



Educaplay as an Interactive Digital Media for Students' HOTS Thinking on Living Things Material

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Abstract: This study aims to determine the effectiveness of Educaplay interactive digital media in improving the Higher Order Thinking Skills of grade II elementary school students on the subject of living things. The study used a quantitative approach with a quasi-experimental design of the One-Group Pretest-Posttest Design type. The subjects of the study were 20 grade II students of SDN Karawang Kulon II. The instruments used were multiple-choice HOTS tests and descriptions based on the revised Bloom's taxonomy, with indicators of analyzing, evaluating, and creating. The results showed that there was a significant increase in the posttest score compared to the pretest, with an average increase of 41.1 points and a significance value of 0.001 ($p < 0.05$). The N-Gain value was in the medium to high category (average 0.6867). In addition, the analysis of the quality of the questions showed that most of the questions were difficult and had good discriminating power. These findings indicate that Educaplay is effective in developing students' HOTS skills through interactive, contextual, and fun learning. The implications of this Research encourage teachers to utilize digital media as a learning tool that is not only interesting but also able to stimulate high-level cognitive activities from the elementary education level.

Abstrak: Penelitian ini bertujuan untuk mengetahui efektivitas media digital interaktif Educaplay dalam meningkatkan kemampuan berpikir tingkat tinggi (Higher Order Thinking Skills/HOTS) siswa kelas II SD pada materi makhluk hidup. Penelitian menggunakan pendekatan kuantitatif dengan desain eksperimen semu tipe One Group Pretest-Posttest Design. Subjek penelitian adalah 20 siswa kelas II SDN Karawang Kulon II. Instrumen yang digunakan berupa tes HOTS pilihan ganda dan uraian berdasarkan taksonomi Bloom revisi, dengan indikator menganalisis, mengevaluasi, dan mencipta. Hasil penelitian menunjukkan bahwa terdapat peningkatan signifikan pada nilai posttest dibandingkan pretest, dengan rata-rata kenaikan sebesar 41,1 poin dan nilai signifikansi 0,001 ($p < 0,05$). Nilai N-Gain berada pada kategori sedang ke tinggi (rata-rata 0,6867). Selain itu, analisis kualitas soal menunjukkan sebagian besar soal tergolong sukar dan memiliki daya pembeda yang baik. Temuan ini mengindikasikan bahwa Educaplay efektif dalam mengembangkan kemampuan HOTS siswa melalui pembelajaran yang interaktif, kontekstual, dan menyenangkan. Implikasi dari penelitian ini mendorong guru untuk memanfaatkan media digital sebagai alat pembelajaran yang tidak hanya menarik, tetapi juga mampu menstimulus aktivitas kognitif tingkat tinggi sejak jenjang pendidikan dasar.

A. Introduction

The rapid development of digital technology has brought significant changes to the world of education. Digitalization has facilitated access to learning resources that were previously limited by space and time. The Ministry of Education, Culture, Research, and Technology (Kemendikbudristek) encourages the use of technology-based learning media to improve the quality of learning in elementary schools. This is in line with the vision of "Independent Learning," which emphasizes active, innovative, and student-needs-based learning (Mauliansyah et al., 2023). Interactive digital media such as Educaplay is present as one of the innovative technology-based learning solutions that can enrich the learning process (Rosyada et al., 2025), especially in the context of the Independent Curriculum, which emphasizes strengthening high-level thinking skills HOTS.

Higher Order Thinking Skills (HOTS) are high-level thinking skills that include analysis, evaluation, and creation. HOTS is an essential indicator in the Independent Curriculum because it emphasizes students' ability to understand concepts in depth, relate knowledge to real contexts, and develop solutions to complex problems. In elementary school learning, strengthening HOTS not only trains critical and reflective thinking skills but also helps students become independent and adaptive learners. Therefore, a learning strategy is needed that can stimulate high-level mental activity from an early age, especially in subjects such as Natural and Social Sciences (IPAS), which are closely related to students' daily lives.

