

**THE EFFECT OF TOOTH PAIN RELIEF MATERIAL SCRAPBOOK ON THE
KNOWLEDGE AND BEHAVIOR CRITERIA OF PREVENTING TOOTH
CALES FOR STUDENTS OF PUBLIC ELEMENTARY SCHOOL CILANDAK
TIMUR 03 SOUTH JAKARTA**

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Abstract

This study aimed to determine the effect of scrapbook media on the knowledge and behavior criteria of students before and after the dental health learning process. This type of research is quantitative research with experimental methods used is quasi-experimental or quasi-experimental with the nonequivalent pretest-posttest control design groups. The population in this study were fourth-grade students at State Elementary School 05 Cilandak Timur, South Jakarta. The sample is a small part of the population that is taken according to certain procedures to represent the population. In this study, the researcher used a Stratified Random Sampling type random sampling technique which the researcher carried out to produce a sample of 4th-grade students in the morning and IV in the afternoon with state school status. The results were that the fourth-grade students from Public Elementary School 05 Cilandak Timur were the control class, while the fourth-grade students from Public Elementary School 03 were the treatment class. In this study, the instrument used was a test sheet in the form of multiple-choice questions to assess the knowledge criteria consisting of 25 multiple-choice questions regarding dental health. The grid of knowledge test instruments includes C4 (Analyzing) to C6 (Creating). Data collection techniques used are pre-test and post-test. The data analysis technique in this study used descriptive statistical analysis, prerequisite test analysis, and inferential statistical analysis.

Keywords: Thematic Dental, Health, Scrapbook Media, Learning.

Abstrak

Penelitian ini bertujuan untuk mengetahui pengaruh media scrapbook terhadap kriteria pengetahuan dan perilaku siswa sebelum dan sesudah proses pembelajaran kesehatan gigi. Jenis penelitian yang digunakan adalah penelitian kuantitatif dengan metode eksperimen yang digunakan adalah eksperimen semu atau eksperimen semu dengan desain nonequivalent pretest-posttest control group. Populasi dalam penelitian ini adalah siswa kelas IV SDN 05 Cilandak Timur Jakarta Selatan. Sampel adalah sebagian kecil dari populasi yang diambil menurut prosedur tertentu untuk mewakili populasi. Dalam penelitian ini peneliti menggunakan teknik Stratified Random Sampling jenis random sampling yang peneliti lakukan untuk menghasilkan sampel siswa kelas 4 pagi dan kelas IV sore hari yang berstatus sekolah negeri. Hasilnya

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siswa kelas IV SDN 05 Cilandak Timur menjadi kelas kontrol, sedangkan siswa kelas IV SDN 03 menjadi kelas perlakuan. Pada penelitian ini instrumen yang digunakan adalah lembar tes berupa soal pilihan ganda untuk menilai kriteria pengetahuan yang terdiri dari 25 soal pilihan ganda tentang kesehatan gigi. Kisi-kisi instrumen tes pengetahuan meliputi C4 (Menganalisis) hingga C6 (Mencipta). Teknik pengumpulan data yang digunakan adalah pre-test dan post-test. Teknik analisis data dalam penelitian ini menggunakan analisis statistik deskriptif, analisis uji prasyarat, dan analisis statistik inferensial. Kata Kunci : Tematik Gigi, Kesehatan, Media Scrapbook, Pembelajaran.

INTRODUCTION

The World Health Organization states that health is the most important part of human life, physically and spiritually healthy. Health needs to be considered in addition to general body health, dental and oral health which can affect overall body health. Dental caries or cavities are dental and oral health problem that is often experienced by almost all people in Indonesia.¹ This is evidenced by the results of Basic Health Research conducted by the Ministry of Health of the Republic of Indonesia in 2013 and 2018, showing that the percentage of the population who had dental and oral problems increased from 25.9% to 57.6%. The prevalence of caries tends to increase with increasing age, which means that there is a tendency for dental health status to decrease with increasing age.²

