The development of clean and healthy life behavior learning videos

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Abstract. The purpose of this study was to develop a learning video media to increase the knowledge of clean and healthy living in kindergarten children in group B. This research conducted in three kindergartens in Banten Province, namely TK Al Aziz - Tangerang, TK Al Kautsar - Serang and Raudhatul Jannah - Cilegon. This research took place from January 2017 to June 2019. This research used the J.Moonen prototype development model. Learning evaluation is carried out in stages, namely expert reviews consisting of learning design experts, material experts, and instructional media experts. After reviewing from experts, I continued with one to one trials, small group trials, and field tests for kindergarten B group children. Based on the trial, the results of the development were obtained, which proved that learning video products are suitable for media use in improving knowledge of the clean and healthy life of children. The novelty of this research is to produce an appropriate and exciting healthy living behavior (HLB) Learning Media Video for teachers to use in conducting teaching and learning activities in schools, which consists of 4 episodes of HLB at the end of each episode reinforced by an expert reviewing the core of each chapter and also equipped with music as an introduction.

1. Introduction
The target of education services for early childhood in Indonesia agreed by the government in 2030 stated in the Sustainable Development Goals (SDGs) is "quality PAUD." However, early childhood often ignored as a target group; they are not reached by treatment programs that focus on toddlers and pregnant women through Integrated Service Posts (Posyandu). The results of the study mentioned that health education related to behavior change needed for early childhood before entering into further education [1]. In line with other researchers to form health behaviors in children need support from parents [2].

Healthy behaviors in children need to educate as early as possible. If healthy behavior learning is weak, it results in the prevalence of the disease due to not implementing clean and healthy living behaviors (HLB) such as diarrhea and dengue fever. Diarrheal disease is a potential endemic extraordinary event (KLB), which is often accompanied by death in Indonesia [3]. According to the World Health Organization, diarrheal disease is the second leading cause of death in children under five years and has killed around 760,000 children every year [4]. Based on the percentage distribution from WHO of mortality in the world, diarrhea is still the leading cause of death in children under five years by 15%. According to Riskesdas data, the cases of diarrhea in Indonesia in 2016 were 544,084, then in
the province of Banten reached 7.5% who suffered from diarrhea from the six highest regions with diarrhea [5].

The following situation caused by unhealthy behavior is a case of dengue fever, dengue fever has increased every year until 2015 in Indonesia reached 49.5% of dengue cases. The incidence of dengue in Banten province reached 25.19% due to an unhealthy environment [6]. According to the above disease events, prevent the spread of the disease needs to effort. The most crucial prevention efforts and primary prevention efforts are various human activities and human behavior that must be carried out by families as the smallest community group known as the Clean and Healthy Behavior Program (PHLB).

Many schools in Banten Province considered no optimal in implementing PHLB. Based on the results of the evaluation of health promotion (Promkes) in 2018, carried out by the Health Office (DHO), the level of PHLB has not optimally implemented in schools [7]. This situation applies to schools in Banten Province, namely Cilegon City. Based on a preliminary study conducted by researchers through in group B Raudhatul Jannah TKIT which became the research site obtained information that from a total of 28 children there were 23 children or about 82% in group B had knowledge of clean and healthy living (HLB) which is still underdeveloped (BB) and the remaining five children or around 18% are approaching the stage of developing (MB).

The reason for choosing learning video media for kindergarten children group B is to provide a clear picture and adapted to the characteristics of the child. It is also to give the material that delivered related to clean and healthy living behavior (HLB), where the process of washing hands, brushing teeth explained showering, exercising, eating healthy food, and taking out the trash in its place.

Based on the cone of experience delivered by Edgar Dale, the learning process of children, which starts from seeing the video, is 30%. It then comes to playing roles, where children can practice clean and healthy living behaviors (HLB), namely 90%. This statement proves the results of research showing that the required leadership course for active learning achieved by applying the strategy at the bottom of the pyramid by using direct and directed learning experiences in every daily life, and the survey results establish that experiential activity significantly improves learning outcomes [8]. Other related research states that students who have seen video shows are better able to apply and produce better performance, videos used to strengthen previous learning [9]. Media in the learning process is essential to strengthen the memory for beginner students [10]. Similarly, the results of the study revealed that the learning process using video would show a higher learning efficiency [11]. Inline by other researchers that the learning process is more enjoyable with the help of the media [12].

