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## DEVELOPMENT OF THEMATIC DIGITAL COMICS FOR HEALTHY CHILDREN DURING THE COVID-19 PANDEMIC FOR PJOK LEARNING CLASS V ELEMENTARY SCHOOL STUDENTS IN PALEMBANG

**Bangkit Seandi Taroreh<sup>1\*</sup>, Desy Arisandy<sup>2</sup>**

<sup>1</sup>Sport Education, Faculty of Teacher Training, Education and Languages, Universitas Bina Darma, Palembang, Indonesia

<sup>2</sup> Psychology, Faculty of Psychology, Universitas Bina Darma, Palembang, Indonesia

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### Abstract

The research aims to: 1) develop thematic digital comics for healthy children during the Covid-19 pandemic for learning PJOK for Class V Elementary School students in Palembang, 2) to determine the effectiveness of product implementation. The research method uses quantitative research with the ADDIE development model approach. The research subjects consisted of 1 physical education learning technology expert, 1 learning psychology expert, 3 PJOK teachers and 30 elementary school fifth grade students. Quantitative data were collected through questionnaire instruments and observation guidelines. Data analysis used descriptive quantitative. The results of the research are 1) it has produced a thematic digital comic model for healthy children during the Covid-19 pandemic for Grade V Elementary School Students in Palembang, 2) the percentage of effectiveness is 87.73% so it is very feasible to use. The hope is that it will become an alternative choice of learning media for physical education, sports and health (PJOK).

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Corresponding address : Sport Education, Faculty of Teacher Training, Education and Languages, Universitas Bina Darma, Palembang, Indonesia

\*Corresponding email : [bangkitseanditaroreh@binadarma.ac.id](mailto:bangkitseanditaroreh@binadarma.ac.id)

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## INTRODUCTION

Learning media has an important role in the Physical Learning, Sports and Health (PJOK) process, especially during the Covid-19 pandemic. The hope is that the learning media can help PJOK teachers in delivering learning materials in class. The Covid-19 pandemic condition encourages various innovations in managing learning so that the competencies of the intended students are achieved.

One of the innovations that it offers is through digital comic learning media. The current development of comics has become illustrated reading material that is liked by children and adults. The novelty of this research is to make comics, which were originally a collection of illustrated paper containing short dialogues, converted into digital form which is no longer in paper form but turns into soft files that can be read via mobile phones, laptops or other supporting technology devices.

Digital comics are simple comics designed with images, sound and packaged into electronic media (Yuliana et al, 2017). One of the advantages of digital comics is that they are effective intermediaries in delivering learning information to facilitate understanding of abstract material into more concrete. The use of media in learning aims as a learning resource and is able to motivate student interest to improve learning outcomes (Hidayah and Ulva, 2017). The advantages of developing digital comics are that learning becomes more interesting because students can learn through audio (sound) and visual (image) elements. Where media with audio-visual elements is able to convey learning material to be clearer and easier to digest because students do not think abstractly (Hilmi, 2017). Able to describe events in a short time, convey information quickly

and easily, develop students' minds and participation, develop students' imaginations. Submission of material has a coherent storyline so that it is easy for students to understand and remember (Raneza & Widowati, 2020). With the implementation of this media development, the learning process becomes more meaningful (Nugraha, 2020).

Research first through literature study and researcher observation. The results of the literature study carried out obtained the following data: 1) Elementary school teachers were less than optimal in providing learning material, disruption of the learning process caused the expected learning objectives not to be achieved so that the material was incomplete, the use of learning media in online learning was not optimal, student assessments were also constrained by mere cognitive assessments (Sari, 2021), 2) online learning in PAUD has problems, namely limited mastery of technology, unstable internet network, very minimal variety of teaching materials, and unlimited working hours for teachers (Sakti, 2021).

Meanwhile, based on observations made by researchers, initial data was obtained at Elementary Schools (SD) in Palembang, South Sumatra as follows: 1) the covid-19 pandemic condition caused learning to be carried out online or assignments were carried out through whatsapp groups, 2) the covid-19 pandemic gave the only negative impact on student psychology is reduced interest in learning. This is because online learning at home that has been going on during the covid-19 pandemic seems boring, 3) the current situation during the covid-19 pandemic is in accordance with the mastery of basic competencies for class V, namely understanding and applying the concept of self-care and other people from

infectious and non-communicable diseases. contagious, 4) innovation is needed in managing learning so that the competence of the targeted students is achieved, namely through the development of thematic digital comic media for healthy children during the Covid-19 pandemic for Class V Elementary School Students.

