Tri Hita Karana-based interactive e-worksheet for Indonesian language subjects to improve literacy skills and prevent bullying in elementary schools

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Abstract: Low literacy skills and the still high number of bullying cases are two problems currently faced in schools in Indonesia. Therefore, this study aims to develop an Interactive E-Worksheet Based on Tri Hita Karana for Indonesian Language Subjects to Improve Literacy and Prevent Bullying in Elementary Schools. To achieve these goals, this study was conducted by following the development research model with the ADDIE approach consisting of five stages: analysis, design, development, implementation, and evaluation. Data in this study were collected through observation, questionnaires and tests. Data were analyzed qualitatively and quantitatively. The results of this study indicate that the developed e-worksheet is proven valid and has a good level of practicality. In addition, based on the results of the analysis using MANOVA, it was found that learning using the Interactive E-Worksheet Based on Tri Hita Karana for Indonesian Language Subjects can effectively improve students' literacy skills and understanding of bullying so that bullying prevention can be carried out optimally. Thus, the practical implication of this study is that the Tri Hita Karana-based Interactive E-Worksheet for Indonesian Language Subjects, developed to improve literacy skills and prevent bullying, can be used as teaching materials to achieve similar goals in other schools.

Keywords: Bullying, E-worksheet, Indonesian language, Literacy, Tri hita karana.

1. Introduction

The Indonesian government has launched the Vision of Golden Indonesia 2045. Of course, to achieve this Vision, extraordinary synergy is needed between all components of the nation. One such synergy is the synergy of the world of education, which can produce superior, characterful human resources and compete in global competition.

However, the reality in Indonesian education today shows that there are still many problems that are the main concern of the central and regional governments. These problems are the low literacy skills of students and the still high level of bullying behaviour in schools. According to data from the Programme for International Students Assessment (PISA), children and adolescents in Indonesia experience 15% intimidation, 19% are ostracized, 22% are insulted, 14% are threatened, 18% are pushed and beaten by friends, and 20% are gossiped about with bad news. In addition, UNICEF also noted that Indonesia has a higher position regarding the level of child violence when compared to other Asian countries such as Vietnam, Nepal and Cambodia (Almizri & Firman, 2022; Elmahera, 2018; Oktaviani & Ramadan, 2023).

Data from the Indonesian Child Protection Commission (KPAI) found that as many as 861 cases of violence against children occurred in educational units (RRI, 2023). Bullying behavior at the educational level also occurs in Bali. Based on data from the Denpasar Bali Police, it was found that there were 23 cases of bullying reported throughout January-September 2023 (5). This Bullying case must be given

special attention from an early age. This is because bullying behaviour can interfere with students' mental and emotional development (Khairunisa et al., 2022; Sukmawati et al., 2022; Zulqurnain & Thoha, 2022).

One of the factors causing the high number of bullying cases is the lack of literacy among students (Djamzuri & Mulyana, 2023; Ibnu, 2023). In 2023, the literacy competence of elementary school students in Indonesia was 61.53% (Alamsyah, 2023; Ashari, 2023; Kompas, 2023). The low literacy skills of elementary school students were also found in several studies. The study stated that the average percentage of literacy skills mastered by elementary school students was still below 60% (Anggraeni & Mukhlis, 2020; Harahap et al., 2022).

The low literacy skills of elementary school students also occurred in the province of Bali. Based on data obtained from the Satu Data Indonesia website of Bali Province, it was found that the average literacy ability of elementary school students in Bali was 56.34% (Provinsi Bali, 2022). These results indicate that the average literacy ability of elementary school students in Bali is lower than the average literacy ability of elementary school students in Indonesia. To overcome this problem, various efforts have been made by various parties. One of these efforts is to hold various training for elementary school teachers to improve students' literacy skills (Sudiana et al., 2023; Sukmayasa et al., 2022).

