Batik Module: Health-Integrated Thematic and its Impact on Understanding of the Concept and Behavior of Clean and Healthy Living

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Abstract

This research was conducted due to the lack of students' awareness of the importance of health protocol behavior such as: no mask, no social distancing, no hand-washing, and no health awareness. Therefore, this study aims to analyze the impacts of the BATIK module (health integrated thematic learning material) on the conceptual understanding and behavior of clean and healthy living for elementary school students.The research design was quasi-experimental in form of a post-test control group design. The samples of the research were 58 students, consisting of 30 students for the experimental class and 28 students for the control class. Test and questionnaire methods were used for collecting the data. The test with 10 essay questions was used to examine the conceptual understanding. The questionnaire, consisting of 30 statements, was used to measure clean and healthy living behavior. The data analysis technique used was Manova. The results showed that there were significant differences in the understanding of the concept and behavior of clean and healthy living among the students who were taught by using the BATIK module and students who were not. So, it can be recommended that this module can be used as an alternative source of learning in elementary schools.

Keywords

body health;
clean;
health protocol;
healthy lifestyle;
healthy;
living Behavior;

Contents

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1 Introduction

Health is one of the most important components at this time amid the COVID-19 that has hit the world. To keep everyone healthy, the government has declared various policies that are used to prevent the spread of COVID-19 (Lesyk et al., 2022). One of them is to prohibit activities that involve many people. The policy in the field of education is replacing face-to-face learning with online learning (Dong et al., 2020; Mirza et al., 2020; Mishra et al., 2020). Another policy is that all activities involving large numbers of people must be stopped to prevent the spread of COVID-19. The existence of online learning will have a positive impact, such as; online learning will help students to understand abstract material, develop collaborative learning, reasoning, and problem-solving activities (Arnott & Yelland, 2020), and make students more independent in their learning process (Hwang et al., 2021). However, behind the advantages of online learning, there are several disadvantages. Online learning is not approved for children because it can interfere with their social and emotional development, lack of social interaction, and endanger health and growth (Edwards et al., 2012; O'Doherty et al., 2018). Another impact is that many children do not do online learning but other activities such as playing games, social media, watching YouTube, and other activities that confirm gadget addiction (Liu et al., 2020; Rahmawati & Latifah, 2020; Samaha & Hawi, 2016). This condition will certainly greatly affect health and the learning process. Therefore, to reduce the negative impact of online learning, the government has declared a new policy, in which learning that was previously fully online, replaces with face-to-face learning.

Controlled face-to-face learning requires teachers and students to optimally apply health protocols (Darsini et al., 2021; Sari et al., 2022). Health protocols include the level of understanding and forms of application of health protocols (Mardhia et al., 2020). The implementation of the health protocol is expected to be able to reduce the number of COVID-19 cases so that the COVID-19 pandemic can end quickly and all learning activities run normally (Irmayani et al., 2021). However, it is found that there are several facts about the current condition while applying this face-to-face learning system. They are a lack of public awareness about the importance of dealing with health protocols, such as, not wearing masks, not keeping a distance and awareness washing hands, as the causes of the spread of COVID-19 (Komarudin & Puspita, 2022). This condition is also found in schools where students still take off their masks and do not wash their hands during the learning process or play with other people. These indicate that the awareness of clean living is still not optimal.

One of the factors that affect the level of children's awareness is the concept of understanding healthy living. Concept understanding is a person's ability to master many subject matter, which is not just remembering but can explain in different ways (Fitrah, 2017). Conceptual understanding is a mechanism that underlies meaningful learning. Meaningful learning here means a person's ability to understand content along with connecting new ideas with previous knowledge and experience (Farrokhnia et al., 2019). Concept understanding is closely related to one's working memory in the learning process (Rhodes et al., 2016). The description also illustrates that in the process of solving problems, understanding concepts have a very important role. It is one of the prerequisites and the ability to relate concepts and mental readiness in the learning process (Nomleni & Manu, 2018). It is as well as a comprehensive understanding of concepts which is an absolute requirement. in achieving learning success (Widyantari & Ayub, 2020). So, the existence of a good conceptual understanding of a person will make a meaningful learning process can be realized. In this case, if students have a good understanding of the importance of health and how to live clean, they will be able to implement it in a healthy lifestyle.

