

# The Effectiveness of E-Story Book Media Living Behaviors Clean and Healthy in Collaborative Learning

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**Abstract:** This research is motivated by the low habits of clean and healthy living of pre-school age children in Rembang Regency, this can be seen by the number of children who do not brush their teeth at least 2 times a day, children are accustomed to throwing garbage in any place, the habits of children who eat junk food. The purpose of this study is 1) to analyze the planning of the development of the e-story book media for clean and healthy behaviour in collaborative learning, 2) to produce an e-story book media development design material for clean and healthy behaviour in collaborative learning, 3) analyzing the effectiveness of e-story book media development for clean and healthy behaviour in collaborative learning. This study uses a mix-method approach with exploratory variants. The type of research used is applied research with the Research and Development (R&D) method. The research instruments were interviewing/observations, questionnaires, tests, and product validation instruments. Data analysis was carried out to see the average difference between the two samples using the t-test. The results showed that the e-story book media could be used effectively in collaborative learning, this is based on the results of the paired samples statistic, it is known that the habituation of clean and healthy behaviour in the experimental class got a post-test score of 81.7 and the control class a posttest score of 60.6. The conclusion is that the children who are given learning using the development of e-story book media have better habituation of clean and healthy behaviour compared to children who receive learning without using e-story book media.

**Keywords:** Effectiveness, e-storybook, clean and healthy, collaborative learning

## 1. Introduction

Currently, in Indonesia, there are more than 147.503 preschool institutions, both public and private. The number of preschool-age children in Indonesia is 25.5 million of the total population of Indonesia (Aulina & Astutik, 2018). Pre-school-age children are a critical age group because at that age they are vulnerable to various health problems. Health problems faced by preschool-age children are quite complex and varied (Wiliyanarti et al., 2019).

Kindergarten age, which is 4-6 years, is a very important period in the growth and development of children. Clean and healthy living behaviour affects the growth and development of children. The benefits of developing healthy behaviour from an early age in children will have a healthy lifestyle later in life (Azizah et al., 2022). This means that early childhood who are accustomed to healthy living behaviour is not easily lost at the next stage of development. In addition, early childhood already has a healthy lifestyle, then they will be free from attacks of various kinds of diseases that often occur in early childhood. Learning in Kindergarten to train children's daily habits.

Habituation of clean and healthy living behaviour must be applied as early as possible so that it can be carried out by children in the future. Clean and Healthy Living Behavior (PHBS) is a reflection of a family's lifestyle that always pays attention to and maintains the health of all family members. All health behaviours that are carried out with awareness so that family or family members can help themselves in the health sector and can play an active role in health activities in the community are another meaning of PHBS (Kandou & Kandou, 2019). This clean and healthy lifestyle includes the habit of brushing your teeth twice a day, throwing garbage in its place, and getting used to eating nutritious food. Dental health in early childhood is one of the children's growth and development that needs to be considered. Tooth decay that occurs in children can be one of the causes of impaired tooth growth in children at a later age. Children's behaviour in maintaining dental health is usually shown by brushing their teeth regularly. But

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sometimes this is not directly proportional to the diet that is lived by the child. Early childhood is still very fond of foods and drinks that contain a lot of sugar. The habit of children consuming foods and drinks that contain lots of sugar has not been balanced with good and correct dental care (Kuźbicka & Rachoń, 2013).

Health problems that often occur in elementary school children are related to personal and environmental hygiene problems. Hygiene problems that are still mostly experienced by elementary school-aged children are 86% of teeth problems, 53% not being able to cut nails, 42% not being able to brush their teeth, and 8% being unable to wash their hands before eating. Meanwhile, the most common diseases suffered by elementary school-age children are intestinal worms as much as 60-80%, and dental caries as much as 74.4% (Cuellar, 2015).

Inculcating the value of PHBS (Clean and Healthy Living Behavior) in preschool-age children is very important, considering that health problems that often occur in elementary school-age children are related to PHBS (Langi, 2019). PHBS in schools is a set of behaviours practised by all school members based on awareness as a result of learning, to prevent disease, improve health, and play an active role in creating a healthy environment.