The 2013 curriculum, often called thematic learning, greatly facilitates teacher performance in the learning process because one of the characteristics of thematic learning is the child-centered learning process. According to Winarni integrated thematic learning is integrated learning that can provide a variety of meaningful experiences to students by associating several subjects using themes, in this year's activity, the theme is dental health. In connection with the learning process, there are learning outcomes that will be obtained by the students themselves.³ According to Rusman, learning outcomes are various experiences gained by students starting from the criteria of knowledge and attitudes in the learning process. One factor that influences learning outcomes is the teacher or facilitator; on this occasion, the researchers used the media. According to Chusni, learning media includes messages from learning resources to recipients of learning messages (students) and tools to assist teachers in learning.⁴ Media selection includes several types: graphic media, three-dimensional media, audio media, projection media, and the environment. Here the researcher chooses to use graphic or visual media. In this case, the

¹ Lee, Timothy J., Ji-Sook Han, and Tae-Gyou Ko. "Health-Oriented Tourists and Sustainable Domestic Tourism." *Sustainability* 12.12 (2020): 4988.

² Amalia, Rosa, et al. "Indonesia: Epidemiological Profiles of Early Childhood Caries." *Frontiers in Public Health* 7 (2019): 210.

³ Cade, June, Francis Wardle, and Jan Otter. "Quality Early Care and Learning: Exploring Child-Centered Pedagogy A Qualitative Multi-Case Study." *Cogent Education* 9.1 (2022): 2144589.

⁴ Murti, Warda, and Sri Maya. "The Effectiveness of Environmental Learning Model on Students' motivation and Learning Outcomes." *Lentera Pendidikan: Jurnal Ilmu Tarbiyah dan Keguruan* 24.2 (2021): 255-263.

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researcher chose graphic/visual media, namely scrapbooks, which would be used in teaching dental health because they matched the characteristics of elementary school-age children still in the concrete operational stage (Piaget's theory).⁵

Scrapbook comes from the English "scrap," which means leftovers or pieces, and "book" means book. A scrapbook is the art of sticking to a medium (usually paper), starting from sticking photos, original materials from the natural environment, cutouts, and others according to creativity.⁶ In addition, a scrapbook can also contain important notes related to pictures, words, or even lesson plans.

Through the use of scrapbook media, which is packaged in book form by combining various pieces of pictures as well as explanations, it is hoped that it can attract the attention and activeness of students so that it will be easier for them to understand the material being taught. In line with this, Dewi & Yuliana, in their research journal, concluded that students' responses to scrapbook media were in the very good category.⁷ Then other relevant research was conducted by Rosihah and Pamungkas in the *Madrasah Ibtidaiyah* journal. The results showed that scrapbook learning media scored very decent or very good criteria for learning media. There are also results of research conducted by Damayanti, which discusses the effect of Scrapbook media on student learning outcomes or, in another sense, a conclusion that there is a significant influence of scrapbook media on learning outcomes in the material being taught.⁸

Some of the problems in the learning process tend to impact students' activeness and mastery of subject matter, so this can affect student learning outcomes themselves. Knowing the field conditions regarding this matter, researchers examined the problem with alternative actions, namely the use of scrapbook media in learning Dental Health material, namely recognizing and learning the benefits of traditional herbal ingredients that are easily obtained from the surrounding environment or the home environment that can be used as first aid before going to the dental clinic.⁹ There are also several advantages of scrapbook media: attractive, realistic, can overcome

⁵ Hidayati, Niswatin Nurul. "Telling About Islamic Heroes and Female Leaders: Ways of Implanting Self-Concept, Moral, and Religious Value on Children." *Auladuna: Jurnal Prodi Pendidikan Guru Madrasah Ibtidaiyah* 1.2 (2019): 1-14.

⁶ Hardiana, Iva. *Terampil Membuat 42 Kreasi Mahar Scrapbook*. Gramedia Pustaka Utama, 2015.

⁷ Chen, Cheryl Wei-yu. "Composing Print Essays versus Composing Across Modes: Students' Multimodal Choices and Overall Preferences." *Literacy* 55.1 (2021): 25-38.