Clean and Healthy Living Behavior is a collection of behaviors that are practiced based on the awareness that makes a person able to help himself (independently) in the health sector. Healthy behavior refers to efforts to prevent or avoid the causes of disease or health problems and behavior in seeking, maintaining, and improving health (Lowe et al., 2022; Wu & Sheng, 2021). These actions include: a balanced-healthy menu, regular exercise, not smoking and drinking alcohol, sufficient rest, controlling stress, and positive health behaviors and lifestyles (Fahrurazi et al., 2016; Umaroh et al., 2016). Healthy behavior includes knowledge, attitudes, and actions (Mailoa et al., 2017; Umaroh et al., 2016). About health, knowledge about health includes knowledge about healthy lifestyles, such as knowledge about infectious diseases, factors that affect health, health services, and accident prevention (Wanti et al., 2013). Attitude towards health is an individual's review of matters relating to health maintenance, such as attitudes towards infectious and non-infectious diseases. Health practices for healthy living are activities to maintain health and actions to avoid accidents. Indicators of healthy living behavior are the availability of clean water and healthy latrines, washing hands with clean water and soap, doing physical activity every day, and eating fruit and vegetables (Hartono et al., 2017; Sulaeman et al., 2022). Other studies also state that indicators of healthy living behavior are handwashing behavior, healthy snacks, and not littering (Cao et al., 2021; Nasiatin et al., 2021; Nishimi et al., 2022; Susanto et al., 2016). So, it will make a person able to reduce the risk of illness and optimize the immune system. The importance of understanding the concepts and behaviors of clean and healthy living requires learning to emphasize more learning activities that can develop an understanding of clean and healthy living concepts and behaviors.

To support optimal learning to improve understanding of clean and healthy living concepts and behaviors, Batik (Health-Integrated Thematic) module was developed. Learning modules are the choice because they module is an independent learning tools, flexible, and easy to use (Dhaliwal et al., 2018). The existence of a learning module will make it easier for students in the learning process (Barbieri et al., 2018). The existence of a module can develop student interaction and involvement as well as enable an understanding of concepts (Al Mamun et al., 2020; Oyarzabal & Rowe, 2017). The module as a development product used can increase interests, attitudes, critical thinking skills, cognitive aspects of learning achievement, and student skills in learning (Nizaar et al., 2021). It can accommodate students' abilities by utilizing study time more efficiently so that educational goals can be achieved (Sari & Montessori, 2021).

There are several studies related to thematic modules. There is some researcher found result related to the thematic module; 1) the thematic-integrative teaching materials in increasing the character of responsibility and discipline (Estuwardani & Mustadi, 2016), 2) the integrated thematic module is valid, practical, and effective for learning Theme 1 for fifth-grade elementary school students (Riwanti & Hidayati, 2019), 3) 4CM-Based Thematic Module through the Contextual Teaching and Learning (CTL) Approach is effective in improving learning outcomes (Yulianti & Tutianingsih, 2020), and 4) thematic learning module is character-based, such activities stimulate motivation and focus students' attention (Purwitaningsih et al., 2021). So based on these descriptions, many thematic modules have been developed to facilitate learning.

Based on the results of the preliminary analysis, it is found that currently there are no thematic modules that are integrated with Health. So that in this study a Health-Integrated thematic (BATIK) module will be developed. This module will be developed concerning the needs analysis, curriculum, and analysis of student characteristics. This BATIK module will be packaged attractively with interesting illustrations and pictures that are following the development of students, especially in elementary schools. In addition, the developed module will be designed with interesting language suitable for the student's development. Based on those concerns that are related to the development of the module, the module developed is valid and practical in the good category. The next step that needs to be done after the validation and practical BATIK module has been developed is to test its effectiveness. Thus, this research will focus more on analyzing the impact of the Batik Module on understanding the concepts and behaviors of clean and healthy living for elementary school students. In this study, the understanding of the concept that will be expected is that students can understand how to live clean and healthy which will later be applied in everyday life. In addition, in this study, it is also expected that students have a clean and healthy living behavior. The behavior that will be observed here is the behavior of washing hands, maintaining environmental cleanliness, and carrying out health protocols.