Based on relevant research and the results of preliminary studies in the field described earlier, knowledge about Clean and Healthy Behavior (HLB) in Banten province is still relatively low, which also seen from the many cases of diarrhea in children. According to other research results, there has limited research that examines the use of instructional video media to increase the healthy living of children's knowledge. For this reason, researchers are interested in producing appropriate and exciting learning video media to increase HLB knowledge that teachers can use at school and parents at home.

2. Methodology

Researchers are trying to develop instructional video media to improve HLB knowledge with the J.Moonen Prototype model. In the operationalization of this study, the procedures used in the main steps of the learning design model, according to J.Moonen, are 1) Analysis Phase, 2) Design Phase, 3) Development Phase, 4) Evaluation Phase, and 5) Implementation Stage [13]. The selection of this model based on a comprehensive and appropriate process used for educational products to achieve learning goals, explicitly learning in kindergarten B.

Early childhood needs healthy education before entering into further education [14]. It is necessary to have support from parents to form HLB knowledge in children [15]. Changes in behavior, in this case, the act of clean and healthy living, also show a high increase when given to elementary school children supported by the use of electronic media in the learning process. This research is in line with Ming Hung Lin that digital learning shows a better positive effect on learning outcomes than traditional teaching. Based on the problems, that the objectives of this study are: 1) Knowing the form of HLB learning in
TK-B so far. 2) The development of HLB learning video media to improve the knowledge of HLB for group B kindergarten children in Banten Province.

Data collection techniques in this study include two types, namely tests and non-tests. Data collection techniques with non-tests are observation, documentation, and interviews with children [16]. Also, data collection techniques with experiments carried out by giving questionnaires (with interviews) carried out during observation and the study. Likert scale instruments used to measure the knowledge of a person or group of people on the potential and problems of an object, the design of a product, the process of making products, and created products [17]. Data analysis techniques in this research development using a qualitative approach. This study used a qualitative approach seeks to develop a video media for learning healthy living behaviors through formative tests in children in the TK B group.

3. Results and discussion

The J. Moonen Prototype development model consists of five stages, each of which described as follows:

3.1. Analysis stage

Before conducting a needs analysis, a preliminary study phase and the needs analysis carried out. Based on the interviews, observations, and questionnaires, it is necessary to develop media in the form of learning videos that discuss healthy behavior that is closely related to children's daily activities of personal hygiene, sports, healthy food and drinks, and environmental cleanliness. It hoped that this learning video media make it easier for students to practice and support learning activities that take place at school and in the surrounding environment.

3.2. Design stage

In this stage, determine story ideas and script development (Daily Learning Implementation Plan (RPPH), Media Content Outline (GBIM), Material Description (JM), and Storyboards and Manuscript).

3.3. Development stage

In the technical aspects of the development phase dominates the activities, namely:

3.3.1. Pre-Production. The stages carried out in this pre-production are: 1) Casting, this process is carried out steps of determining the character or actor. The figures needed are Chika, Expert, Ani, Budi, Ani's father, Ibu Ani, Ibu Budi, and Teacher. The process carried out by performing a role simulation. 2) Reading the cast who has chosen to practice reading from the manuscript that has made. Scripts are given to each character so that they can be memorized and mastered. 3) Planning for Taking Pictures, Places, and Property. This process is carried out to find and determine the location that suits the script requirements. The areas needed are schools, homes, and playgrounds. 4) Determine the production crew consisting of producers, directors, assistant directors, camera directors, music stylists, camera operators, light directors, sound directors, editors, wardrobe, consumption, production, and transportation units. 5) Making the budget that used starting from making story ideas to the video at the mastering stage. 6) Preparation of equipment, make a list of what tools used, such as voice recording devices, video recorders, and computer/software for editing process.

3.3.2. Production. In this production process, several steps need to consider, namely: 1) Call sheet, making a day schedule that contains the composition of the scene, the actors involved. The assistant director made the process of making this call sheet. 2) Shooting. The method of taking pictures by the script and concepts that have created. 3) Acting. Each character plays a part according to the script that has made. 4) Sound Recording. In this process, we record the voices of the characters/actors of the learning videos that we make.