In the Ministry of National Education (2014) No. 146 of 2014 concerning the 2013 Curriculum for Early Childhood Education, there are basic competencies 3.4 and 4.4, know how to live a healthy life/ able to help oneself to live a healthy life there is an indicator of kindergarten age, namely 4-6 years old, namely getting used to living a clean and healthy life and doing clean and healthy living habits such as bathing two times a day, wearing clean clothes, throw garbage in its place, and so on.

The implementation of PHBS at the pre-school level can be done through effective learning media to build awareness and habituation of clean and healthy behaviour for early childhood. Learning media is a tool or a means used in the teaching and learning process, media can support the effectiveness of student learning success, and learning media can create a sense of interest in students to take part in classroom learning activities (Azizah et al., 2022). The use of learning media provides benefits for students to better accept the material presented by the teacher and the learning process in the classroom becomes varied, and students can play a direct role in using the media (Rahmelina et al., 2019). Learning media has a function to increase students' learning motivation, as well as increasing understanding according to the context used. The media used is digital literacy media with clean and healthy behaviour material. This media is in the form of an application that parents can use at home so that collaborative activities with parents can run well.

Digital literacy can be used as a medium for learning about the habituation of clean and healthy living behaviour in Kindergarten. The digital literacy used is by using the E-Story Book media, namely using electronic picture story books. Picture story books are graphic media that can be used to convey the reader's message to children without the child knowing it because the images presented are interesting, and very close to the child. This picture story book can be used as a stimulus for teachers in discussing, providing examples, and helping children understand how to practice getting used to clean and healthy behaviour. Parents and teachers become companions and motivations for children's habituation (Nurhanifah, 2022).

## 2. Literature Review

A healthy lifestyle is one that does not spread disease because of a clean environment. For instance, if our home is clean, there won't be any germs or other microorganisms, preventing illness and hospitalisation of residents. Early childhood PHBS education includes hand washing with soap and running water, trimming fingernails and toenails, brushing teeth after meals and before bed, choosing clean and healthy snacks, eating vegetables and fruit every day, throwing trash in the trash, exercising regularly, and using latrines (Putri, Rosdiana, & Nisa, 2019).

The goal of PHBS implementation in schools is to teach students how to properly wash their hands with soap and flowing water. consuming nutritious food at the school cafeteria. Utilize hygienic restrooms. Regular, controlled exercise (Susanto et al., 2016).

All health habits that are practised with awareness to enable family members or families to assist themselves in the healthcare industry and actively participate in community health initiatives are referred to as "PHBS." The advantages of PHBS in schools include the ability to establish a clean and healthy environment, enhance the teaching and learning process, and increase the well-being of students, staff, and the school setting. Putting PHBS into practice at home will undoubtedly result in a healthy family and be able to reduce health issues.

Therefore, the promotion of healthy living practices can create a generation and society that are aware of and appreciate the value of adopting a healthy lifestyle (Yufiarti, 2019). It is crucial to instil a clean and healthy lifestyle in young children at this time, specifically by teaching them to keep their rooms tidy. Teachers and parents have a responsibility to educate children consistently so that they become accustomed to doing it on a daily basis.

Children that live this way of life are healthier, have stronger immune systems, develop into intellectual adults, and are considerably more active throughout the day. However, the teacher only assigns assignments and explains the topic through lectures, so the lack of learning media in encouraging early childhood to use clean and healthy living behaviour is not ideal (Putra et al., 2020). Therefore, it is crucial that parents and teachers work together to educate, instruct, and support children as they learn in order to adopt PHBS with the greatest likelihood of success (Nasiatin et al., 2021).

Researchers have developed an e-story book media for early childhood learning as a response to the aforementioned issues. Early children can be interested in learning to be done as well as the information to be supplied via the use of this ebook. E-book media can display a still image that will appear to be genuine and has a moving image and sound in the form of audio-visual.