2 Materials and Methods

This study used a quasi-experimental research design in form of a *post-test control group design* (Rogers & Revesz, 2019). The research implementation process is grouped into the experimental class and the control class. The experimental group was given learning treatment with the BATIK module, while the control group was given learning without the BATIK module. Both groups were given a *post-test* to determine differences in understanding the concept and behavior of clean and healthy living. The data obtained in this study were (1) concept understanding (Y1) of students who are taught by learning with the BATIK module; (2) concept understanding (Y1) of students who were taught without the BATIK module; (3) clean and healthy living behavior (Y2) of the students who were taught with the BATIK module; and (4) clean and healthy living behavior (Y2) of the students who were taught without BATIK. The trial is done.

The population of this study was all fourth-grade students in Cluster 5, Buleleng District, which consisted of 4 schools with a total of 250 students. Then the population equivalence test was carried out with ANOVA which found that all classes were equal. Samples were taken using a random sampling technique. Next, random sampling was conducted to determine the experimental class and the control class. Random sampling was done 2 times. The first random sampling was conducted to determine the experimental class with learning with the BATIK module. The results of random sampling obtained by the control students were class IA SD N 3 Banjar Jawa and the experimental class was class IA SD N 4 Kampung Baru, with 30 students and 28 students. The experimental class learned with the BATIK module and the control class learned without the BATIK module.

In this study, the data collection process used was the test and questionnaire method. The test was conducted to measure the understanding of students' concepts on the theme of a Clean, Healthy, and Beautiful Environment. The test developed was a description test which consists of 10 questions, 10 questions developed were at the C2-C3 level. The indicators for understanding the concept of a Clean, Healthy, and Beautiful Environment are described in Table 1. After the instrument has been developed, it would be tested for instrument item validity, instrument content validity, test reliability, level of difficulty of test items, and level of difficulty of test equipment. Testing the validity of the instrument for the concept understanding ability test was carried out using the CVR formula. The CVR result from the calculation of each instrument item is 1 and the total CVR of all the concept understanding test instrument items are obtained by 10 and can be declared valid based on the validation provisions of each instrument item in the CVR formula. The content validity test of the concept understanding ability test instrument was carried out using the CVI formula with the result that the CVI value was 1 and the concept understanding ability test instrument was declared very good based on the content validation provisions of the entire instrument in the CVI formula. The reliability test of the concept understanding ability test whose data was in form of polytomies using a*lpha Coefficient* with the results obtained was 0.85 and was in the range of 0.60 <r11≤0.85. So, the reliability of the critical thinking ability test is in high criterion. The level of difficulty of the critical thinking ability test items obtained the results that from the 10 questions made, 6 questions were in the medium criteria and 4 questions were in the high criteria. While the level of difficulty of a test device is in the difficult criteria.

Table 1
Indicators of understanding the concept of a clean, healthy, and beautiful environment

No	Basic Competence	Indicators	Level Cognitive	Number of Questions
1	Get to know the applicable regulations in daily life at home and at school	1) Explaining how to maintain and clean the house	C2	2
		2) Explaining how to maintain cleanliness in the classroom	C2	2
		3) Determining how to keep the body	C3	2
		4) Determining how to properly dispose of waste	C3	2
		5) Determining healthy food	C3	2

The method of collecting data to measure healthy and clean-living behavior was a closed questionnaire using a *Likert* model rating scale. Each item in the questionnaire is equipped with a choice of 5 answers, namely: Very Appropriate (SS), Appropriate (S), Not Appropriate (TS), and Very Not Appropriate (STS). The questionnaire was developed from the dimensions of healthy living behavior; maintaining cleanliness and body health, and keeping the environment clean. From these 2 dimensions, 7 indicators were developed into 30 statements. In more detail, the indicators are described in Table 2. After the instrument has been developed, the next stage is testing the validity of the instrument items, the validity of the content of the instrument, and the reliability. CVR formula was used to attempt the validity of the contents in the questionnaire instrument. The CVR result from the calculation of each instrument item is 1 and the total CVR of *all self-* is 30 and can be declared valid based on the validation provisions of each instrument item in the CVR formula. Testing the validity of the contents in the questionnaire by using SPPS obtained 0.88, and this value is classified as very strong. Testing the reliability of the questionnaire used SPSS. The results of the analysis obtained *Cronbach's Alpha* with a value of 0.867, which means that the developed questionnaire is very reliable.