One effective strategy in developing HOTS is through the use of interactive digital media. This media not only provides visualization and a more interesting learning experience, but also encourages active student involvement in exploring concepts contextually. Educaplay is a digital platform that offers various educational game-based learning features, such as interactive quizzes, crosswords, concept matching, and sequence games (Anwar & Jasiah, 2024). These activities provide space for students to analyze information, identify patterns, and construct understanding independently. With a fun and flexible approach, Educaplay supports the achievement of 21st-century competencies, especially in building high-level thinking skills meaningfully and sustainably (Elli et al., 2025).

Learning Natural and Social Sciences (IPAS) for grade II Elementary School students includes material about living things that are very close to students' daily lives (Hanum et al., 2024). However, in practice, the delivery of this material is still often done conventionally through lecture methods and reading textbooks. This model tends to be less interesting for students and is not optimal in developing critical, analytical, and reflective thinking skills as required by HOTS indicators. In fact, at the stage of cognitive development of elementary school children, visual, interactive, and contextual learning has an essential role in building meaningful conceptual understanding.

Based on the results of initial interviews with the Principal and second-grade teachers at SDN Karawang Kulon II, it was found that the limited use of digital-based learning media is still a significant obstacle. Teachers stated that although they have a basic

understanding of digital media, they are not yet accustomed to using platforms such as *Educaplay* optimally. Meanwhile, the Principal emphasized the importance of learning innovation that is in line with the times to support students' critical and creative thinking skills. In implementing learning about living things, teachers revealed that students often have difficulty connecting the concepts taught with real life, and are less active in the discussion process or information exploration.

Observation results during the learning process also show that most students are only able to answer questions at the LOTS (Lower Order Thinking Skills) level, such as remembering and understanding. On the other hand, their ability to explain reasons, analyze differences, or draw conclusions is still minimal. This indicates that there needs to be a more challenging and interactive approach and media so that students not only memorize concepts, but are also able to develop more profound ways of thinking.

To strengthen the findings, classroom observations and interviews were conducted with two second-grade teachers and the Principal. The first teacher stated that "Students sometimes get bored quickly if they only look at books. They are more enthusiastic if they are invited to play games or watch videos." The second teacher added that "We need media that can make children think, but also remain fun. So far, we have not used much digital media." The Principal stated that "We are very open to learning innovations, but there has been no special training for using *Educaplay* or the like." From these observations, it is clear that there is a need to integrate interactive digital media into the teaching and learning process, especially those that can improve students' HOTS thinking skills.

Research by [Prayoga et al \(2024\)](#) shows that the use of *Educaplay* can significantly increase student engagement and learning outcomes in science subjects. Meanwhile, a study by [Prayoga et al \(2024\)](#) proves that interactive digital media can trigger high-level brain activity in students, which has an impact on increasing analytical and synthesis skills. However, most of these studies were conducted at the upper grade level or junior high school, and there has not been much Research that specifically examines the use of *Educaplay* for lower grade elementary school students, especially class II. Research by [Diantari et al \(2021\)](#) also shows that educational game-based learning is more effective in increasing learning interest and conceptual understanding. However, the use of *Educaplay* as a medium that combines quizzes, puzzles, and interactive visuals is still very limited in local studies. There has been no Research that explicitly combines *Educaplay* with improving students' HOTS abilities in living things material in lower elementary school grades.

This Research offers novelty in two main aspects. First, focus on grade II elementary school students who are often considered not ready for HOTS-based learning, even though this is the period when the formation of critical and reflective thinking patterns begins to develop. Second, the systematic integration of *Educaplay* as an interactive learning media designed to build HOTS skills, not just improve superficial understanding of the material.

This study aims to determine the changes in the Higher Order Thinking Skills (HOTS) of grade II students after using *Educaplay* interactive digital media on the material

of living things in the subject of science at SDN Karawang Kulon II. The use of interactive digital media such as Educaplay has excellent potential to answer the challenges of 21st-century learning, especially in strengthening high-level thinking skills since the elementary school level. The limitations of conventional media and approaches can be obstacles in achieving meaningful and contextual science learning objectives. Therefore, this Research is essential to provide empirical evidence as well as practical contributions to the world of elementary education, especially in the development of adaptive and innovative digital learning media.

B. Method

This study uses a quantitative approach with a quasi-experimental design of the One-Group Pretest-Posttest Design type. This design is used to determine changes in students' Higher Order Thinking Skills (HOTS) after learning using Educaplay interactive digital media on the topic of living things. In this design, students are given a pretest before treatment and a posttest afterward to measure improvement in learning outcomes (Sugiyono, 2019).