⁸ Putri, Annisa Ramadina Andani. "The Development of Audio-Visual-Based Learning Media through Canva Application for Eighth Grade Students at SMP N 4 Pekanbaru." *Jurnal Ilmiah Pendidikan Profesi Guru* 5.2 (2022).

⁹ Sukardjo, Moch, and Mohamad Salam. "Effect of Concept Attainment Models and Self-Directed Learning (SDL) on Mathematics Learning Outcomes." *International Journal of Instruction* 13.3 (2020): 275-292.

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time and space limitations, easy to make, easy to obtain materials, and designed according to the material to be discussed or studied.¹⁰

In this study, the researcher took dental health learning materials for fifth-grade students by exploring new knowledge for students who had packed it into a scrapbook. They also need to know that scrapbook art was invented in England in the 15th century and was originally used to compile poetry or beautiful words, but over time, scrapbooks can be used as learning media for students in a class.¹¹

This study also only examines learning outcomes to obtain knowledge criteria based on pre-test and post-test scores to distinguish this research from other studies, namely learning outcomes of knowledge criteria are taken from C4 (Analyzing) to C6 (Creating/creating yourself) or by using HOTS category (High Order Thinking Skill) or high thinking skills. The limitation of the problem in this study is the effect of using scrapbook media on learning dental health material on the criteria of knowledge and attitudes of students in the selected class of Elementary School 03 Cilandak Timur, South Jakarta. Knowing the advantages of scrapbook media that can overcome the problem of limited learning media motivated researchers to research with the title "The Effect of Toothache Reliever Potion Material Scrapbook on Knowledge and Behavior Criteria to Prevent Tooth Cavities for Students of Elementary School 03 Negeri Cilandak Timur Sub-District".

LITERATURE REVIEW

A. Scrapbook

Scrapbook comes from two words: scrap (leftovers) and book (books or sheets). Scrapbook is the art and technique of decorating a personal or photo album to look more beautiful. Scrapbooks are not just sticking to drawing paper but also contemplating expressions with the harmony of colors, motifs, and shapes. The art of scrapbook was invented in England in the 15th century, which comes from the word scrap, meaning leftovers, originally to compile recipes, poems, and beautiful words.¹² In its development, scrapbook media and materials have

¹⁰ Baeng, Benediktus. "Development of Contextual Elektronik Learning Module in Sociology at Senior High School." *Journal of Education Research and Evaluation* 6.3 (2022).

¹¹ Rinaldi, Jen. "What Survivors See: Creative Condemnations of Total Institutionalization." *Emotion, Space and Society* 40 (2021): 100819.

¹² Couvrat Desvergnés, Amélie, et al. "Dutch or Iranian? Technical Study of a Seventeenth-Century Painting on Paper from Gesina Ter Bosch's scrapbook." *Heritage Science* 9.1 (2021): 1-24.

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become more varied. Scrapbook learning media is a handmade product made of paper. This media is effective because it can give students a real and interesting impression.¹³

In its development, the definition of a scrapbook, which was originally just the art of sticking photos or pictures on paper media, became a scrapbook, which is not only in the form of pasted pictures on paper but can include the addition of some information or material that can be opened and closed with the creative power and imagination of the author. This description contains material that can build student knowledge concepts, besides that, the author designed a larger size than the usual temple book.¹⁴

It can be concluded that a scrapbook is an album-like object for collecting documents and writing. But the interesting side of the scrapbook is that it can be used as a learning medium as a silent visual media that contains pictures and is given a description or material. So this makes it easier for students to remember, recognize and relate facts and concepts.¹⁵

B. Dental Caries

Cavities (dental caries) are a disease of the hard tissue of the teeth which is characterized by tissue damage, starting from the tooth surface and extending towards the pulp caused by carbohydrates left in the mouth and microorganisms that are not cleaned immediately.¹⁶

Caries is the result of the interaction of bacteria on the tooth surface, plaque or biofilm, and diet (particularly carbohydrate components which can be fermented by plaque bacteria into acid, especially lactic and acetic acids) so that demineralization of the hard tissue of the teeth occurs and requires sufficient time for this to occur. Caries can occur if there are four factors together. These factors are cariogenic bacteria, vulnerable tooth surfaces, availability of nutrients to support bacterial growth, and sufficient time to convert nutrients into acid.¹⁷

According to Newburn in Suwelo, there are three main factors: microorganisms, teeth and saliva, substrate, and time as additional factors.

