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Fun Thinker Digital Media Material on the Growth and Development of Living Things to Improve Science Learning Outcomes in Schools

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A B S T R A K. *Penelitian ini bertujuan mengembangkan aktivitas pembelajaran berbantuan media digital* fun thinker *materi perkembangan dan pertumbuhan makhluk hidup untuk meningkatkan hasil belajar siswa. Model pengembangan yang digunakan adalah ADDIE, yang meliputi lima tahap: analisis, perancangan, pengembangan, implementasi, dan evaluasi. Objek penelitian ini adalah validasi aktivitas pembelajaran, dengan sampel 31 siswa kelas III B. Metode pengumpulan data menggunakan wawancara, studi dokumentasi, dan tes. Subjek penelitian terdiri dari 4 ahli, 2 praktisi, dan 1 rombel siswa kelas III SD Negeri 1 Baktiseraga. Instrumen yang digunakan adalah lembar kuesioner. Hasil penelitian menunjukkan bahwa: (1) produk yang dihasilkan berupa media pembelajaran fun thinker digital materi perkembangan dan pertumbuhan makhluk hidup pada muatan IPA yang menarik, interaktif, dan inovatif, (2) validitas media dengan penilaian ahli materi sebesar 0,89 dan ahli media sebesar 0,95, yang menunjukkan validitas sangat tinggi, (3) respons praktisi sebesar 96,67%, respons siswa dalam uji coba perorangan sebesar 92,33%, dan respons siswa dalam uji coba kelompok kecil sebesar 98,18%, semuanya dengan kualifikasi sangat baik, (4) nilai signifikansi sebesar 0,000, lebih kecil dari 0,05, menunjukkan pengaruh signifikan antara sebelum dan sesudah menggunakan media pembelajaran* fun thinker *digital yang dapat meningkatkan hasil belajar siswa secara signifikan dan mempermudah pemahaman materi. Dengan demikian, penggunaan media ini sangat efektif dalam meningkatkan kualitas pembelajaran dan hasil belajar siswa secara keseluruhan.*

A B S T R A C T. This study aims to develop learning activities assisted by digital media, fun-thinking materials, and the growth of living things to improve student learning outcomes. The development model used is ADDIE, which includes five stages: analysis, design, development, implementation, and evaluation. The objective of this study is to validate learning activities, using a sample of 31 students from class III B. Data collection methods included interviews, document analysis, and tests. The research subjects consisted of 4 experts, two practitioners, and 1 class of students of class III SD Negeri 1 Baktiseraga. The instrument used was a questionnaire sheet. The results of the study showed that: (1) the resulting product was a digital fun thinker learning media for the development and growth of living things in science content that was interesting, interactive, and innovative, (2) the validity of the media with an assessment by material experts of 0.89 and media experts of 0.95, which showed very high validity, (3) the practitioner response was 96.67%, the student response in individual trials was 92.33%, and the student response in small group trials was 98.18%, all with excellent qualifications, (4) the significance value was 0.000, less than 0.05, indicating a significant influence between before and after using the digital fun thinker learning media which can significantly improve student learning outcomes and facilitate understanding of the material. Thus, the use of this media is highly effective in improving the quality of learning and overall student learning outcomes.

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1. INTRODUCTION

Technological developments are advancing rapidly; human resources (HR) must adapt to them in this modern era. One of the changes currently brought about by digitalisation is technological advancement. In this era, technological

developments have made us more practical, enabling us to access various new sources and obtain new information worldwide (Maharani & Meynawati, 2024). Changes in education in schools can be seen in terms of the latest innovations in the learning process. Educational innovation continues to evolve alongside the development of digital technology in learning (Prasrihamni et al., 2022). Implementing an innovation can be done comprehensively by examining existing aspects and components. Therefore, innovation is seen from a learning perspective, which must include students, teachers, materials and media, facilities and infrastructure, and the hidden curriculum. As the learning process at school develops, students are expected to experience significant improvements in knowledge, attitudes, and skills. As the learning process develops in schools, students are expected to experience changes in knowledge, attitudes, and skills (Hasma, 2017). A good learning process will create a pleasant learning atmosphere (Karnia et al., 2023). However, in reality, learning in schools often occurs ineffectively because much time, energy, and cost are wasted while learning objectives cannot be achieved.