Table 1. HOTS Grid

No.	HOTS (Revised Bloom's Taxonomy) Indicators	Material	Question Number	Question Form	Question Description
1	Analyzing	Characteristics of living things	1, 2	Multiple choice	Students identify the differences in characteristics of living and non-living things.
2	Analyzing	The needs of living things	3	Description	Students explain the reasons why water and food are essential for plants.
3	Evaluating	Habitat of living things	4, 5	Multiple choice	Students evaluate the suitability of specific habitats for certain types of living things.
4	Evaluating	Adaptation of living things	6	Description	Students give their opinions about the ability of certain animals to survive.
5	Creating	Relationships between living things	7, 8	Multiple choice	Students create scenarios of interactions between animals and plants in an ecosystem.
6	Creating	Living things and their environment	9, 10	Description	Students create simple stories about the lives of living things in their

No.	HOTS (Revised Bloom's Taxonomy) Indicators	Material	Question Number	Question Form	Question Description
					surrounding environment.

The Research was conducted at SDN Karawang Kulon II. The study took place during the second semester of the 2024/2025 academic year. The subjects in this study were 20 second-grade students, selected using a purposive sampling technique, based on the criteria that: (1) the class was currently studying science material on living things, and (2) students had access to digital learning media.

The data collection technique used in this study was a written test, consisting of a pretest and a posttest. The instrument used was a Higher Order Thinking Skills (HOTS) test in the form of descriptive and multiple-choice questions, based on revised Bloom's taxonomy indicators (analyzing, evaluating, and creating).

The test was validated by two experts, one in subject matter and one in learning evaluation, before it was used in the Research (Santhi & Pangestika, 2021). This test consisted of 10 questions and was validated in advance by material experts and learning evaluation experts.

Data Analysis Technique

The data obtained from the pretest and posttest were analyzed quantitatively using a Paired Sample t-Test to determine the significance of differences between the pre- and post-intervention scores (Nafisatur, 2024). The analysis was conducted using SPSS statistical software.

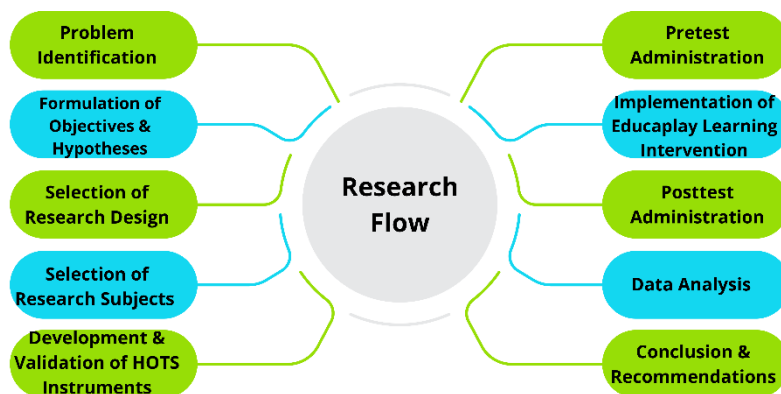


Figure 1. Research Flow

The Research flow diagram illustrates the systematic steps taken in this study from the initial stage to the conclusion. Each component plays a vital role in ensuring the Research process is structured and effective.