¹³ Aljukhadar, Muhammad, Sylvain Senecal, and Charles-Etienne Daoust. "Using Recommendation Agents to Cope with Information Overload." *International Journal of Electronic Commerce* 17.2 (2012): 41-70.

¹⁴ Corrigan-Kavanagh, Emily, David M. Frohlich, and Caroline Scarles. "Re-invigorating the Photo Album: Augmenting Printed Photobooks with Digital Media." *Personal and Ubiquitous Computing* (2022): 1-14.

¹⁵ Quanchi, Max. "'Record of my journeyings in the Coral Sea': Randolph Bedford's 1906 album of the Solomon Islands." *Journal of New Zealand & Pacific Studies* 8.1 (2020): 39-56.

¹⁶ Mosaddad, Seyed Ali, et al. "Oral Microbial Biofilms: An Update." *European Journal of Clinical Microbiology & Infectious Diseases* 38 (2019): 2005-2019.

¹⁷ Sedghi, Lea, et al. "The Oral Microbiome: Role of Key Organisms and Complex Networks in Oral Health and Disease." *Periodontology 2000* 87.1 (2021): 107-131.

a) Microorganisms

The bacteria that cause caries are very large. The most dominant bacteria in dental caries is *Streptococcus mutans*. These bacteria are very cariogenic because they can make acid from carbohydrates which can be harmed, as a result, the bacteria are helped to stick to the teeth and stick to one another.¹⁸

Streptococcus mutans plays a role in the initial process of caries which first enters the outer layer of enamel, and then *Lactobacillus acidophilus* takes over the role in caries which is more damaging to teeth. Microorganisms stick to the teeth with plaque. Plaque consists of microorganisms (70%) and intercellular material (30%). A plaque will grow if there are carbohydrates, while caries will occur if there is plaque and carbohydrates.¹⁹

b) Teeth and saliva

According to Kidd and Bechal, a plaque containing bacteria begins cavities' formation. Dental areas that make it easier for plaque to stick to cavities are: 1) Pits and fissures on occlusal surfaces of molars and premolars, buccal pits of molars, and incisor palatal pits; 2) Smooth surface in the approximal area slightly below the point of contact; 3) Email on the edge of the neck area of the teeth; 4) Exposed root surface; 5) The edges of the filling are especially uneven; and 6) Teeth surfaces are adjacent to dentures and bridges.²⁰

Saliva functions as a lubricant (the ability of saliva to maintain a constant pH), cleanser, anti-solvent, and anti-bacterial. Saliva is also the first defense against caries and also plays another important role, namely in the process of forming dental plaque, besides that, saliva is also a good medium for the life of certain microorganisms associated with caries.²¹

c) Substrate

According to Newburn in Suwelo, the substrate is a mixture of fine food and drinks consumed daily that sticks to the surface of the teeth. This substrate affects cavities locally in the mouth. The staple foods of humans are carbohydrates, fats, and proteins.²²

Carbohydrates contained in several foods containing sugar will rapidly lower the plaque's pH to a level that can cause the demineralization of enamel. A plaque will remain acidic for some

¹⁸ Deglovic, Juraj, Nora Majtanova, and Juraj Majtan. "Antibacterial and Antibiofilm Effect of Honey in the Prevention of Dental Caries: A Recent Perspective." *Foods* 11.17 (2022): 2670.

¹⁹ Benahmed, Asma Gasmi, et al. "A Review on Natural Teeth Whitening." *Journal of Oral Biosciences* 64.1 (2022): 49-58.

²⁰ Chintyasari, Shaula, Isnur Hatta, and I. Wayan Arya Krishnawan Firdaus. "The Effect of Dental Health Education Using Music in Decreasing Plaque Index of Intellectually Disabled." *Dentino: Jurnal Kedokteran Gigi* 5.1 (2020): 58-65.