The selection of learning media is an invaluable tool for teachers in the teaching and learning process. By using various learning methods and strategies, teachers can create engaging and easily understood learning experiences for students (Agustira & Rahmi, 2022). As educators, teachers must understand students' various characteristics before selecting the appropriate media to deliver learning materials. Digital media can be a tool in delivering science material, especially in elementary schools (Ayudia & Prasetya, 2023). Technological developments are advancing rapidly in education, especially in elementary schools, which must implement innovations and technology-based learning for students. At SD Negeri 1 Baktiseraga, technology-based learning has begun to be implemented in lower grades, but only at the introductory stage of technology media and remains under the supervision of the homeroom teacher or subject teacher. This statement is supported by the results of observations and interviews with the homeroom teacher at SD Negeri 1 Baktiseraga on April 30, 2024, namely that, in the learning process, it is necessary to develop digital media-based learning innovations to support it. Technological developments in education, particularly in elementary schools, demand technology-based innovation. At Baktiseraga 1 Public Elementary School, technology-based learning has begun to be implemented in lower grades. However, it is still in the introductory stage and under teacher supervision. Based on observations and interviews with the third-grade homeroom teacher of Baktiseraga 1 Public Elementary School on April 30, 2024, digital-based learning innovations need to be continuously developed to support the teaching and learning process. This is reinforced by observations and data from third-grade student learning outcomes tests in Cluster 2, Singaraja, indicating the need to improve learning effectiveness.

Table 1. Learning Outcomes of Science Students in Grade III Cluster II Singaraja

No	School	Class	Minimum Competency (KKM)	Number of students	Number of students below the Minimum Competency (KKM) (n < 70)		Number of students achieving the Minimum Competency (KKM) (n > 70)	
					Student	%	Student	%
1	SD Negeri 1 Baktiseraga	III B	70	30	21	70%	9	30%
2	SD Negeri 1 Banjar Tegal	III	70	33	18	55%	13	39%
3	SD Negeri 2 Banjar Tegal	III	70	23	15	65.22%	8	34.78%
4	SD Negeri 3 Banjar Tegal	III	70	9	8	88.89%	1	11.11%
Total				**95**	**62**	**70%**	**31**	**29%**

The table above shows that the majority of third-grade students' learning outcomes are still classified as low, with 70% not achieving the maximum score, indicating that student learning outcomes remain low. Observations and interviews with the homeroom teacher of grade III B at SD Negeri 1 Baktiseraga revealed that grade III B students enjoy learning while playing or watching instructional videos. Furthermore, these media are used by teachers to deliver material and to conduct tests to determine students' understanding of the material presented. The development of digital media in the learning process has been significantly out of step with the digital age (Akbar & Noviani, 2019). One crucial topic in science education is the growth and development of living things. This topic is not only profound but also complex, requiring effective and engaging learning methods. Using digital media is expected to improve students' understanding of textbook material, particularly the growth and development of living things. Fun Thinker Digital Media is a digital version of the Fun Thinker Book, usable on smartphones, computers, or laptops. Using Fun Thinker learning media can increase student engagement in thematic learning. This media is designed as an Android application and a laptop or computer application (Adnyani & Agustiana, 2021). Teachers must utilise technological advances to create engaging, efficient, and effective learning experiences by utilising appropriate learning media in the educational process (Hidayat & Khotimah, 2019). Fun Thinker digital media can certainly improve student learning outcomes, student enthusiasm, and create more enjoyable learning innovations (Rahardjo & Handoyo, 2015).