Based on the explanation above, the literacy skills and bullying behaviour of elementary school students, especially in Bali, must be given serious attention from an early age. Therefore, efforts need to be made to improve literacy skills to prevent bullying behaviour of elementary school students in Bali by providing early education about the dangers of bullying behaviour so that the mental and emotional development of elementary school students, especially in Bali, can develop optimally.

For this reason, this study specifically aims to develop a Tri Hita Karana (THK)-based Interactive E-Worksheet for Indonesian Language Subjects to Improve Literacy and Prevent Bullying in Elementary Schools. The selection of THK in this study as the ideological basis for problem-solving is because the THK teachings teach us to always maintain harmony between humans and God, humans and others, and humans and the surrounding environment. So, the THK teachings are very relevant to be used in overcoming literacy and bullying problems in schools. The THK-based Interactive E-Worksheet for Indonesian Language Subjects contains assignments for students to read various narrative stories in the form of writing or videos related to the dangers of bullying behaviour. In addition, the Interactive E-Worksheet will also provide various quizzes created using various games/designs to determine students' understanding of the material they have learned. With the THK-based Interactive E-Worksheet for Indonesian Language Subjects, it is hoped that students will be more enthusiastic about improving their literacy skills and understand that bullying behaviour is not good.

2. Method

This study was conducted in nine locations spread across nine districts/cities in Bali. This study uses a development method with the ADDIE approach. This method consisted of five steps, Analysis, Design, Development, Implement, and Evaluate (Branch, 2009). In the analysis stage, a needs analysis was carried out, analyzing Learning Achievements and Learning Objective References and compiling instructions for the Interactive E-Worksheet for Indonesian Language Subjects. Then, in the design stage, the product concept was designed, the display was designed, the theme was chosen, and quizzes or interactive assessments were created.

Furthermore, product development and validation were carried out during the development stage. In the implementation stage, expert testing was carried out with nine judges, namely three content experts, three media experts, and three language experts, as well as product validation, small group trials, field testing, and effectiveness testing. Finally, evaluation, product refinement, and product dissemination were carried out in the evaluation stage.

The data in this study were collected using questionnaires and tests. The data generated from the questionnaire used for the validity test were analyzed quantitatively by finding the average value, which was then converted into Aiken qualifications. Meanwhile, data from the test results were analyzed quantitatively using the MANOVA statistical test.

3. Findings

3.1. Validity Test Results

First, a product worthy of use must be validated. In this study, the validity of the product includes content, media, and language experts. The data from expert validation were analyzed using the Aiken V formula. The Aiken V formula is used because it can show the opportunity index between raters regarding the suitability of the items (questions or statements on the validation sheet) with the indicators to be measured. The results of each validity can be presented in Table 1.

Table 1.
Content validity results.

No	Indicator	V	Qualification (Aiken, 1985)
1	The material presented includes the material contained in the Learning Outcomes.	1.00	Very valid
2	The material presented reflects positions that support the achievement of all learning objectives.	1.00	Very valid
3	The material presented starts with an introduction of concepts, definitions, procedures, examples, cases, and exercises and then moves on to interactions between concepts according to the elementary school level.	0.83	Very valid
4	The concepts and definitions presented do not give rise to many interpretations.	1.00	Very valid
5	The images and illustrations presented are in accordance with reality and are efficient in improving student understanding.	1.00	Very valid
6	The material presented is actual, namely following student development.	0.83	Very valid
7	Examples of problems are in accordance with student development and are found in everyday life.	1.00	Very valid
8	The descriptions, exercises or case examples presented encourage students to work further and foster curiosity/critical thinking.	1.00	Very valid
Mean score		0.96	Very valid