²¹ Wang, Kun, et al. "Human Salivary Proteins and Their Peptidomimetics: Values of Function, Early Diagnosis, and Therapeutic Potential in Combating Dental Caries." *Archives of Oral Biology* 99 (2019): 31-42.

²² Rowińska, Ilona, et al. "The Influence of Diet on Oxidative Stress and Inflammation Induced by Bacterial Biofilms in the Human Oral Cavity." *Materials* 14.6 (2021): 1444.

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time, and it will take 30-60 minutes to return to a normal pH of about seven. Sucrose is the most widely consumed sugar, so sucrose is the main cause of cavities.²³

d) Time

According to Newburn in Suwelo, time is the speed at which cavities form and the duration and frequency of substrate sticking to the tooth surface. Cavities are a chronic disease, and the damage continues over months or years.²⁴

RESEARCH METHOD

The type of research used is an experiment with a quantitative approach, where the data obtained is in the form of numbers, while the research uses a quasi-experimental design (pseudo-experimental) with the form used, namely nonequivalent control group design.²⁵ The population in this study were fifth-grade students at Public Elementary School 03 Cilandak Timur, South Jakarta. In this study, the instrument used was a test sheet in the form of multiple choice questions to assess the respondent's knowledge criteria, consisting of 35 multiple choice questions (Yes and No) while assessing attitudes during the learning process of the material by observing as well.

RESULT AND DISCUSSION

A. Research Result

This research was used in the experimental class, namely class VB of Elementary School 03 Cilandak Timur, South Jakarta, which aims to determine differences in learning outcomes in dental health material between the experimental class and the control class (without scrapbook media) in the learning process of the respondents. The scrapbook media in this study uses material about traditional ingredients that are easy for respondents to get to know better, learn about the benefits of each ingredient and be able to show how to mix it according to the title chosen in the 2022 research element. During the learning process, the responsiveness to the scrapbook media was very good, as indicated by the activeness of the respondents in asking and answering dental health material questions. In contrast to the control class, which did not use scrapbook media, the mediocre students seemed less enthusiastic and less active than the intervention class.

The following is a table of the frequency distribution of the characteristics of the respondents (A and B) as in table 1:

²³ Atkinson, Fiona S., et al. "The Impact of Carbohydrate Quality on Dental Plaque pH: Does the Glycemic Index of Starchy Foods Matter for Dental Health?." *Nutrients* 13.08 (2021): 2711.

²⁴ Meyer, Jeffrey M., Nicole Bichir, and Sheridan Langford. "Common Dental Issues in Pediatrics." *Primary Care: Clinics in Office Practice* 48.3 (2021): 429-442.

²⁵ Burhan, Imron, Nurul Afifah, and Sri Nirmala Sari. *Metode Penelitian Kuantitatif*. Insan Cendekia Mandiri, 2022.

**Table 1. Frequency Distribution of Respondent Characteristics of Class A and B Classes
Based on Gender**

No	Gender	Number of Respondents	Percentage (%)
1	Male	31	50
2	Female	31	50
Total		62	100

Table 1 shows that class A and class B are male, as many as 31 people (50%) or the same number are female, namely 31 people (50%). Next is a table containing the pre-test and post-test results for the scrap (VB) intervention class. The following are the contents of the table:

Table 2. Scrap Intervention Class (VB) Pre-test and Post-test Results Sheet

No	Respondent Name	<i>Pre-test</i>	<i>Post-test</i>
1	Ahmad Bagus Setiawan	25	80
2	Aleesya Dania Maisara	20	60
3	Atiqa Alviena Fithri	25	60
4	Dafi Omar Mahasin	30	60
5	Danar Rizky Putra	20	60
6	Dandhi Muli Rizqi	20	55
7	Dzakky Alif Abiyyu	20	55
8	Efrans Simorangkir	30	60
9	Hilwa Nailus Sa'adah	55	90
10	Kaino Jabar Allefero	20	55
11	Khairunnisa Najlaa	20	60
12	Khanza Queenara. E	36	55
13	Mochammad Fikri Haikal	15	55
14	Muhammad Danish Zafran	25	60
15	Muhammad Ilyas Saputra	20	70
16	Muhammad Sachio. A	40	75
17	Muhammad Wira Aqil. S	30	55
18	Nabila Denita Putri	50	90