2. METHOD

Research on the development of learning media designed for the digital media platform Fun Thinker. To ensure high-quality learning materials and facilitate effective learning, it is crucial to consider the development model when creating them. This is crucial because learning materials development is fundamentally a process directly correlated with the learning process. The goal of development research is to create digital products. This research is a development study on learning media designed in Digital Media Fun Thinker. The research model chosen is the ADDIE model. The ADDIE model consists of five stages, namely: 1) analysis stage, 2) design stage, 3) development stage, 4) implementation stage, and 5) evaluation stage. ADDIE is a systematic development research model that is theoretically grounded in many methodological practices for designing and developing audiovisual, text and digital learning materials (Tegeh & Kirna, 2013). Cara pengumpulan datanya adalah dengan memberikan pernyataan atau daftar pertanyaan kepada responden, menyebarkan kuesioner dan menunggu kuesioner diisi kemudian dikembalikan (Pranatawijaya et al., 2019).

This study uses digital fun thinker media as a research subject for third-grade elementary school students in Theme 1, "Growth and Development of Living Things". The object of this study is to review media beliefs regarding the validity of the digital fun thinker. The research subjects were 31 students in grade III B at Baktiseraga 1 Elementary School, and the research focused on student learning outcomes through media on a predetermined theme. In this study, there are several trial stages. First, Expert Trials involving two subject matter experts, two media experts, and two practitioners (teachers) who have competence in their respective fields to evaluate the product to be developed. Second, Individual Trials were conducted with three third-grade students with low learning outcomes, as determined by their semester grades, to obtain initial information about the product. Third, Small Group Trials involving nine students, comprising three with high learning outcomes, three with medium learning outcomes, and three with low learning outcomes, were identified based on their respective semester grades. Furthermore, Field Trials were conducted involving all 31 students of grade III B to determine the feasibility of the learning media and student responses to the developed media. Finally, the Effectiveness Phase aims to determine the extent to which this learning media can improve student learning outcomes. This phase involves administering pre- and post-tests to all third-grade B students to measure the effectiveness of the learning media. The data in this study were collected through a thematic analysis that included interviews, observations, and document reviews to obtain needs analysis data. During the development stage, validity data for the digital fun thinker media were collected from media experts and subject matter experts using a rating scale instrument. Furthermore, responses to the digital fun thinker media from participants and students were collected through questionnaires. Data collection was carried out by providing statements or a list of questions to respondents, distributing the questionnaires, and waiting for the questionnaires to be completed and returned (Pranatawijaya et al., 2019). The distribution of these questionnaires was conducted during expert and practitioner testing to obtain comments, criticisms, and suggestions, which were then used to inform product revisions.

This research employed two methods: qualitative and quantitative. The qualitative method was used to collect data for thematic analysis through observation, interviews, and document analysis, while the quantitative method employed rating scales and questionnaires. The rating scale instrument was designed to briefly record a list of behavioural traits or characteristics in accordance with the research objectives. The instrument was developed through several stages: creating a grid table, compiling the instrument according to the grid, and consulting with the supervisor for validation. The instrument grid used in this study included media validation, test material validation, practitioner responses, and student responses.

Table 2. Media Expert Instrument Grid

No	Aspect	Indicator	Item No.	Number of Item
(1)	(2)	(3)	(4)	(5)
1	Appearance	Appropriate color selection	1,5	2
		Layout suitability	2,3	2
		Accurate use of letters	4,7	2
		Learning media design	6,8	2
2	Convenience	Ease of accessing media	9,10	2
		Clarity of instructions for use	11,12	2
3	Usefulness	Ease of achieving learning goals	13,14	2
		Ease of independent learning	15	1
		Total		**15**

Table 3. Material Expert Instrument Grid

No	Aspect	Indicator	Item No.	Number of Item
(1)	(2)	(3)	(4)	(5)
1	Curriculum	Learning objectives	1,2,3,4	4
		Material delivery	5,6,7,8,9	5
2	Material	Material relevance	10,11	2

No	Aspect	Indicator	Item No.	Number of Item
(1)	(2)	(3)	(4)	(5)
		Material selection	12,13,14,15	4
		Total		**15**