### 3. Methodology

The research paradigm uses a mix-method with an exploratory variant. The type of research used is applied research with the Research and Development (R&D) method or research and development method, this method is used to produce certain products and tests the effectiveness of these products (Richey & Klein, 2014). The effectiveness test in research uses quasi-experiment research, which is a type of research that provides treatment using the experimental group and the comparison control group (White & Sabarwal, 2014). The research design used was Non-Equivalent Control Group Design, namely the selected research sample was two samples where 2 groups carried out different interventions and then observed between before and after the action. The population of this study was students and their parents. By the purposive sampling technique, samples were taken from students. The research instruments were interviewed/observations, questionnaires, tests, and product validation instruments. Data analysis was conducted to see the average difference between the two samples using a t-test.

### 4. Results and Discussion

The media e-story book material on effective clean and healthy living behaviour can be used in Collaborative Learning in State Kindergartens throughout Rembang Regency, this is based on the results of paired samples statistics, it is known that the habituation of clean and healthy living behaviour of students in the experimental class gets a posttest score of 81.7 and the control class with a posttest score of 60.6. It can be said that children who are given learning using the development of e-story book media for clean and healthy living behaviour have better habits of clean and healthy living behaviour compared to children who receive learning materials for clean and healthy living behaviour without using e-story media development books.

The results of this study are in line with Puspita, Muchlas, & Kuat's (2020) opinion that with the media presented, learning is not boring because there are multimedia elements in the form of images, writing, movements, or sounds that make students happy in learning and understand the material presented.

Harun et al. (2021) explain that the media is a tool in the learning process that is planned by the teacher to explain the lesson material and is used by students to be directly involved in learning mathematics. The existence of learning media makes it easier for students to learn, provides concrete experiences, attracts attention, activates students' senses, and awakens the world of theory and reality.

The results of this study are following Knowles & Malmkjær (2002) that children's stories are one type of children's literature. Barnes, Bernstein, & Bloom (2015) stated that children's stories are real stories or fiction in the form of prose or poetry whose purpose is to provide information and entertain the readers (children). Cunsolo Willox et al. (2013) state that the context of storytelling helps develop vocabulary. In addition to vocabulary, children will learn many other things including customs from the course of a local story as well as the moral message conveyed. Kennedy added that students start acquiring stylistic conventions that are found in traditional tales, such as standard beginning, repetition of language, repetitions of events, flat characterizations, and moralistic endings. The repetition made by the story reader (teacher) is needed to create an understanding of the storyline.

Drew, Duncan, & Sawyer (2010) says the storytelling method is "one of the provisions of learning experiences for kindergarten children by bringing stories to children orally and the stories used must be interesting, and invite children's attention and cannot be separated from the educational goals for kindergarten children. Rieger et al. (2018) that the storytelling method is "a method that is very good and liked by the human soul because it has an amazing effect to be able to attract the attention of listeners and make a person can remember the events in a story quickly."

According to Mujahidah, Damayanti, & Afif (2021), the storytelling method has become a development need, although previously the method was not a new learning method for students to be given, in learning it needs to be given an initial understanding of the basic concepts of learning. The prototype of the storytelling method for early childhood consists of two types of activities 1) storytelling with pictures, and 2) storytelling. All of these activities aim to develop children's language skills. The level of validity and practicality of the development of storytelling methods in early childhood shows that the validator's assessment of all the tools that have been presented can be declared valid for use and the development of the storytelling method meets the practical aspects so that it is feasible to use.

Several research results become a reference for researchers for the habituation of clean and healthy living behaviour with e-story book digital literacy media. Although the material is different, some previous studies have the same goal, namely to develop clean and healthy behaviour using learning media in collaborative learning.

This research also shows that digital literacy is part of a way to attract children's attention to the learning process. this is following Munawar et al. (2019) research, they state the problems that often occur in the world of education are the disconnected information between what happens at home and school and the lack of information sharing between school and home. Technology can bridge the relationship between school and home to provide opportunities for

teachers and families to share and expand learning opportunities, provide and receive information about children's growth and development, create partnerships, and strengthen family involvement. The involvement of parents in schools is a form of commitment and active participation of parents in schools and children, which will eventually lead to the achievement of children's competence. The purpose of this study is to describe the involvement of parents in early childhood digital literacy education in Kindergarten in Semarang City. This study concludes that parental involvement in children's digital literacy education is still very low. Therefore, it is necessary to have the competence and role of parents in digital literacy education in early childhood.