Table 2
Indicators of clean and healthy living behavior for the material clean, healthy, and beautiful environment

No	Dimensi	Indicator	Number of statements
1	Maintaining The body hygiene	1) How far the students can treat themselves to body hygiene.	4
		2) How far the students are able to keep their body clean	4
		3) How far the students follow the health protocols	6
2	Keeping The environment's cleanliness	1) How far do the students keep the classroom seat clean	4
		2) How far the students are disciplined in disposing of trash in its place	4
		3) How far the students can keep the bed clean	4
		4) How far the students can use cleaning tools	4
		Quantity	30

The data analysis method in this research was descriptive analysis and inferential statistical analysis. The descriptive analysis carried out in this study was processed using SPSS26.0 *for Windows*. The post-test data were analyzed. The values sought in the statistical test include the mean, standard deviation, maximum and minimum values. Meanwhile, for inferential analysis, inferential statistical analysis was used using the MANOVA test for post-test data. Before testing the hypothesis, a prerequisite test was carried out, the normality used was *Kolmogrof-Smirnov,* while the homogeneity test used *Levane Statistic.* Likewise, with the Manova test, before the Manova test is carried out, the prerequisite test is carried out, the prerequisite test is the normality test with *Kolmogrof-Smirnov*, homogeneity test with *Levane Statistic and Box's Test of Equality of Covariance Matrices* and multi correlation test by comparing the tolerance values and V. MANOVA and the prerequisite test was carried out by using SPSS 26.0 *for Windows*

3 Results and Discussions

3.1 Results

After students were taught according to a predetermined plan, where the experimental class was taught with the BATIK module and the control class learned without the BATIK module, the result was analyzed. The results of the descriptive analysis show that there were differences in the understanding of the concepts and behaviors of clean and healthy living students who were taught by learning with the BATIK module and students who were taught without the BATIK module. This is shown by the difference in the concept understanding score of 4.98, where the average value of students' understanding of concepts taught by the Learning with the BATIK module is greater. Meanwhile, clean and healthy living behavior showed a difference score of 6.42, whereas the average score of clean and healthy living behavior of students who were taught by learning with the BATIK module is greater. Other findings based on the results of the descriptive analysis were that the variable of clean and healthy living behavior is more influenced by learning with the BATIK module seen from the value of the difference in scores between the variables of understanding the concept and clean and healthy living behavior. In detail, the results of the descriptive analysis are described in Table 3.

Table 3
Results of the descriptive analysis of character and learning outcomes

Treat	Dependent Variable	Mean	Std. Deviation	Min.	Max s	Range
Learning with BATIK module	Concept understanding	3.75	4.73	77	93	16
	Clean and healthy behavior	5.65	5.45	73	95	22
Learning without BATIK module	Concept understanding	8.57	7.46	65	91	26
	Clean and healthy behavior	9.23	7.04	68	93	25

Prerequisite tests for the analysis carried out included tests for normality of data distribution, homogeneity of variance test, multivariate homogeneity test, and linearity test for the dependent variable. The first prerequisite test is the normality test with *Kolmogorov-Smirnov*. The results of the analysis showed that all data come from groups of data that were normally distributed, this could be indicated by the value of Sig. > 0.05, which is presented in Table 4. After the normality requirements are met, the next prerequisite test is the homogeneity test. In this study, the homogeneity test was carried out with two analyzes; the homogeneity of variance test with *Levene's Test of Equality* and the multivariate homogeneity test with the *Box's Test of Equality of Covariance Matrices*.

Table 4
Results of normality analysis

Treating		Kolmogorov-Smirnova		
		Statistic	df	Sig.
Learning with BATIK Module	Concept understanding	0.17	30	0.14
	Clean and healthy living behavior	0.12	28	0.20*

Treating		Kolmogorov-Smirnova		
		Statistic	df	Sig.
Learning without BATIK Module	Concept understanding	0.11	30	0.20*
	Clean and healthy living behavior	0.15	28	0 ,20*

The results of the homogeneity analysis carried out showed the same meaning, namely, the research data comes from homogeneous data groups. It can be seen from the sig value. Each test showed a value of more than 0.05. Value of Sig. *Levine's Test of Equality test was* 0.13 for understanding the concept while the value of Sig. Clean and healthy living behavior was 0.18. Meanwhile, the homogeneity test with *Box's Test of Equality of Covariance Matrices* obtained a sig value of 0.08 with a Box M value of 2.55. The next prerequisite test is the linearity test which aims to determine whether there is a linear relationship in each of the analyzed dependent variables. The results of the analysis showed that the value of sig. on *Deviation from Linearity* of 0.43 (>0.05). It means that there was a linear relationship between the concept of understanding data and clean and healthy living behavior. The prerequisite test for MANOVA analysis has been fulfilled, where the research data obtained were normally distributed and homogeneous, so that hypothesis testing with MANOVA can be carried out. The results of the complete analysis are described in Table 5 and Table 6.