Table 4. Practitioner Response Instrument Grid

No	Aspect	Indicator	Item No.	Number of Item
(1)	(2)	(3)	(4)	(5)
1	Material	Appropriateness of material to learning objectives	1,2	2
		Presentation of exercises in media	3,4	2
		Delivery of material and use of language in media	5,6,7	3
2	Display	Attractiveness and neatness of media content appearance	8,9,12	3
		Readability of writing and clarity of use of images	10,11	2
3	Operation	Ease of use/instructions for use	13,14,15	3
		Total		**15**

Table 5. Student Response Instrument Grid

No	Aspect	Indicator	Item No.	Number of Item
(1)	(2)	(3)	(4)	(5)
1	Material	Suitability of material to learning objectives	1,2	2
		Presentation of exercises in media	3,4	2
		Material delivery and use language in media	5,6,7	3
2	Display	Attractiveness and neatness of media content display	8,9,12	3
		Readability of writing and clarity of use of images	10,11	2
3	Operation	Ease of use/instructions	13,14,15	3
		Total		**15**

3. RESULT AND DISCUSSION

Result

The purpose of this research is to develop digital fun-thinking media to improve the learning outcomes of third-grade elementary school students in the growth and development of living things. This digital fun thinker media development research was carried out in five stages, in accordance with the ADDIE development model: analysis, design, development, implementation, and evaluation. The development of digital fun thinker learning media was carried out using the ADDIE model, starting with the analysis stage. **First**, the analysis of third-grade students' characteristics shows that they are at the concrete operational stage and prefer interactive, digital game-based learning. The curriculum analysis was conducted by referring to the K13 curriculum, specifically on the theme "Growth and Development of Living Things" for the subjects of PPKn, Indonesian, and Mathematics, to ensure the suitability of the material. Based on interviews, teachers tend to use online video, but the use of digital media remains limited. The digital fun thinker media was designed by paying attention to aspects of material, images, sound, language, and colour to make it attractive and easy for students to understand. The analysis of facilities and infrastructure shows that SD N 1 Baktiseraga has adequate facilities, including laptops and supporting devices, to support the implementation of digital learning media. Thus, this media is expected to increase student interest in learning and support more interactive learning. **Second**, in the design stage, the material, learning objectives, and digital fun thinker media were determined. The material used was "Growth and Development of Living Things," which is suitable for third-grade elementary school students. The material was designed to be relevant, engaging, and interactive to facilitate understanding of basic concepts. This media consists of three main parts: an introduction, practice questions, and a conclusion. The introduction presents the cover and material instructions. The practice questions test students' understanding, and the conclusion displays the results and scores. The design includes content design, character selection, and storyline to create fun and practical learning. **Third**, after the digital fun thinker media design stage, media expert tests and material expert tests are conducted to obtain input and suggestions for the digital fun thinker media to be developed. Improvements are made based on the input and suggestions developed. Improvements are made based on the input and suggestions provided, in the hope of achieving optimal money-learning media. The media development stage involves turning the design into a real product. The following is the development of digital fun thinker learning media.