Based on Table 1 above, two aspects of content validity (material) are used, namely content feasibility and presentation feasibility. In content feasibility, indicator (1) The material presented includes the material contained in the Learning Outcomes, getting a score of 1.00 with a very valid qualification. Indicator (2) The material presented reflects the description that supports the achievement of all learning objectives, getting a score of 1.00 with a very valid qualification. Indicator (3) The material presented starts from introducing concepts, definitions, procedures, examples, cases, and exercises to interactions between concepts according to the elementary school level, getting a score of 0.83 with a very valid qualification. Indicator (4) The concepts and definitions presented do not give rise to many interpretations, getting a score of 1.00 with a very valid qualification. Indicator (5) The images and illustrations presented are in accordance with reality and are efficient in improving student understanding, getting a score of 1.00 with a very valid qualification. Indicator (6) The material presented is actually in accordance with student development, getting a score of 0.83 with a very valid qualification. Indicator (7) Examples of problems following students' development that are found in everyday life are getting a score of 1.00 with a very valid qualification. Indicator (8) Descriptions, exercises, or examples of cases presented encourage students to work on them further and foster curiosity/critical thinking, resulting in a score of 1.00 with a very valid qualification.

Table 2.
Language validity results.

Aspect	No	Indicator	V	Qualification (Aiken, 1985)
Readability	1	Using good and correct language rules.	0.83	Very valid
	2	Using terms that are appropriate to the concept of worksheet development	1.00	Very valid
	3	The language used is straightforward and understandable to users.	1.00	Very valid
	4	The language used is communicative.	0.92	Very valid
	5	Accuracy of word choice in describing material.	0.92	Very valid
	6	The sentences used represent the content of the message or information you want to convey.	1.00	Very valid
	7	The sentences used are simple and straight to the point.	1.00	Very valid
	8	The use of language supports ease of understanding the flow of the material.	1.00	Very valid
	9	The use of language is following the intellectual development of students.	1.00	Very valid
	10	The use of language is following the emotional development of students.	1.00	Very valid
Conformity to Indonesian Language Rules	1	Spelling accuracy.	0.83	Very valid
	2	Accurate use of capital and lowercase letters.	1.00	Very valid
	3	Correct use of standard words.	0.92	Very valid
	4	Accurate use of punctuation marks.	0.92	Very valid
	5	Accuracy in the use of morphemes or affixes.	0.83	Very valid
	6	Accuracy of writing words in a foreign language.	0.92	Very valid
	7	Accuracy of word choice at the beginning of a sentence or paragraph.	1.00	Very valid
	8	Effective use of sentences.	0.92	Very valid
	9	Use of good sentence structure.	0.92	Very valid
	10	Consistency in the use of terms and symbols or icons.	1.00	Very valid
Mean Score			0.95	Very valid

Based on Table 2 above, the language validity aspects of the Interactive E-Worksheet Based on THK for Indonesian Language Subjects consists of two aspects: readability and conformity to Indonesian language rules. The readability aspect consists of ten indicators, including the following. The results of indicator (1) Using good and correct language rules are 0.83, with a very valid qualification. The results of indicator (2) Using terms that are in accordance with the concept of developing an Interactive E-Worksheet Based on THK for Indonesian Language Subjects are 1.00 with a very valid qualification. The results of indicator (3) The language used is straightforward and can be understood by users, which is 1.00 with a very valid qualification. The results of indicator (4) The language used is communicative, with 0.92, which is a very valid qualification. The results of indicator (5), which describes the accuracy of word choice in describing the material, are 0.92, with a very valid qualification. The results of indicator (6) The sentences used represent the contents of the message or information to be conveyed, which is 1.00 with a very valid qualification. The results of indicator (7) The sentences used are simple and directly on target are 1.00 with a very valid qualification. The result