Table 5

The result analysis of Manova

Effect		Value	F	Hypothesis df	Error	df Sig.	Sig.
Intercept	Pillai's Trace		0.10 5411.52[b]	2.00		35.00	0,00
	Wilks' Lambda		0.00 5411.52[b]	2.00		35.00	0,00
	Hotelling's Trace	309.23	411.52[b]	2.00		35.00	0,00
	Roy's LargestRoot	309.23	411.52[b]	2.00		35.00	0,00
Treatment	Pillai's Trace		0.26[b]	6.07 2.00		5.00	0,00
	Wilks' Lambda		0.74[b]	6.07 2.00		5.00	0,00
	Hotelling's Trace	0.35	b	6.07 2.00		35.00	0,00
	Roy's LargestRoot	0.35	b	6.07 2.00		35.00	0,00

The results of the analysis obtained several findings. First, based on *Pillai Trace, Wilks' Lambda Hoteling's Trace,* and *Roy's Largest Root* it shows that the F coefficient was 5411.52[b] with a value of Sig. 0.00. It means that there is a simultaneous difference in understanding the concept and behavior of clean and healthy living between students who were taught by using the BATIK module and students who were taught without the BATIK module. Second, the results of the *Tests of Between-Subjects* Effects analysis showed an F value of 7.45 with Sig. 0.01 which is smaller than 0.05. It shows that there is an effect of learning with the BATIK module on

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understanding the concept. Third, the results of the analysis *of Tests of Between-Subjects Effects* showed an F value of 7.26 with Sig. 0.01, which is smaller than 0.05. It shows that there is an effect of learning with the BATIK module on clean and healthy living behavior.

Table 6
The Result Analysis of *Tests of Between-Subjects Effects*

Source	Dependent Variable	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	Concept understanding	283.69[a]	1	283.69	7.45	0.01
	Clean and healthy living behavior	284.27[b]	1	284.27	7.26	0.01
Intercept	Concept understanding	248712.64	1	1 248712.64	6529.03	0.01
	Clean and healthy living behavior	257677.95	1	1 257677.95	6584.56	0.01
Treat	Concept understanding	283.69	1	1 283.69	7.45	0.01
	Clean and healthy living behavior	284.27	1	1 284.27	7.26	0.01
Error	Concept understanding	1371.36	56	56 38.09		
	Clean and healthy living behavior	1408.81	56	56 39.134		
Total	Concept understanding	251946.00	58	58		
	Clean and healthy living behavior	260991.00	58	58		
Corrected Total	Concept understanding	1655.05	57	57		
	Clean and healthy living behavior	1693.08	57	57		

3.2 Discussion

The results of the analysis showed that there was an effect of learning with the BATIK module on understanding the concept and behavior of healthy living. The existence of the BATIK module in the learning process would provide students with information related to the material to be given. The existence of a learning module would make it easier for students in the learning process. This is considering that the module is a teaching material that is used to explain certain learning materials (Azizah et al., 2021; Khasanah et al., 2017; Nastiti et al., 2018). Which allows students to learn more independently (Sueb & Damayanti, 2021). The existence of a module allows students to understand the material and minimize errors. The use of modules in the learning process can help students be more active in learning (Setiawan et al., 2017) because students will think and use their abilities to find final results (Febriana et al., 2020). The existence of a learning module will make it easier for students in the learning process (Barbieri et al., 2018), the existence of a module can develop student interaction and involvement and allow for conceptual understanding (Al Mamun et al., 2020;

Oyarzabal & Rowe, 2017). So, it can be said that the existence of a learning module will make it easier for students in the learning process and make students learn more actively in the learning process. This is also felt in the learning process by using the BATIK module, where students understand more about the material, in this case, health material.