19	Nayshila Kasi Putri	55	80
20	Nevisya Khairunisa. D	25	60
21	Nur Sita Kurniati	35	70
22	Queency Jasmine. P	60	90
23	Reza Wahyu Saputra	25	55
24	Satria Anugerah. A	35	55
25	Satrio Anugerah. A	25	60
26	Siti Shoviya	45	80
27	Stefani Christian Vina. B	40	60
28	Sulthan Nabil Fauzan	40	75
29	Syaqina Qamara Tiffany	60	80
30	Tiara Laila Riyadi	55	90
31	Zefanya Theodora Sinurat	35	90

Next is a table containing the pre-test and post-test results of the control or conventional class (VA). The following details the contents of the table:

Table 3. Pre-test and Post-test Class Control/Conventional (VA) Results Sheet

No	Respondent Name	<i>Pre-test</i>	<i>Post-test</i>
1	Adam Azhari	25	50
2	Alvino Rizqi Ramadhan	60	70
3	Aretha Putri Lysthia	25	50
4	Desak Putu Vidya Desta Maharani	55	70
5	Devin Cipta Nugraha	35	50
6	Devon Cipta Nugraha	30	50
7	Dewa Bagas Pradipta	50	70
8	Farid Rajab Rifa'i	40	55
9	Febi Auliawati	40	55
10	Gatan Pandu Pratama	55	70
11	Hana Humaira Arafat	55	70

12	Inayah	30	55
13	Indah Ramadhania	25	45
14	Intan Nur' Aini	50	70
15	Irsyad Dwi Putra	20	45
16	Kanaya Syafira Karunia	40	55
17	Malika Putri Alhesya	35	50
18	Mohammad Ghufron Ghassani	35	50
19	Muhamad Derry Pratama	35	55
20	Muhammad Dzaky Ramadhan	50	65
21	Muhammad Hafidz Ramadhan	80	90
22	Mutiara Nadia Syafitri	80	90
23	Navy Oktameino Muslimin	35	50
24	Raffasya Wira Pramudya	20	45
25	Ratu Bhetari Mountanna Karan	35	45
26	Refan Ghaniy Fatryanto	45	55
27	Ruruh Ghaissani Firda	35	50
28	Siholl Michael Junior	55	55
29	Soffiyanti	55	60
30	Tiara Salsabila Nur Radya	30	55
31	Zia Yunia Azzara	40	55

B. Research Discussion

Before conducting the research, the researcher carried out the research preparation stage, which included 1) conducting a preliminary study, 2) formulating a problem that had never been exposed to health material according to the research title using a scrapbook, 3) preparing media and research sites 4) compiling instruments 5) testing validity and reliability. The initial step taken by the researchers was to visit the location of Cilandak Timur Jakarta 03 Public Elementary School. This was done to observe the learning process of dental health material according to the research title and find that there were still pre-test values, including sufficient and insufficient knowledge criteria. Then the researchers conducted interviews with class teachers to collect the necessary information as complementary data for class respondents. Based on the observations of

the Lecturer team in this year's research element, the obstacle encountered was dental health learning material that required a lot of memorization and the active role of each student. Apart from that, as a solution for special media used for the teaching and learning process, the lecturer team has prepared a dental health scrapbook which includes traditional spices and concoctions to reduce the pain of cavities with creations that are very interesting and arouse curiosity of each respondent, to recognize, learn about and apply them for needs before going to the Puskesmas dental clinic, or afternoon practice clinic. Based on these problems, the research will be carried out to test the effect of scrapbook media on the pre-test results compared to the post-test of students in VA and VB classes at SD Negeri 03 Cilandak Timur, South Jakarta.