of indicator (8) is that language supports the ease of understanding the material flow, which is 1.00 with a very valid qualification. The result of indicator (9), The use of language in accordance with the intellectual development of students, is 1.00, with a very valid qualification. The result of indicator (10), The use of language in accordance with the emotional development of students, is 1.00, with a very valid qualification. The suitability of Indonesian language rules consists of ten indicators. The results of the achievement of its validity can be explained as follows. The result of indicator (1) Spelling accuracy is 0.83, with a very valid qualification. The result of indicator (2) The accuracy of the use of capital letters and lowercase letters is 1.00, with a very valid qualification. The result of indicator (3) The accuracy of the use of standard words is 0.92 with a very valid qualification. The result of indicator (4) is that the punctuation use accuracy is 0.92, which is a very valid qualification. The result of indicator (5) is that the accuracy of the use of morphemes or affixes is 0.83, which is a very valid qualification. The result of indicator (6) is that the accuracy of writing words in foreign languages is 0.92, with a very valid qualification. The result of indicator (7) is that the accuracy of word selection at the beginning of a sentence or paragraph is 1.00, with very valid qualification. The result of indicator (8) is that effective sentence use is 0.92, with very valid qualification. The indicator (9) result is that good sentence structure is 0.92, with very valid qualification. The indicator (10) result is that the consistency of using terms and symbols or icons is 1.00, which is a very valid qualification.

3.2. Practicality Test Result

The practicality testing of the use of Interactive E-Worksheet Based on THK for Indonesian Language Subjects was conducted in nine schools spread across 9 regencies in Bali, namely: SDN 1 Blahkiuh (Badung Regency), SDN Bayung Cerik (Bangli Regency), SDN 2 Petandakan (Buleleng Regency), SDN 3 Renon (Denpasar City), SDN 1 Buahan (Gianyar Regency), SDN 2 Kesimpar (Karangasem Regency), SDN 2 Takmung (Klungkung Regency), SDN 4 Batuagung (Negara Regency), and SDN 4 Babahan (Tabanan Regency). Based on the test results, the results were obtained as shown in Table 3 below.

Table 3.
Practicality test results.

No	Statement	Rater									Total
		1	2	3	4	5	6	7	8	9	
1	The material in the Interactive E-Worksheet Based on THK for Indonesian Language Subjects is easy for teachers to understand.	4	4	5	5	4	5	5	4	5	41
2	The material presented in the Interactive E-Worksheet for Indonesian Language Subjects can be studied repeatedly.	4	5	5	5	5	4	5	5	5	43
3	The description of the material and exercises in the Interactive E-Worksheet for Indonesian Language Subjects is clear and simple.	4	3	5	5	5	5	4	5	4	40
4	Interactive E-Worksheet for Indonesian Language Subjects is practical for students to work on	4	5	4	5	4	5	4	5	4	40
5	Interactive E-Worksheet for Indonesian Language Subjects is easy for teachers to use	4	5	5	5	4	5	5	5	5	43

6	The interactive e-worksheet display for Indonesian language subjects attracts students' attention to studying the material in depth.	4	4	5	4	5	5	5	5	5	42
7	The content of the Interactive E-Worksheet for Indonesian Language Subjects is equipped with illustrations, images and videos that are appropriate to the material.	5	5	5	4	5	4	4	5	4	41
8	The font size on the Interactive E-Worksheet for Indonesian Language Subjects is clearly legible	4	3	5	4	5	5	4	5	5	40
9	The colour combination used in the Interactive E-Worksheet for Indonesian Language Subjects is interesting.	4	4	5	4	5	5	5	5	5	42
10	The use of an interactive e-worksheet for learning Indonesian language subjects is efficient and can save time.	4	5	4	4	5	5	5	4	5	41
11	Interactive E-Worksheet for Indonesian Language Subjects can help deliver learning materials according to students' development levels.	4	4	5	4	4	5	5	5	5	41
12	Interactive E-Worksheets for Indonesian Language Subjects can support learning activities and meet the demands of the independent curriculum.	4	5	5	5	5	5	5	5	5	44
13	Interactive E-Worksheet for Indonesian Language Subjects can be used flexibly.	4	4	5	5	5	5	5	5	5	43
14	Interactive E-Worksheet for Indonesian Language Subjects can help improve students' literacy skills and prevent bullying.	4	5	5	5	4	5	5	5	5	43
15	Interactive E-Worksheet for Indonesian Language Subjects is suitable for application in Indonesian language learning materials.	4	5	5	5	5	4	4	5	5	42
Total											626
Mean Score											41.73
Mean score of the percentage											92.74
Category											Really practical