- 1) Problem Identification
The Research begins by identifying a relevant educational problem, particularly the lack of higher-order thinking skills (HOTS) in students when learning about living things.
- 2) Formulation of Objectives & Hypotheses
After identifying the problem, the researcher formulates specific Research objectives and hypotheses to guide the direction of the study.
- 3) Selection of Research Design
The researcher then selects an appropriate design—in this case, a quasi-experimental design (One Group Pretest-Posttest Design)—to evaluate the effect of the treatment.
- 4) Selection of Research Subjects
The next step involves selecting suitable Research participants. Here, 20 second-grade students from SDN Karawang Kulon II are chosen through purposive sampling.
- 5) Development & Validation of HOTS Instruments
The researcher develops a HOTS-based test instrument that includes both multiple-choice and descriptive items. The instrument is then validated by content and evaluation experts to ensure its quality and relevance.
- 6) Pretest Administration
Before the learning intervention begins, a pretest is administered to measure students' initial HOTS level.
- 7) Implementation of Educaplay Learning Intervention
The core treatment involves the use of Educaplay, an interactive digital learning platform, during science lessons on living things.
- 8) Posttest Administration
After the learning intervention, a posttest is conducted to assess any improvements in students' HOTS.
- 9) Data Analysis
The data collected from pretest and posttest results are analyzed using statistical methods, specifically a Paired Sample t-Test via SPSS software.
- 10) Conclusion & Recommendations
Based on the data analysis, conclusions are drawn regarding the effectiveness of Educaplay in enhancing students' higher-order thinking skills, and recommendations are provided for future practice or Research.
To measure students' Higher Order Thinking Skills (HOTS) aligned with revised Bloom's Taxonomy, the instrument used in this study consists of both multiple-choice and descriptive questions. These questions are designed to assess students' ability to analyze, evaluate, and create based on the science topic "Living Things." Below are two randomly selected examples from the test:
 - 1) Question No. 4 (Evaluating): A duck lives in a rice field, and an eagle lives in the mountains. Do you think an eagle could live in the rice field? Why or why not? Answer: Measures the ability to evaluate the suitability of an animal's habitat.

- 2) Question No. 9 (Creating): Write a short story about a butterfly living in a flower garden and how it helps the plants reproduce. Answer: Measures the ability to create and relate living things with their environment.

C. Result

This study aims to determine changes in student learning outcomes after using Educaplay interactive digital media on living things material. The results obtained from data analysis include validity tests, reliability, discriminatory power, level of question difficulty, normality, paired t-test, and N-Gain analysis. The following is a presentation of the Research results.

A validity test was conducted on 15 questions. The analysis results showed that 10 questions were declared valid ($r_{\text{count}} > r_{\text{table}} = 0.42$), while the other five items were invalid. This indicates that most of the instruments have met the content validity requirements, as in Table 2. Furthermore, the reliability test showed a reliability value of 0.631, which is included in the high category, as shown in Table 3. This means that the instruments used in this study have good internal consistency.

Table 2. Validity Test

No. Question	r_{count}	r_{table}	Information
1	0.65	0.42	Valid
2	0.45	0.42	Valid
3	0.11	0.42	Invalid
4	0.10	0.42	Invalid
5	0.02	0.42	Invalid
6	0.47	0.42	Valid
7	0.53	0.42	Valid
8	0.11	0.42	Invalid
9	0.45	0.42	Valid
10	0.74	0.42	Valid
11	0.57	0.42	Valid
12	0.49	0.42	Valid
13	0.45	0.42	Valid
14	0.55	0.42	Valid
15	0.02	0.42	Invalid

Table 2 shows that out of 15 questions tested, 10 items were valid ($r_{\text{count}} > r_{\text{table}} = 0.42$), and five items were invalid ($r_{\text{count}} < r_{\text{table}}$). Only the valid items (questions 1, 2, 6, 7, 9, 10, 11, 12, 13, 14) were used in the final test instrument.

Table 3. Reliability Test

Reliability Test	
0.63116	Tall

Table 3 shows that the instrument has a Cronbach's Alpha value of 0.63, which falls into the "moderate" or "acceptable" category. This indicates that the test items are sufficiently reliable for assessing students' higher-order thinking skills (HOTS), although there is still room for improvement.

The results of the Discriminatory Power Test and the Level of Difficulty of the Instrument were also tested from the aspect of discriminatory power. There were six questions with "excellent" discriminatory power, 3 "good" questions, 1 "sufficient" question, and 5 "less good" questions. These results show that most of the questions can distinguish between students who have high and low understanding. In terms of difficulty level, the majority of questions are included in the "difficult" category, with only 1 question included in the "moderate" category. This shows that most of the questions require high-level thinking skills (HOTS), in accordance with the use of *Educaplay*.