3.3.3. Post production. The process carried out in this post production is as follows: 1) Offline Editing. The process carried out in this stage is dialogue synchronizing (where the video matched with sound),
the next step is picture locked (where the Director, producer determines edits made by the editor. So that background makers can immediately make backgrounds that used without worrying about the existence change). 2) Online Editing. The process carried out in this stage is animation / visual effect (the means to provide transitions, text, or other visual effects on the video); atmosphere (Entering the sound of the sauna background atmosphere in the video); and making back sounds. 3) Mastering. After going through the editing stage, it exported video in the form of learning videos that played through the video player media. Table 1 describes the created video product.

| Software/Device              | Effect on product process                                      |
|------------------------------|----------------------------------------------------------------|
| Producing video              | HDV camera                                                     |
| Producing audio              | Shoot gun + Boom pole                                         |
| Editing process              | Adobe premier                                                  |
| Visual effect                | Plural eyes                                                    |
| Compression                  | Online editing                                                 |

3.4. Evaluation stage
Based on the results of the media expert review by doing three revisions, it continued by conducting one to one test, small group test, and field test.

3.4.1. One to one test
- One to one expert test
  In this one to one experiment, researchers divided into two, namely, one to one test from experts and one to one test from students. The result from expert material, expert media, and expert learning design is feasible with minor revision; individual shoot variations need to make the details visible, synchronize words with pictures, if necessary add a title in a particular section to clarify the message, orient Student center (what do children do), adjust the K-13 curriculum. Based on one-to-one trials from several experts, an improvement in the learning video media used, which used to test one-to-one students.

- Students’ one to one test
  The results of the one to one student test are as follows:
  a. Readability Aspects
    According to 3 Kindergarten children in group B as the research subjects gave an average score of 2.33, where students gave a less agreeing response. The results of individual trials indicate that the readability aspect needs to be improved again so that the material delivered can be accepted by students.

![Figure 1. Test results of one to one reading aspect.](image-url)
b. Media quality aspects
According to the 3 Kindergarten children in group B as the research subjects gave an average score of 2.56, where students gave a response close to agreeing. The results of individual trials indicate that aspects of media quality need to be improved so that the material delivered can be received by students.

![Figure 2](image)

**Figure 2.** Test results of one to one media quality aspect.

c. Material conformity aspect
According to the 3 Kindergarten children in group B as the research subjects gave an average score of 2.83, where students gave a response close to agreeing. The results of individual trials show that the material suitability aspect is good enough and accepted by students. For more details can be seen in the following picture:

![Figure 3](image)

**Figure 3.** Test results of one to one aspects of material accordance.

d. Aspects of interest
The average score is 2.83, where students give a response close to agreeing. The results of individual trials show that the material suitability aspect is good enough and accepted by students.

![Figure 4](image)

**Figure 4.** Test results of one to one interested aspect.

3.4.2. Small-group test. This step conducted a small group trial on 9 group B kindergarten children in Al Aziz kindergarten Tangerang. The implementation of the small group trial begun holding a researcher meeting with nine kindergarten children in group B. The researcher assisted the teacher with the child to approach through play activities where the teacher and researcher conveyed the purpose of developing this learning video media. After that, the video aired several episodes with a duration of 5-10 minutes. The child looks focused on watching the learning video. Then the researcher and the teacher asked the
child's reaction and response after watching the video media. The results obtained from the small group test are as follows:

- **Readability aspects**
  The average score is 2.85, where students give responses close to agreeing. The little group trial results show that the readability aspect is good enough and accepted by students.

![Figure 5. Test results of the small group reading aspect.](image)

- **Media quality aspects**
  The average score is 2.81, where students give responses close to agreeing. The small group trial results show that the quality aspect of the media is already quite good and accepted by students.

![Figure 6. Media quality small group test results.](image)

- **Material conformity aspect**
  The average score is 2.89, where students give a response close to agreeing. The small group trial results show that the material suitability aspect is good enough and accepted by students.

![Figure 7. Test results of the small group aspect matters.](image)
• Aspects of Interest

The average score is 2.83, where students give a response close to agreeing. The results of individual trials show that the material suitability aspect is good enough and accepted by students.