Table 3 above shows that teachers gave a very practical assessment (92.74%) in implementing the THK-Based Interactive E-Worksheet for Indonesian Language Subjects. In general, the THK-Based Interactive E-Worksheet for Indonesian Language Subjects is very good, interesting, and able to increase students' enthusiasm for learning Indonesian language material. However, it is better if teachers are given training first before using the THK-Based Interactive E-Worksheet for Indonesian Language Subjects because, in schools, not all teachers are able to operate technology well.

3.3. Effectiveness Test Result

To determine the effectiveness of using an Interactive E-Worksheet for Indonesian Language Subjects to improve literacy skills and prevent bullying behaviour among elementary school students, a trial was conducted in two classes in Buleleng, namely class IVB and IVC SDN 3 Banjar Jawa. Before the study was conducted, a class equivalency test was first conducted using the Indonesian language scores given by the homeroom teacher. The results were obtained based on the equivalency test using the t-test, as shown in Table 4.

Table 4.
Statistical matching test results.

Group	t	df	Sig. (2-tailed)
IVC - IVB	0.674	34	0.505

Based on the equivalence test results above, the t count was obtained at 0.674 with a significance of 0.505. These results indicate that the significance is greater than 0.05, so it can be concluded that the difference in student abilities is not significant or, in other words, the entire class has equal abilities. Based on research that has been conducted on groups of students who participated in learning using Interactive E-Worksheet for Indonesian Language Subjects, the following data on student literacy abilities were obtained. The average score of students' literacy skills was 37.80, the mean score was 38, the most frequently occurring score was 38, the standard deviation was 2.81, the magnitude was 7.87, the range was 12, the minimum score was 31, and the maximum score was 43. Meanwhile, the literacy skills of students who were taught using the conventional model got an average score of 34.91, a mean score was 35, the most frequently occurring score was 35, a standard deviation was 3.28, a magnitude of 10.79, the range was 14, the minimum score was 28, and the maximum score was 42. These results indicate that the literacy skills of students who were taught using the Interactive E-Worksheet for Indonesian Language Subjects are better than the literacy skills of students who were taught using the conventional model.

Furthermore, the prevention of bullying of students who are taught through learning using Interactive E-Worksheet for Indonesian Language Subjects gets an average score of 19.97, a mean score of 20, the most frequently occurring value of 20, a standard deviation of 1.93, a magnitude of 3.73, a range of 7, a minimum score of 16, and a maximum score of 23. Meanwhile, the prevention of bullying of students who are taught using conventional learning models gets an average score of 18.06, a mean score of 18, the most frequently occurring value of 18, a standard deviation of 2.27, a magnitude of 5.17, a range of 7, a minimum score of 14, and a maximum score of 21. These results indicate that students' understanding of bullying of students who are taught through learning using Interactive E-Worksheet for Indonesian Language Subjects is better than students' understanding of bullying who are taught using conventional models, so bullying prevention is more effective using Interactive E-Worksheet for Indonesian Language Subjects.

The data were then analyzed using the MANOVA test to determine the significance of the differences in students' literacy and bullying prevention skills. Before the MANOVA test, the analysis requirements test was first carried out, namely, the data distribution normality test, variance homogeneity test, and correlation test between dependent variables. The results of the requirements test are as follows.

3.3.1. Normality Test Results

The normality test of data distribution in this study uses the Kolmogorov-Smirnov technique, which is calculated using SPSS. The results of the tests that have been carried out are in Table 5.

Table 5.
Normality test results.