Normality Test Results Normality tests were conducted using Kolmogorov-Smirnov and Shapiro-Wilk. The test results on the pretest data showed a significance value of 0.048 (Kolmogorov-Smirnov) and 0.118 (Shapiro-Wilk), while the posttest data obtained a significance of 0.076 and 0.108. Because the significance value in the Shapiro-Wilk test is greater than 0.05 for both data groups, the data is declared normally distributed, as in Figure.

Table 4. Pretest Normality Test

	Tests of Normality					
	Kolmogorov-Smirnov ^a			Shapiro Wilk		
	Statistics	Df	Sig.	Statistics	df	Sig.
Pretest	.194	20	.048	.924	20	.118

a. Lilliefors Significance Correction

Based on the Shapiro-Wilk test, the pretest data are normally distributed (Sig. = 0.118 > 0.05), so it meets the assumption of normality.

Table 5. Posttest Normality Test

	Tests of Normality					
	Kolmogorov-Smirnov ^a			Shapiro Wilk		
	Statistics	Df	Sig.	Statistics	df	Sig.
Post Test	.184	20	.076	.922	20	.108

a. Lilliefors Significance Correction

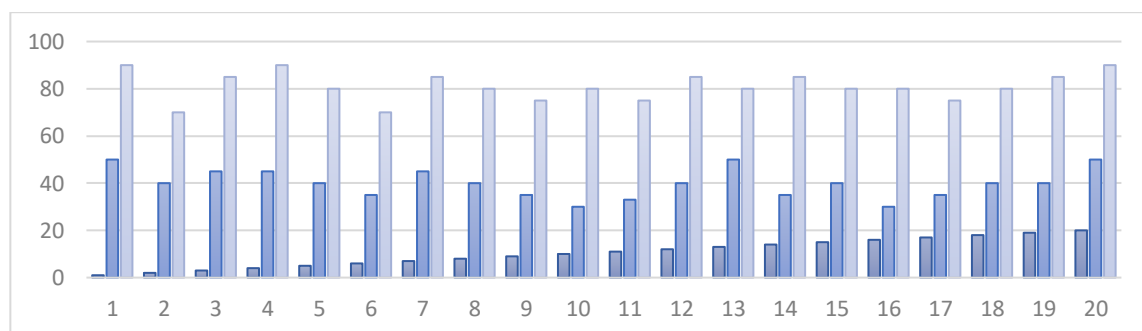
Based on the Shapiro-Wilk test, the posttest data are also normally distributed (Sig. = 0.108 > 0.05), which means they meet the assumption of normality.

The results of the paired sample t-test showed a significant difference between the pretest and posttest scores. The average increase was 41.1 points with a significance (2-tailed) of 0.001 < 0.05. This indicates that the use of *Educaplay* media has a significant influence on student learning outcomes.

Table 6. Paired Samples Test

Paired Samples Test	Pair 1 PreTest - PostTest
Mean	-41.100
Std. Deviation	5.524
Std. Error Mean	1.235
95% CI Lower	-43.685
95% CI Upper	-38.515
T	-33.273
Df	19
One-Sided p	0.001
Two-Sided p	0.001
Paired Samples Test	Pair 1 PreTest - PostTest

Pretest and Posttest Scores Improvement in learning outcomes can be seen directly from students' pretest and posttest scores. There was consistent improvement in all students after learning using *Educaplay*. Figure 2. Comparison Chart of Students' Pretest and Posttest Scores (Line or bar graph images must be attached separately in a .jpg/.jpeg file as per the provisions).

**Figure 2.** Pretest and Posttest Recapitulation Results

This shows that most of the questions require high-level thinking skills (HOTS), in accordance with the use of *Educaplay*.

- Which of the following pairs shows the difference between a living and a non-living thing?
 - Cat and lion
 - Rock and chair
 - Tree and table
 - Water and soil

This question can be displayed through "Drag and Drop" or "Multiple Choice Quiz" formats on *Educaplay*, allowing students to engage visually and reinforce the concept of life characteristics interactively.

- Question: Why are water and food important for plants?

Can be presented as an “Open Question” or “Matching Pairs” activity where students match needs (e.g., water, sunlight) with their functions. This encourages analysis through interactive tasks.

3. Which animal is best suited to live in the desert?

A. Frog
B. Camel
C. Fish
D. Seal

Features like “Guess the Word” or “Quiz with Feedback” provide students with instant feedback and explanations, encouraging deeper evaluation and conceptual understanding.