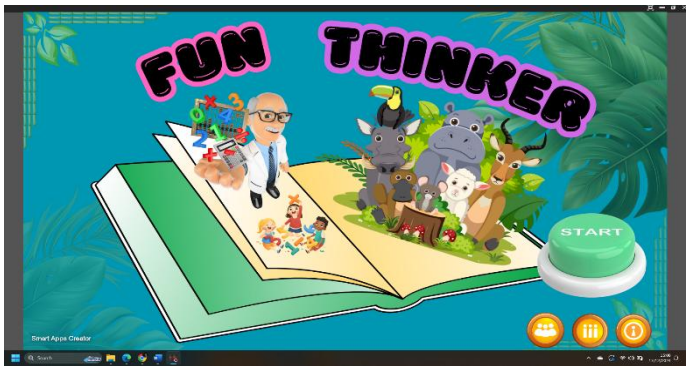

Figure 1. Begining of the Fun ThinkerGame

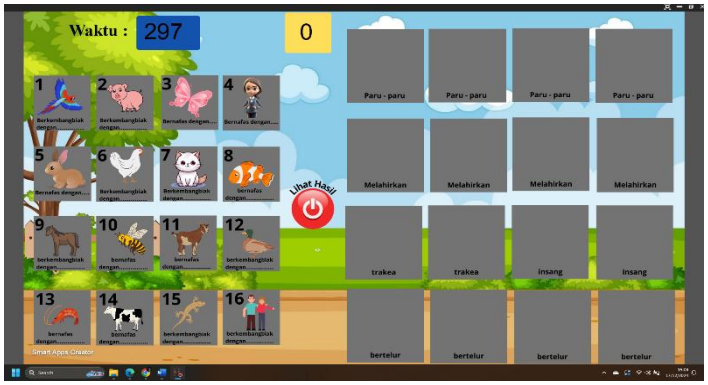

Figure 2. Contents of the Fun Thinker Digital Game

Figure 3. Fun Thinker Digital Game Conclusion

Fourth, the implementation phase involves applying the learning media to third-grade students at Baktiseraga Public Elementary School. This phase aims to determine the effectiveness of the developed digital fun thinker learning media. The **fifth** evaluation stage was conducted by administering pretest and posttest questions to third-grade elementary school students. The evaluation stage was conducted to assess the quality of the Fun Thinker digital learning media and to determine whether it impacted student learning outcomes.

Table 1. Material Expert Validity Results

Item	Evaluation		S1	S2	$\sum s$	n(c-1)	V	Category
	I	II						
Item 1-15	65	72	50	57	107	120	0.891667	High

Table 2. Media Expert Validity Results

Item	Evaluation		S1	S2	$\sum s$	N(c-1)	V	Category
	I	II						
Item 1-15	72	72	57	57	114	120	0.95	High

From these results, it can be seen that the assessment of media experts 1 and 2 on the digital fun thinker learning media obtained an achievement level of 0.95 for both media experts and was included in the very high range, these results stated that the media expert's response was at a very high predicate/qualification, meaning that this digital fun thinker learning media has excellent qualifications.

Table 8. Results of Normality Test

Tests of Normality							
	Class	Kolmogorov-Smirnov			Shapiro-Wilk		
		Statistic	df	Sig.	Statistic	df	Sig.
Science learning outcomes	Pretest	0.119	31	0.200	0.957	31	0.245
	Postest	0.090	31	0.200	0.987	31	0.968

Based on the results above, the pre-test significance value was 2.45, and the post-test significance value was 9.68. From these results, it can be seen that if the sig value is > 0.05, the data are usually normally distributed, whereas if the sig value is < 0.05, the data are not normally distributed. These results indicate that the significance value in both data groups is greater than 0.05 (5% significance level). Based on this, the data is usually distributed.

Table 9. Results of Homogeneity Test

Test of Homogeneity of Variances					
		Levene Statistic	df1	df2	Sig.
Science llearning outcomes	Based on Mean	7.965	1	59	0.006
	Based on Median	7.886	1	59	0.007
	Based on Median and with adjusted df	7.886	1	54.346	0.007
	Based on trimmed mean	7.961	1	59	0.007

Based on the results above, the homogeneity test indicates a mean of 0.06. In the homogeneity test, if the sig. Value is > 0.05, then the data distribution is homogeneous; otherwise, the significance. If the value is < 0.05, the data distribution is not homogeneous. From these results, it is evident that 0.06 > 0.05, indicating that the data distribution is homogeneous.