3.4.3. Field test. After conducting a small group trial, then proceed with the field test by involving 76 teachers as educators who assist in the learning process of healthy living to find out the feasibility of the media. Based on the observations above in some kindergarten children in group B, effective video media is used as a learning medium to improve children's HLB knowledge and applied to live clean and healthy in everyday life until formed habits. This research supported McHardy that television program content through video can play an essential role in the relationship between television and other daily activities, which ultimately impacts on habituation [18].

The feasibility test was conducted on 76 educators to assess the feasibility of the media that had made. The first indicator discussed was a learning video that was in line with the learning objectives, the results obtained were as many as 45% of 34 educators declared very feasible, 52% of 40 educators declared worthy, and 3% of 2 educators stated that they were quite reasonable. The following chart matches the video with the learning objectives. Another indicator is a new instructional video media, from 76 educators stating that as many as 41% of 31 educators indicated that they were very feasible, 54% of 41 educators indicated that they were possible, and 5% of 4 educators indicated that they were quite possible. The third indicator is the suitability of instructional video media as a learning aid for children of the TK B group. The results show that 37% of 28 educators stated that they were very feasible, 57% of 43 educators indicated that they were possible, and 6% of 5 educators indicated that they were adequate.

The overall results obtained that the learning video media about clean and healthy living behavior deserves used as a tool in the learning process both at school and at home. The results of data collection through preliminary research and literature studies describe as follows: a) That children are the main target in improving HLB behavior, namely group B kindergarten children. Childhood is a period of growth that needs handling correctly. According to research conducted by Yong that children aged 8 to 9 years can consciously choose and apply health-related behaviors [19]. b) The results of interviews, questionnaires, and discussions with parents, teachers, and observations of children, the results obtained that children have HLB knowledge that is still undeveloped as many as 23 children from 28 kindergarten children in group B. These results showed circumstances where the child is not doing hand washing before handling food and drinks; children sometimes throw rubbish out of place, and children who are not diligent in brushing their teeth. This finding is reinforced by the results of the study that the discovery of 73.62% did not care about health information, so that resulted in body mass index that is not optimal, so the need for promotion of health literacy to maintain optimal health conditions [20]. Seeing this fact, the importance of health information so that children have good knowledge and actively carry out clean and healthy living activities.

![Figure 8. Test results of the small group interested aspect.](image-url)
The results showed that the knowledge and understanding of patients could improve by combining visual images using video technology [21]. Researchers revealed that the use of video was well received by schools, teachers, and children as an aid in health education information and had a positive impact on changes in knowledge and attitudes. Researchers observed that educational videos are entertaining, engaging, and providing information at the same time, and this is an essential factor when targeting children because of their limited attention span. Also, videos are more likely to encourage behavior change than text-based teaching methods, a principle discussed in observational learning concepts [22]. The goal achieved to increase children's HLB knowledge through a media product for learning healthy living behaviors that formed habituation to children and increase HLB knowledge. This research supported McHardy that television program content through video can play an essential role in the relationship between television and other daily activities, which ultimately impacts on habituation [23]. The weakness of the learning video "Clean and Healthy Living to increase the knowledge of HLB" is that patience needs implementing this learning video because it requires a thorough education in all environmental conditions.

4. Conclusion
Based on the research results discussed, the findings of this study are as follows: Products that have made in the form of learning videos with four episodes presented such as personal hygiene, exercise, healthy eating and drinking, and environmental hygiene can increase knowledge of clean and healthy living (HLB) in kindergarten B group children. Conceptually the learning videos are arranged based on the principles and theories of learning as well as concepts related to increasing HLB knowledge and theories relevant to the development of instructional videos. Procedurally, the development of instructional videos aims to increase the understanding of HLB for Kindergarten B children in stages and a series of trials to produce the final product of the learning video. Based on the validation and revision by the expert/expert created a physical model in the form of a learning video given to kindergarten B group children through the learning process at school. The results of the four aspects related to a clean and healthy life, healthy eating, and drinking aspects are the first order that influences the improvement of kindergarten children's knowledge of group B, followed by sports aspects, personal hygiene aspects, and finally, environmental hygiene aspects.

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