In this study, the media used was a scrapbook (scrapbook) which was made with a size of 50 × 50 cm because it was used classically because scrapbooks are visual media, which are media related to the sense of sight. After preparing the scrapbook media as learning media and determining where to research, the next step is to develop research instruments in the form of pre-test and post-test sheets. Next, the researcher conducted a validation. Below is a table regarding the results of the N-Gain Score analysis for the experimental and control groups.

Table 4. Results of the N-Gain Score Analysis for the Experiment Group and the Control Group

Group			
No	Experiment Class	No	Control Class
	N-Gain score (%)		N-Gain score (%)
1	73.33	1	33.33
2	50.00	2	25.00
3	46.67	3	33.33
4	42.86	4	33.33
5	50.00	5	23.08
6	43.75	6	28.57
7	43.75	7	40.00
8	42.86	8	25.00
9	77.78	9	25.00
10	43.75	10	33.33
11	50.00	11	33.33
12	29.69	12	35.71
13	47.06	13	26.67
14	46.67	14	40.00

15	62.50	15	31.25
16	58.33	16	25.00
17	35.71	17	23.08
18	80.00	18	23.08
19	55.56	19	30.77
20	46.67	20	30.00
21	53.85	21	50.00
22	75.00	22	50.00
23	40.00	23	23.08
24	30.77	24	31.25
25	46.67	25	15.38
26	63.64	26	18.18
27	33.33	27	23.08
28	58.33	28	0.00
29	50.00	29	11.11
30	77.78	30	35.71
31	84.62	31	25.00
Mean	52.93	Mean	28.44
Min	29.69	Min	00.00
Max	84.62	Max	50.00

Table 4 shows that the average percentage of the N-Gain score obtained in the experimental group was 52.93%, while the maximum value was 84.62%. Referring to the interpretation of the effectiveness of N-Gain by Hake (1999), it was concluded that the scrapbook media intervention was effective in increasing the learning outcomes of dental health materials for the knowledge and behavior criteria for preventing tooth cavities for respondents in class VB Public Elementary School 03 Kelurahan Cilandak Timur. In the control group, the average percentage of the N-Gain score obtained was 28.44%, and the maximum value was 50%. Referring to the interpretation of the effectiveness of N-Gain by Hake (1999), it was concluded that without the intervention of scrapbook media, the results were less effective in increasing the learning outcomes of dental health materials for respondents to improve knowledge and behavior criteria to prevent cavities.

The results of this calculation in another view are following Figure 1 in the following Bar Chart:

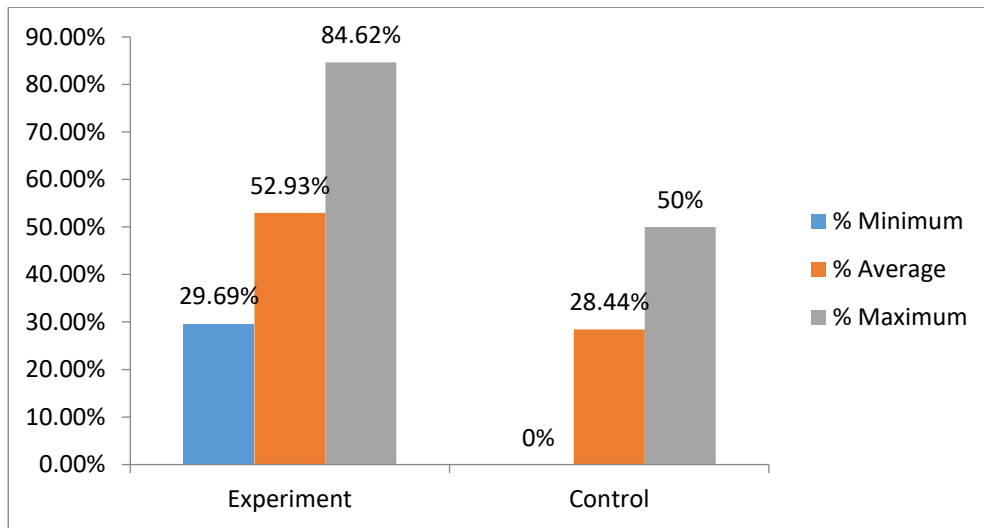


Figure 1. Bar Chart of N-Gain Score Analysis Results for the Experiment Group and the Control Group