Table 10. Hypothesis Test Results

Paired Samples Test									
		Paired Differences					t	df	Sig. (2-tailed)
		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference				
					Lower	Upper			
Pair 1	Pretest -Post test	-15.032	14.979	2.690	-20.527	-9.538	-5.588	30	0.000

Based on the results above, the significance value is 0.000. If the sig value < 0.05, then there is a significant difference between before and after using digital fun thinker learning media on the science learning outcomes of the growth and development of living things material for grade III of SD Negeri 1 Baktiseraga. Meanwhile, the sig value is> 0.05. In that case, there is no significant difference between before and after using the digital fun thinker learning media on the science learning outcomes of the growth and development of living things material for grade III of SD Negeri 1 Baktiseraga. From this, it is concluded that 0.000 < 0.05, indicating a significant difference between before and after using the digital fun thinker learning media on the science learning outcomes of the growth and development of living things material for grade III of SD Negeri 1 Baktiseraga.

Discussion

The product developed in this research is a digital fun-thinking media for the material on the growth and development of living things, aimed at improving science learning outcomes in grade III of elementary schools. This media is designed to make it easier for students to understand and absorb the material presented. In addition, this media can also assist teachers in delivering learning materials, especially about the growth and development of living things. This digital fun-thinking media is used with third-grade students studying the growth and development of living things. This digital media can be accessed on a device that contains various questions, each answered by matching it to its appropriate answer. This method encourages students to be more active in the learning process. The digital fun thinker media consists of several exercises, each with 16 questions on the left and answers on the right. This media features an attractive appearance, a diverse colour palette, and pleasant background music to support an interactive learning atmosphere. In addition, this media has been equipped with instructions for use to make it easier for students and

teachers to operate it. Thus, digital fun-thinking media is expected to increase students' interest in learning and their understanding of the material they are studying.

Based on the research conducted, the development of digital fun thinker media to improve science learning outcomes for third-grade elementary school students involves a design approach using the ADDIE model (Analyse, Design, Development, Implementation, Evaluation). The ADDIE model is systematic and easy to apply, producing creative, efficient, and effective products. The Analyse stage involves analysing student characteristics, the curriculum, media, and infrastructure. The Design stage includes media design by creating designs, determining characters, storylines, and so on. The Development stage involves developing the comic design. Next, tests are carried out by material experts, media experts, practitioners, and students. The media test is carried out by providing assessment sheets to experts, practitioners, and students. The Implementation stage involves implementing digital fun-thinking learning media for third-grade students at SD Negeri 1 Baktiseraga. The Evaluation stage is carried out by administering pre- and post-tests to third-grade students to determine the effect of the digital fun thinker learning media on students' science learning outcomes. Using the ADDIE model, this study shows that the developed learning media can significantly improve student learning outcomes and provide a more engaging, interactive learning experience (Fadilah et al., 2022).

Based on the research conducted, the digital fun-thinking learning media have demonstrated excellent validity. This can be seen from the results of research by material experts and media experts. From the perspective of learning materials, the digital fun thinker learning media has demonstrated excellent validity, with an expert rating of 0.89 (very high). These results indicate that digital fun-thinking learning media are worthy of implementation in the learning process. This is supported by the material's appropriate level of difficulty for students' cognitive development, clear sources, material that attracts students' interest in learning, and a sequential, clear presentation with interesting stories. In addition, the language used is appropriate to students' characteristics and uses effective sentence structure so that students can easily understand the material. In terms of learning media, Fun Thinker Digital achieved excellent validity with a rating of 0.95 (very high) from media experts. This is supported by the attractive appearance of Fun Thinker Digital, which is full of images easy for students to understand, features attractive colours, and is accompanied by music. Furthermore, the suitability of the media illustrations to the learning material can facilitate students' understanding. Based on this, Fun Thinker Digital is suitable for use in the learning process. The development of the Fun Thinker digital learning media also considers practicality in its use. Teachers and students use this Fun Thinker digital learning media. Teachers use this learning media to teach students, and students use it to learn. In terms of practicality, the Fun Thinker digital learning media achieved practicality levels of 96.67% from practitioners' responses, 92.33% from students in individual tests, and 98.18% from students in small-group tests. This is supported by the transparent material, the level of difficulty appropriate to students' cognitive development, and the engaging delivery. In addition, using easy-to-understand language and an attractive media display for students makes learning more enjoyable. This indicates that the Fun Thinker digital learning media has received an excellent predicate/qualification for use in learning. For teachers/practitioners, the Fun Thinker digital learning media can facilitate the delivery of material to students, presented in a learning-by-play format that aligns with students' characteristics. In addition, the Fun Thinker digital learning media can also increase students' interest in learning and can be used repeatedly. Meanwhile, for students, the Fun Thinker digital learning media provides a fun atmosphere. During class, students are very enthusiastic to participate because all third-grade students at SD Negeri 1 Baktiseraga enjoy and are interested in learning with the Fun Thinker digital media. In fact, all students are focused on listening to the material presented and playing interactive games on the Fun Thinker digital media. The benefits of this media will increase seriousness, curiosity, and activeness in learning.