4. Question: Why do ducks have webbed feet? Explain how this helps them survive. Activities like “Interactive Diagram” or “Labeling” let students visually match body parts to their functions, strengthening their evaluative skills through interactive learning.

5. What would happen if bees disappeared from the environment?

A. Flowers would reproduce faster
B. Pollination processes could be disrupted
C. More fruits would grow
D. No significant change would occur

Using “Interactive Story” or “Sequencing” tasks, students can build logical cause-and-effect scenarios, developing their creative and critical thinking about ecological relationships.

6. Question: Write a short story about a stray cat in your neighborhood. Explain how it survives.

This question encourages students to create a narrative based on real observation, connecting living things with their environment. Through tools like “Audio Recorder” or “Creative Writing Task,” students can write or record their stories, enhancing imagination and understanding using engaging digital storytelling.

D. Discussion

This study aims to determine changes in student learning outcomes after learning using Educaplay interactive digital media on living things material. Based on the results of statistical tests, a significant difference was found between the pretest and posttest scores, with an average increase of 41.1 points. This shows that Educaplay media makes a positive contribution to improving high-level thinking skills (HOTS) of grade II students of SDN Karawang Kulon II. This increase is also in line with the results of the analysis per HOTS indicator on the question grid, which shows that students can achieve the ability to analyze, evaluate, and create through various forms of questions designed according to the characteristics of the material and their cognitive development. For example, in the creating indicator, students can compose a straightforward narrative about the relationship between

living things in their environment, which shows not only conceptual understanding but also developing creativity. Thus, quantitative and qualitative results both confirm the effectiveness of Educaplay as a digital-based learning media to encourage meaningful and HOTS-based learning.

These findings indicate that learning that integrates interactive digital media can create learning experiences that are more enjoyable, challenging, and encourage students to think more deeply (Kurniasari et al., 2025). Educaplay facilitates students in compiling information, classifying, evaluating, and drawing conclusions from material presented visually and interactively (Anisa et al., 2025). The quiz, crossword, and educational game features offered by Educaplay indirectly stimulate high-level brain activity, as explained by Jannah (2021) in the revised Bloom's taxonomy, which states that learning that can invite students to analyze, evaluate, and create is included in the HOTS realm.

This study supports the findings of Annisa et al (2025), which show that the use of digital interactive media, such as Educaplay, can significantly improve student learning outcomes and participation. In line with Nurhaliza & Sari (2023), digital media-based learning has excellent potential in triggering high-level thinking activities because of its visual, dynamic, and contextual presentation. In addition, these results are also in line with the results of Research by Putri (2024), which concluded that educational games not only increase interest in learning but also support students' conceptual understanding in more depth. Interactive digital media is very relevant to the characteristics of elementary school-age students who tend to learn through exploratory, visual, and kinesthetic activities (Sari, 2024). This is reinforced by Piaget's opinion (Rhamadanty, 2023) that at the concrete operational stage, children learn more effectively when they are directly and actively involved in the learning process. Educaplay, as a medium that supports this principle, allows students to be actively engaged, repeat material, and get instant feedback.

The formulation of the problem in this study is whether there is a change in students' high-level thinking skills after using Educaplay media. Based on the results of data analysis showing a significant increase and the N-Gain value in the "moderate to high" category (average 0.6867), it can be concluded that the Research questions are clearly answered. Learning using Educaplay has proven effective in improving students' HOTS abilities. An essential contribution of this study is to show that the use of digital media does not have to be limited to high-grade levels, but is also very possible and practical to be applied to lower grades, such as grade II of elementary school, as long as the material is adjusted to the characteristics of student development. This study also expands the scope of the use of Educaplay, which was previously widely used in language learning, and is now proven to be used in science learning to strengthen science literacy and HOTS.

