacher but engage in a series of investigative activities—from observing phenomena, identifying problems, gathering information, processing data, verifying findings, to formulating conclusions.

This activity has a positive impact on learning outcomes because students gain conceptual understanding through hands-on learning experiences. When students discover for themselves the relationship between facts and the concept of changes in the state of matter, their understanding becomes more meaningful and goes beyond mere memorization. The process of discovering these concepts helps students understand the material more deeply, thereby leading to improved learning outcomes.

The results of this study reinforce the view that discovery-based learning supported by digital media can have a positive impact on various aspects of students' development. Discovery Learning helps students build understanding through the scientific thinking

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process, while Live Worksheet provides support in the form of learning activities that enable students to learn actively, independently, and purposefully.

Thus, it can be concluded that the Discovery Learning model supported by Live Worksheet simultaneously influences students' learning outcomes and inference skills. This learning model is not only effective in improving students' mastery of the concept of changes in the state of matter but also develops their higher-order thinking skills through inquiry and problem-solving activities.

CONCLUSION

Based on the results of a study on the effect of the Discovery Learning model supported by Live Worksheet on students' learning outcomes and inference skills regarding the topic of changes in the physical state of matter in fourth grade, it can be concluded that the implementation of the Discovery Learning model supported by Live Worksheet has a significant effect on students' learning outcomes. This is evidenced by the results of data analysis, which show a difference in the improvement of learning outcomes between the experimental group, which received instruction using the Discovery Learning model supported by Live Worksheet, and the control group, which received conventional instruction. The improvement in learning outcomes in the experimental group occurred because the learning process provided students with the opportunity to actively engage in discovering concepts through activities such as observing phenomena, identifying problems, gathering information, processing data, verifying findings, and drawing conclusions. The support provided by Live Worksheet in the learning process also helped create more interactive learning activities, making it easier for students to understand the concept of changes in the state of matter in a contextual manner.

In addition to influencing learning outcomes, the implementation of the Discovery Learning model aided by Live Worksheets also has a significant impact on students' inference skills. This is demonstrated by improvements in students' ability to identify facts, formulate alternatives or hypotheses based on the information obtained, and draw conclusions based on their observations. This impact occurs because the Discovery Learning framework directly trains students' scientific thinking processes. Through the stages of stimulation, problem statement, data collection, data processing, verification, and generalization, students are encouraged not only to accept information but also to analyze a phenomenon so that they can draw conclusions based on the evidence they find.

Overall, the implementation of the Discovery Learning model supported by Live Worksheet has a combined effect on students' learning outcomes and inference skills. This indicates that the use of a discovery-based learning model supported by interactive digital media can enhance both students' cognitive aspects and their higher-order thinking skills. Learning that actively involves students in the inquiry process makes the learning process more meaningful because students construct their own understanding through direct learning experiences. Thus, the Discovery Learning model supported by Live Worksheet can be an effective alternative for science education in improving the learning outcomes and inference skills of elementary school students.

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