Student learning outcomes in the implementation of digital fun thinker learning media affect students' science learning outcomes. This is supported by the study's results, which show a significant. <0.05, namely $0.000 < 0.05$, so it is concluded that there is a significant influence of using digital fun thinker learning media before and after on science learning outcomes regarding the material properties of objects and their changes in class III of SD Negeri 1 Baktiseraga. Based on these results, the use of digital fun-thinker learning media can help students understand the subject matter more easily and enjoyably, thereby increasing their interest in learning and affecting their science learning outcomes. In addition, the material is presented in a conversational style commonly used in everyday life. The advantage of this digital fun thinker learning media compared to other fun thinker media is that it has been developed from a concrete media form into an interactive digital media. Media containing images can be attractive and easy for students to understand, thus appealing to their visual preferences (Damitri, 2020). In addition to the existing images, colourful, varied visualisations with characteristics of elementary school students (Wulandari et al., 2020) . Fun thinker learning media is designed to engage students' right- and left-brain intelligence in a structured time frame through interactive and creative activities. In its use, this media is equipped with a time limit for gameplay that aims to improve students' focus, concentration, and decision-making abilities during learning (Daryanes & Ririen, 2020). This time limit feature also helps students learn to manage their time well, thereby increasing the effectiveness of more focused and enjoyable learning (Inggritiya et al., 2024). This digital media can be accessed on laptops and Android smartphones anytime, anywhere with internet access. Laptops and smartphones are becoming increasingly sophisticated and can be utilised for learning (Azizah et al., 2023). Challenges in developing Fun Thinker media include several factors that must be considered to ensure effective use in learning. First, media development requires creative ideas to produce engaging, enjoyable content for elementary school children, keeping them engaged in the learning process (Khoriyah & Muhid, 2022). Furthermore, developing this media requires considerable time and effort, as every element from the material to the design must be

tailored to students' cognitive development. Colour selection is a challenge, as it must attract attention without disrupting children's concentration (Sundari & Zahro, 2021). Similarly, audio must be tailored to elementary school children's tastes to ensure they can comfortably follow the material. Furthermore, the images in the media must be simple and easy to understand so students can easily connect them to the concepts being taught (Ramadanti & Arifin, 2021). All of these factors must be carefully considered to ensure Fun Thinker media provides a fun and practical learning experience for students.

4. CONCLUSION

This research successfully developed a digital fun thinker material on the growth and development of living things to improve science learning outcomes for third-grade elementary school students. This media has high validity, excellent practicality, and has been proven to attract students' attention through interactive, adventure-themed designs. The digital fun-thinking learning media are declared valid, practical, and effective for improving student learning outcomes. The validity of this media is very high, based on assessments of 0.89 by material experts and 0.95 by media experts. This media is also considered practical, with positive responses from practitioners (96.67%), individual student trials (92.33%), and small group trials (98.18%). In addition, this media is proven to be effective in improving student learning outcomes, indicated by the results of the effectiveness test with a significance value of 0.000, which is smaller than the 5% significance level, so there is a significant influence before and after the use of this media on the science learning outcomes of third-grade students of SD Negeri 1 Baktiseraga.

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