Theoretically, this study strengthens the relevance of constructivist theory in learning, especially Vygotsky's theory, which emphasizes the importance of interaction and scaffolding in the learning process (Etnawati, 2022). Educaplay acts as a digital scaffolding that allows students to explore information, discover concepts, and construct understanding through interaction with media and peers. In addition to Vygotsky's theory, Piaget's

cognitive development theory is also relevant, where elementary school children are at the concrete operational stage and learn most effectively through direct experience, exploration, and active involvement in meaningful contexts (Alhabib, 2021). In practice, these findings suggest that teachers in lower grades begin to integrate interactive digital media in learning, not only as visual aids, but also as instruments to encourage critical and analytical thinking skills from an early age. Teachers are also advised to take training in using Educaplay or similar platforms to maximize the potential of media in meaningful learning contexts.

E. Implication

The findings of this study offer several important implications for elementary education. First, the effectiveness of Educaplay in enhancing students' Higher Order Thinking Skills (HOTS) demonstrates that digital interactive media can serve as a strategic instructional tool, particularly in science learning on the topic of living things. This supports the constructivist view that learning becomes more meaningful when students are actively engaged and directly interact with learning content through exploratory and problem-based tasks.

Second, the study reinforces existing evidence on the benefits of integrating gamified digital platforms into classroom instruction. Features such as interactive quizzes, feedback mechanisms, and visual learning activities have been shown to increase students' cognitive engagement and analytical abilities. These results highlight that digital media should be integrated not merely as supplementary aids, but as essential components of pedagogical design that promote deeper conceptual understanding.

Third, the study underscores the importance of technology-based learning in supporting 21st-century competencies, including critical thinking, creativity, and digital literacy. Early exposure to interactive digital tools such as Educaplay helps build students' readiness to participate in increasingly digital learning environments.

Finally, the findings imply a need for teachers to strengthen their digital pedagogical competence. Professional development focusing on the use of interactive learning media is crucial to ensure that teachers can design and implement technology-enhanced lessons effectively. This will enable schools to maximize the potential of digital platforms for improving the quality of learning and students' cognitive development.

F. Limitation and Suggestion for Further Research

This study has several inherent limitations that influence the extent to which its findings can be generalized. The small number of participants, consisting of only 20 second-grade students from a single elementary school, restricts the representativeness of the results and may not fully reflect the characteristics of broader student populations. In addition, the relatively short intervention period limits the ability to observe the long-term effects of Educaplay on students' HOTS. The Research also focused exclusively on one digital learning platform Educaplay so the effectiveness of other interactive media remains unexplored.

Moreover, the use of solely quantitative data prevents the capture of students' subjective experiences, engagement levels, and learning challenges throughout the intervention.

In light of these limitations, future Research is encouraged to involve larger and more diverse groups of participants across multiple schools and grade levels to enhance the generalizability of the findings. Extending the intervention duration would allow researchers to examine the sustained impact of Educaplay on cognitive development over time. Comparative studies involving various digital platforms such as Wordwall, Quizizz, or interactive simulations may also provide deeper insights into which types of digital media most effectively promote high-level thinking. Additionally, integrating Educaplay into cross-curricular learning contexts could help determine its broader applicability beyond science education. To enrich the understanding of students' learning processes, future studies are recommended to adopt mixed-method approaches by incorporating interviews, observations, or student reflection logs. This combination of quantitative and qualitative data will yield a more comprehensive picture of how interactive digital media support the development of HOTS in elementary students.

G. Conclusion

Based on the results of data analysis, this study concluded that there were significant changes in the high-level thinking skills (HOTS) of class II students of SDN Karawang Kulon II after participating in learning using Educaplay interactive digital media. This media is effectively used to help students understand the concept of living things through learning activities that involve analysis, evaluation, and creation skills. Thus, Educaplay can be an alternative technology-based learning media that can be used to build critical thinking skills from an early age. The findings of this study provide important implications for the world of elementary education, especially in the application of educational technology to learning in lower grades. Learning that utilizes interactive digital media can not only increase student engagement but also has the potential to hone high-level thinking skills systematically. The application of media such as Educaplay also shows that HOTS skills can not only be developed in upper-level students, but can be trained from an early level with an approach and media that suit the child's characteristics. Further Research is recommended to expand the scope of materials and class levels, and compare the effectiveness of Educaplay with other digital media. In addition, it would be more optimal if learning were carried out with the reinforcement of structured pedagogical strategies, such as problem-based or project-based learning models. This quantitative Research can also be complemented with a qualitative approach to dig deeper into how students respond to and interpret the learning experience using digital media.









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