Salehudin (2020) argue playing and watching YouTube social media is the most popular activity carried out in early childhood. However, the use of YouTube social media without the right example, guidance, and facilities at home will have an impact on children's development. The purpose of this study was to determine the relationship between home facilities and early childhood social media digital literacy. Supported by directed and measurable guidance by parents and family at home.

Oktaria & Putra (2020) state that education in the family is now a surefire strategy to continue to provide early childhood rights in the form of education. The role of parents is now being tested by the Covid-19 pandemic that has hit the country. Many things must also be considered in providing education in the family, namely health factors, children's food and drink needs, and also those related to psychology, and the comfort of early childhood children when studying or playing at home.

Inten & Permatasari (2019) said that the eating clean activity of healthy lunches at Raudhatul Anfal Al-Muqoddasah was carried out as a form of concern for educational institutions for the health of the nation's next generation. healthy food by Eating clean activities and introducing children to a variety of healthy foods and processed foods that are full of nutrition. The activities consist of fruit day, vegetable day, bread and milk day, tubers day, and biscuit day. The result is that from 25 children 90% of children like healthy food supplies that are varied and processed healthily and 99% of parents also feel the impact of eating clean, namely when they feel it helps to prepare children's daily menus and introduce healthy food for children. It is very important to introduce healthy foods that are full of nutrition and balanced nutrition for children as early as possible.

According to Miller et al. (2016), multimedia e-books about health stories are designed to harness the power of storytelling to improve health literacy. reduce health risks, improve quality of life, and protect the environment.

At the level of early childhood education, selectively choosing teaching methods is a matter that contributes to introducing things in the form of material through new themes related to children's daily lives. The Early Childhood Education curriculum currently applies thematic learning so that the materials taught to children have different special themes and sub-themes each week. To teach these themes, the selection of teaching methods used by early childhood education teachers must be under the situation and conditions. One of the many flexible methods for early childhood learning is the storytelling method. According to Papadimitriou et al. (2013), the storytelling method is one of the learning methods in kindergarten. The storytelling method is a way of speaking and delivering stories or explaining a story to children orally. According to Peltier (2010), the storytelling method provides a learning experience for kindergarten children by bringing stories to children orally.

The stories told by teachers to children are not solely intended as a learning distraction. Not unlike other teaching methods, the storytelling method has a clear purpose in its application, which is unique and different from other teaching methods. Widiyaningrum, Masitoh, & Hasibuan (2018) state that the purpose of the storytelling method is to develop the ability to hear stories to provide information or instil social, moral, and religious values as well as information on the physical environment non-human, for example, animals, events, plants in the yard, school, and social environment i. e people in the family, school, and community including one's services.

Furthermore, Hidayati (2019) adds that training children to speak can be done in several ways, one of which is through stories, either hearing stories or telling children to tell stories. This statement implies that the language aspect can progress when the storytelling method is applied. In this case, the child plays an active role as a hearer when listening to stories from teachers/other children as well as a speaker when telling stories to teachers and other children.

## 5. Conclusion

Based on the description in the discussion of the research results, it can be concluded that the e-story book media for clean and healthy living behaviour materials can effectively be used in collaborative learning in state kindergartens in Rembang Regency, based on the results of paired samples statistics, it is known that the habituation of clean and healthy living behaviour of students in the experimental class got a posttest score of 81.7 and the control class a posttest score of 60.6. It can be said that children who were given learning using the development of e-story book media for clean and healthy living behaviour had better habits of clean and healthy living behaviour compared to children who received learning of clean and healthy living behaviour material without using the development of e-story book media.

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## Conflict of Interest

The authors declare no conflicts of interest.

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