Development research on relevant PJOK learning as a reference includes:

1. The level of early childhood education for the development of programmed physical activity has been provided through circuit games (Taroreh, 2017).
2. In particular, a kinesthetic-based manipulative physical activity program for children aged 6 years has also been developed (Taroreh & Wijaya, 2020).
3. Traditional games can be developed as athletic learning materials in elementary schools (Musiandi & Taroreh, 2020).
4. Development is carried out not only on learning materials but also on assessment instruments as an example of a performance assessment model for volleyball learning outcomes in elementary schools (Taroreh, 2012)
5. At the high school (SMA) level, the development of running learning through Flash Card media in high school has also been implemented (Nahar & Taroreh, 2020).

It is hoped that PJOK learning using digital comics will be packaged to be more meaningful so that it can connect a new phenomenon, namely the COVID-19 pandemic, in the structure of students' knowledge. This means that learning materials must match the abilities of students and must be relevant to the cognitive, psychomotor and affective structures of students. Thematic digital comics for healthy children during the Covid-19 pandemic for PJOK Learning Class V Elementary School Students in

Palembang are an alternative choice of learning media for physical education, sports and health (PJOK).

## **METHODS**

The research method uses quantitative methods with an ADDIE development model approach which consists of 1) analysis, 2) design, 3) development, 4) implementation and 5) evaluation (Cahyadi, 2019). The research subjects consisted of 1) physical education learning technology experts, 2) learning psychology experts, 3 PJOK teachers and 30 elementary school fifth grade students. The data collected in the form of quantitative data through questionnaire instruments and observation guidelines.

## **Participants**

This study uses content validity. To find out according to the substance of the digital comic material, a product validation test was carried out by 5 experts consisting of 1 physical education learning technology expert, 1 learning psychology expert, 3 elementary school PJOK teachers practice. revisions are made based on suggestions from experts. Product implementation for 30 Class V Elementary School students online due to the COVID-19 pandemic.

Thematic digital comics for healthy children during the Covid-19 pandemic for PJOK Learning Class V Elementary School Students in Palembang have been systematically compiled by following the revised 2013 curriculum guidelines.

## **Sampling Procedures**

This study uses a purposive sampling technique. The subjects of this study were elementary school students. The sample consisted of 30 fifth grade students at SD Negeri 87 Palembang

**Materials and Apparatus**

The data obtained in this study are numerical data and verbal data. Numerical data in the form of percentages obtained during the product validation and product implementation test stages. Verbal data in the form of suggestions, written input in expert and practitioner instruments. The data collection instrument uses questionnaires and observation guidelines.

**Design or Data Analysis**

Data analysis used descriptive quantitative based on Likert scale (interval 1-4) as shown in the following table:

**Table 1. Rating Score Scale**

Score	Criteria
4	Strongly agree
3	Agree
2	Do not agree
1	Strongly Disagree

The results of the questionnaire were then analyzed through percentages with the formula:

$$P = \frac{\sum X}{\sum Xi} \times 100 \%$$

Description:

P = Percentage of trial results

Σx = Total score obtained by the teacher

Σxi= The total number of teachers' maximum score.

From the results of calculating the percentage, it is then clarified using a rating scale to determine the feasibility of the product being developed. The clarification can be seen in the following table:

**Table 2. Clarification of the Rating Scale**

Percentage	Execution
0 - 20%	Very Unfit for Use
20,1% - 40%	Not Worth Using
40,1% - 60%	Worth Using With Repair
60,1% - 80%	Proper to use
80,1% - 100%	Very Worth Using

**RESULT**

The development research resulted in the development of a thematic digital comics for healthy children during the Covid-19 pandemic for PJOK Learning Class V Elementary School Students in Palembang. The results of the content validation test by experts are as follows:

**Table 3. Content Validation Results**

Content Validation Results
1. The digital comic cover developed is less attractive
2. Colors are made attractive
3. The picture is good
4. The story is in accordance with the characteristics of students
5. Need to be completed with product description
6. Already in accordance with the revised 2013 curriculum on core competencies 3 and 4 for grade V elementary school students

After making revisions based on the results of content validation, the final product results are as follows:



**Fig 1.** Thematic Digital Comics for Healthy Children during the Covid-19 Pandemic

The implementation stage is carried out to determine the effectiveness of the product in the field whether it can be implemented or not, whether it is effectively used or not. Conducted boldly on 30 students. The results are as follows:

**Table 4.** Product Implementation Results

PJOK teache r	Score Earned					$\Sigma x$	$\Sigma x_i$	P (%)
	I	II	III	IV	V			
A	80	86	87	90	91	434	500	86,8
B	87	89	87	87	90	440	500	88
C	90	87	90	85	90	442	500	88,4
Total						1316	1500	87,73
Execution						Very Worth Using		

Based on table 4, it can be concluded that digital comics developed have an effectiveness percentage of 87.73% so it is very feasible to use.

**Table 5.** PJOK Teacher's Advice

PJOK Teacher's Advice
1. During the learning process, many questions arise from students about taking care of themselves and others from infectious and non-communicable diseases
2. Students are enthusiastic, one of them is asking when the next digital comic will appear
3. Able to increase student interest in learning there are new things to be learned
4. Influencing students' reading desire, there are even students who ask the PJOK teacher to read (like a story)
5. The learning process takes place so it needs to be developed on other themes.
6. No revision needed

**DISCUSSION**

The results of this study are a thematic digital comics for healthy children during the Covid-19 pandemic for PJOK Learning Class V Elementary School Students in Palembang.

Elementary schools use the revised 2013 curriculum as a guide in carrying out the teaching and learning process. Teachers are given the freedom to innovate to manage the learning process so that certain competency goals can be achieved, this is increasingly needed during the COVID-19 pandemic situation. In this study, thematic children were healthy for learning PJOK class V in accordance with the objectives of the curriculum. The curriculum objectives include four competencies, namely 1) spiritual attitude competence, 2) social attitude, 3) knowledge, and 4) skills. These competencies are achieved through intracurricular, co curricular, and/or extracurricular learning processes. The formulation of the Spiritual Attitude Competence is, "Appreciating and living

the teachings of the religion he adheres to". The formulation of Social Attitude Competence is, "Showing honest, disciplined, responsible, polite, caring, and confident behavior in interacting with family, friends, and teachers". These two competencies are achieved through indirect teaching, namely exemplary, habituation, and school culture by taking into account the characteristics of the subjects, as well as the needs and conditions of students. The growth and development of attitude competence is carried out throughout the learning process, and can be used as a teacher's consideration in developing student character further. The Knowledge and Skill Competencies at Core 3 and 4 for class V are formulated as follows:

**Table 6.** Knowledge and Skill Competencies at Core 3 and 4 for class V

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Knowledge and Skill Competencies at Core 3 and 4 for class V

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**Core Competency 3 (Knowledge)**

Understanding factual and conceptual knowledge by observing, asking and trying based on curiosity about himself, God's creatures and their activities, and the objects he encounters at home, at school and at the playground.

**Basic Competencies**

Understand the concept of protecting self and others from communicable and non-communicable diseases

**Core Competencies 4 (Skills)**

Presenting factual and conceptual knowledge in clear, systematic, logical and critical language, in aesthetic works, in movements that reflect healthy children, and in actions that reflect children's behavior

**Basic Competencies**

Apply the concept of protecting yourself and others from

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communicable and non-communicable diseases

**CONCLUSION**

The conclusions of the research include: 1) it has produced a thematic digital comics for healthy children during the Covid-19 pandemic for PJOK Learning Class V Elementary School Students in Palembang, 2) the percentage of effectiveness is 87.73% so it is very feasible to use. The hope is that it will become an alternative choice of learning media for physical education, sports and health (PJOK). The limitations of the research include: 1) the implementation uses a small number of students, 2) the learning process takes place online so that many other factors affect student interest in learning, 3) digital comics are developed in the form of images without sound.

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