Variable	Group	Kolmogorov-Smirnov[a]		
		Statistic	df	Sig.
Literacy skills	Experiment	0.128	35	0.155
	Control	0.105	35	0.200
Bullying prevention	Experiment	0.134	35	0.111
	Control	0.146	35	0.056

Based on the normality test of the data distribution above, it is known that the significance value between data groups in this study obtained a significance greater than 0.05. Referring to this test, it can be concluded that all data groups in this study are normally distributed.

3.3.2. Homogeneity of Variance Test

A homogeneity test was conducted on the data group of literacy ability and students' understanding of bullying as prevention of student bullying both collectively and individually. The homogeneity test collectively used the Box'M test calculated with SPSS. The results are in Table 6.

Table 6.
Homogeneity of variance test results.

Box's M	2.360
F	0.762
df1	3
df2	832320
Sig.	0.515

Furthermore, the homogeneity test was carried out individually using Levene's Test. Based on Levene's Test calculated using SPSS, the results are obtained in Table 7.

Table 7.
Levene's test.

Variable	F	df1	df2	Sig.
Literacy skills	0.690	1	68	0.409
Students' understanding of bullying as a prevention of bullying	1.139	1	68	0.290

Based on the Box'M test above, a significance of 0.515 was obtained, while Levene's Test for the literacy ability variable obtained a significance of 0.409 and the variable of students' understanding of bullying as a prevention of student bullying was 0.290. These results indicate that the significance obtained from the Box'M test and Levene's Test is greater than 0.05, so it can be concluded that the data in this study are homogeneous, both together and individually.

3.4. Correlation Test Between Dependent Variables

The correlation test between dependent variables was conducted on the data on literacy skills and bullying prevention of students who were taught using Interactive E-Worksheet for Indonesian

Language Subjects and students who were taught using conventional learning models. The correlation test was conducted using product moment correlation with the help of SPSS at a significance level of 5%. The correlation test results using product moment with the help of SPSS can be seen in Table 8 below.

Table 8.
Correlation test between dependent variables.

Sample group	r_{xy}	N	Sig.	Conclusion
Literacy skills and bullying prevention of students who learn through learning using interactive E-Worksheet for Indonesian language subjects	0.216	35	0.213	Not correlated
Literacy skills and bullying prevention of students who learn with conventional learning models	0.068	35	0.700	Not correlated

Based on Table 8 above, it is shown that the significance of both groups of research samples is greater than 0.05. From these results, it can be concluded that the data on literacy skills and bullying prevention of students who take part in learning using Interactive E-Worksheet for Indonesian Language Subjects and students who take part in learning with conventional learning models are not correlated. Because both data are stated to be uncorrelated, hypothesis testing can be continued using Manova analysis. The following results were obtained based on Manova analysis with the help of SPSS.

    1) There is a significant difference in literacy skills between students who learn using the Interactive E-Worksheet for Indonesian Language Subjects and students who learn using conventional learning models. The calculated F is 15.622, with a significance of 0.001.

    2) There is a significant difference in bullying prevention between students who learn using the Interactive E-Worksheet for Indonesian Language Subjects and students who learn using conventional learning models. The calculated F is 14.399, with a significance of 0.001.

    3) Taken together, there is a significant difference in literacy skills and bullying prevention between students who learn using Interactive E-Worksheet for Indonesian Language Subjects and students who learn using conventional learning models. The calculated F is 13.090, with a significance of 0.001.

Based on the test results with the Manova analysis above, it can be concluded that learning using an Interactive E-Worksheet for Indonesian Language Subjects can effectively improve students' literacy skills and understanding of bullying so that optimal student bullying prevention can be carried out.

4. Discussion

In general, this study found that e-worksheets have proven to improve student literacy and prevent bullying in elementary schools compared to conventional teaching materials. Specifically, the results of the research found in this study can be discussed, such as the validity test results, practicality, and effectiveness of the e-worksheets developed. This study's results align with theories regarding technology-assisted learning and the empirical results of previous studies.