To find out the significance of differences in dental health learning outcomes (percentage value of N-Gain score) in the experimental group compared to the control group, it can be followed by an analysis of the difference test between the two groups, as follows:

Table 5. Results of Data Normality Test Analysis with Shapiro Wilk

Group	ρ -value
Experiment	0.035
Control	0.145

Table 5 shows that the experimental group obtained a ρ -value = 0.035 < 0.05 so that the data was not normally distributed, while the control group obtained a ρ -value = 0.145 > 0.05, so the data was normally distributed. Thus the data did not meet the requirements for the statistical parametric independent t-test, so the Mann-Whitney non-parametric statistical test was performed.

Table 6. Results of Two-Group Difference Test Analysis with Mann-Whitney

Group	Mean	ρ -value	Z score
Experiment	52.93	0.000	5.803
Control	28.44		

Based on table 6 shows that to obtain a significance value of $p\text{-value} = 0.000 < 0.05$, it can be concluded that there is a significant difference in the learning outcomes of the knowledge and behavior criteria for preventing tooth cavities in the experimental group compared to the learning outcomes of knowledge and behavior criteria for preventing cavities in the control group. Because there is a significant difference, it can be concluded that using scrapbook media in learning dental health material is more effective in improving learning outcomes in the knowledge and behavior criteria for preventing cavities using scrapbook media than not using the media at all.

Table 7. Normalized N-Gain Test Results

Research Group	Average N-Gain Score	Category
Experiment	0.53	Medium
Control	0.28	Low

From the table above, it can be concluded that there was an increase in learning outcomes for dental health materials for respondents in the low category in the control class without using scrapbook media, namely 0.28, while in the experimental class, there was an increase in learning outcomes in the medium category from the use of scrapbook media, namely 0.53. So it can be concluded that using scrapbook media can improve the learning outcomes of respondents' dental health material higher when compared to learning with conventional methods on this material or can be described in the following diagram.

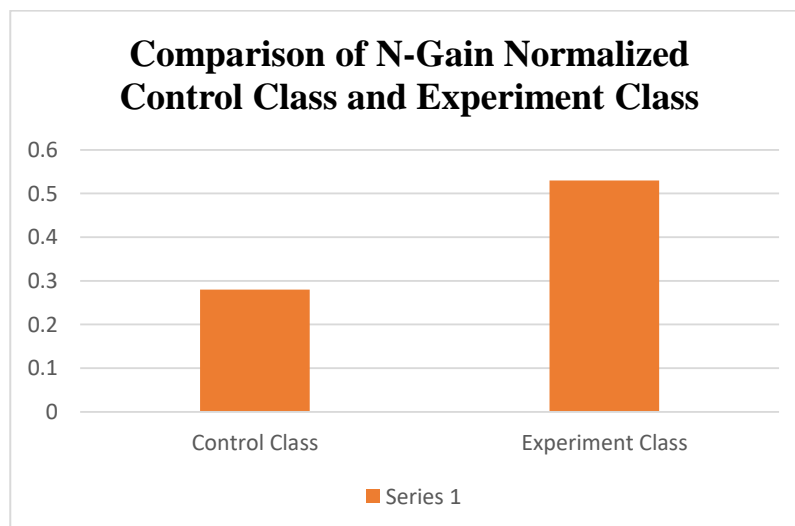


Figure 2. Comparison of N-Gain Normalized Control Class and Experiment Class

CONCLUSION

Based on the results of the research and discussion that have been described regarding the effect of scrapbook media on the learning outcomes of the dental health materials of the respondents (scrapbooks) on the learning outcomes of the respondents in the dental health material of class VB Elementary School 03 Jakarta; it can be concluded that there is effectiveness or significant influence from the intervention or after learning dental health materials using scrapbook media. This is proven from data processing, statistical analysis of the Mann-Whitney test using SPSS 22, then interpreting it and according to the results obtained from the Sig. (2-tailed) which is equal to 0.000, which means <0.05 , it can be concluded that H_a is accepted and H_o is rejected.

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