Students more understand the concept because in the BATIK module the material is packaged with illustrations that match the characteristics of students. Which, the modules compiled contain many illustrations of how to keep the environment clean and healthy. Thus, the illustrations in the form of pictures make students learn better. The existence of appropriate images can also support the achievement of optimal learning outcomes and images can also add insight to students (Putri & Rezkita, 2019). In addition, attractive pictures will make students more motivated in the learning process (Dewi et al., 2018; Nurjannah, 2018). In addition, this BATIK module is effectively used because the language used is following the first graders of elementary school, where we know that an effective language is a language that is following the development of children. The use of language in media has consistency in words, terms, and sentences that make this media easy to understand during the learning process (Astuti et al., 2019). Color, font size, and the typeface must be made more attractive (Riwu et al., 2019), which will make the developed teaching materials more suitable to use. It can be said that BATIK Module can be used properly because it is developed according to the character and needs of students. Thus, students can develop a more optimal conceptual understanding.

Students' understanding of concepts related to clean and healthy living will increase because students get the information, they need from the developed BATIK module. It will also increase if students learn to be more active independently (Darling-Hammond et al., 2020; Deslauriers et al., 2019). With students learning independently and actively, students will understand more about the concepts being taught. Conceptual understanding is a mechanism that underlies meaningful learning. Meaningful learning here means a person's ability to understand content along with connecting new ideas with previous knowledge and experience (Farrokhnia et al., 2019). Concept understanding is closely related to one's working memory in the learning process (Rhodes et al., 2016). The description also illustrates that the process of understanding the concept has a very important role. Understanding the concept is one of the prerequisites and the ability to relate concepts and mental readiness in the learning process (Nomleni & Manu, 2018), as well as a comprehensive understanding of concepts, are absolute requirements in achieving success. learning (Widyantari & Ayub, 2020). In other words, understanding the concept is an important component of the level of student knowledge. By understanding the concept of Clean, Healthy, and Beautiful Environment material, you will be able to provide experiences that will later be applied in their daily lives. In other words, if students have a good understanding of the concept, it will affect the behavior that will be carried out.

Following the results of this study, the BATIK module gave a certain impact on the students' behavior. During the research, students who initially rarely washed their hands, and wore masks became gently washed their hands more often and wore masks. Besides that, students were also accustomed to throwing the trash in the given trash can. It proved that a good understanding of the concept will affect the behavior of students in a clean and healthy life. Clean and Healthy Living Behavior is a collection of behaviors that are practiced based on the awareness that makes a person able to help himself (independently) in the health sector. Healthy behavior refers to efforts to prevent or avoid the causes of disease or health problems and behavior in seeking, maintaining, and improving health (Lowe et al., 2022; Wu & Sheng, 2021). These actions include: a proportionate menu, regular exercise, not smoking and drinking alcohol, sufficient rest, controlling stress, and positive health behaviors and lifestyles (Fahrurazi et al., 2016; Umaroh et al., 2016). Healthy behavior includes knowledge, attitudes, and actions (Mailoa et al., 2017; Umaroh et al., 2016). With the BATIK module, students show indicators of clean and healthy living behavior both from the results of the questionnaire and the observations.

Based on several indicators measured, the most changing is the behavior of awareness of Health protocols. Students who initially were not accustomed to washing their hands either with soap or other materials became accustomed to washing their hands. This condition will certainly have a good impact on student health because washing hands is one way to prevent the spread of disease. It is necessary to know how to wash hands properly and correctly (Kurniasih, 2020; Wikurendra, 2018). The knowledge provided will certainly have a positive impact. Another behavior that has also increased is the use of masks. The use of masks is currently needed because the use of masks can avoid disease. The use of masks is part of a comprehensive series of prevention and control measures, that can limit the spread of certain respiratory

viral diseases (Purnama et al., 2020; Sulaeman et al., 2022). Using a proper mask will have a positive impact on the students' health.

These descriptions illustrate that there is a significant effect of the BATIK Module on the conceptual understanding of clean and healthy living behavior. Through interesting modules which combine thematic materials and health materials, students will understand more about how to keep self-cleanliness and the environment. The illustration and pictures shown in the developed module can make students easier to learn and stimulate their activeness in the learning process. It also can influence the students' understanding of a clean and healthy environment. In addition, a good understanding of a clean and healthy environment will enable students to apply what they understand in their daily lives

4   Conclusion

The results of the study indicated that there were differences in understanding the concepts and behaviors of clean and healthy living by students who were taught using the BATIK module and students who were taught without the BATIK module. Other findings based on the results of the descriptive analysis were found where the variable of clean and healthy living behavior was more influenced by learning with the BATIK module. It could be seen from the value of the difference in scores between the variables of understanding the concept and behavior of clean and healthy living. Some of the behaviors that have increased were handwashing and the use of masks, while other indicators have also experienced quite good changes than before.

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