The results of the validity test showed that the e-worksheets developed were proven to be valid. This means that the e-worksheets developed are suitable for use in learning literacy skills and preventing bullying. This is in accordance with the concept of the validity of teaching materials, namely teaching materials are declared valid if they are in accordance with learning objectives (Adefolarin & Gershim, 2022; Arikunto, 2013; Ribeiro & Spadella, 2018). The e-worksheets' validity was tested by material experts, media experts, and language experts, and it was found that the e-worksheets were proven to be valid in terms of content, media, and language. Content validity is important to ensure that the materials provided can help students achieve learning objectives (Ribeiro & Spadella, 2018; Sena et al., 2020). With materials that follow learning objectives, students will find it easier to improve their learning achievement because their learning achievement will be measured based on the achievement of learning objectives (Division, 2024).

Validity from the media side ensures that the media available in the e-worksheet also helps students achieve their learning objectives. Thus, learning media that are in accordance with learning objectives will also help students improve their learning achievement (Abdulrahaman et al., 2020; Geraee et al., 2015; Rooha et al., 2023). Likewise, from the language side, it was found that the language used in the e-worksheet is straightforward, communicative, and follows students' intellectual and emotional development. Clear and easy-to-understand language is very important in elementary-level learning because it can facilitate students' understanding of the material presented. With the right language, students find it easier to understand difficult concepts and are more actively involved in learning (Chan et al., 2022; Nakamura et al., 2023).

When viewed from the practicality test, this study found that teachers considered this product very practical. Practicality is crucial in the implementation of educational technology. Practicality means that the product developed is easy to use in achieving goals (Fransisca et al., 2019; Supendra et al., 2022; Umamah et al., 2023). In other words, practical educational products are educational products that are easy for teachers and students to use in the process of achieving learning objectives. Thus, practical educational products will be more easily accepted and integrated into daily learning and help teachers and students ensure that the learning process is able to achieve learning objectives.

Based on the results of the effectiveness test, it was found that the developed e-worksheet significantly improved students' literacy skills. Students who were taught using e-worksheets had higher literacy scores than those taught using conventional methods. This is in line with previous findings that interactive learning media can increase student engagement and make the learning process more interesting (Daryanes et al., 2023; Gutmann et al., 2015; Li et al., 2024). Interactivity in learning allows students to actively participate, improving their understanding and literacy skills.

In addition, THK-based e-worksheets are also effective in preventing bullying behaviour. Students' understanding of bullying increased, as seen from the higher scores on the bullying prevention aspect compared to conventional methods. The use of the THK concept, which emphasizes harmony between humans and others, the environment, and God (Indriani et al., 2020; Pickel-Chevalier & Budarma, 2016; Sriartha & Giyarsih, 2017), also contributes to learning moral values that are relevant to preventing bullying behaviour. With the integration of these local values, e-worksheets not only improve the cognitive aspect but also the affective aspect of students. Learning supported by interactive technology like this allows for a more holistic approach to the learning process, where aspects of knowledge, skills and moral values can be taught in a balanced way.

5. Conclusion

From the research results that have been explained previously, it can be concluded that the THK-Based Interactive E-Worksheet for Indonesian Language Subjects to Improve Literacy and Prevent Bullying in Elementary Schools has been successfully developed. Specifically, this study found that the developed THK-Based Interactive E-Worksheet for Indonesian Language Subjects was proven valid in terms of content, media, and language. Teachers and students had no problems implementing THK-Based Interactive E-Worksheet for Indonesian Language Subjects in the learning process. In addition, the THK-Based Interactive E-Worksheet for Indonesian Language Subjects was also proven to be able to achieve the goal of improving student literacy and preventing bullying in elementary schools. However, this study still has limitations, especially in the scope of the trial, which only involved nine schools. A wider trial in various regions and different school levels can provide a more comprehensive picture of the effectiveness of THK-based e-worksheets. In addition, further research is needed to test the sustainability of the impact of e-worksheets on literacy skills and bullying prevention in the long term.

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