

Development of Deep Learning-Based Student Worksheets for Christian Religious Education and Ethics in Shaping Critical and Creative Thinking Patterns in Senior High School

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Abstract. Development research combined with the Rowntree model to produce a Student Worksheet product for Christian religious education and character education based on deep learning in forming critical and creative thinking patterns in phase F of class XI at SMAN 1 Sigi, aims to find out the steps for developing LKPD, the effectiveness and feasibility of LKPD in encouraging critical and creative thinking patterns of students consisting of three stages, namely planning, development, and evaluation. The product testing stage, starting with expert testing; material, language, and media. Then the product was tested on 4 students for one-on-one evaluation and 30 people for field evaluation. The results of the study showed an average value of material experts 4.2 considered very good, language experts 4.6 very good, and media experts 4.8 considered very good. The student trial stage, the average result of the individual test stage was 95.6% which means the product was considered very good, the field trial stage 83.69% very good. The results of the pretest and posttest showed an increase in the percentage of learning completeness of 30.79%. The percentage of divergent student creativity tests was 21.1%, critical reasoning tests were 21.1%, meaning that creativity and critical thinking skills had been formed and increased after studying the LKPD learning materials. The conclusion is that the LKPD learning materials for Christian religious education and character education based on deep learning are very good, suitable for use and need to be maintained because they can form critical thinking patterns and increase student creativity.

Keywords: Christian Religious Education and Character Education; Creativity; Critical Thinking; Deep Learning; LKPD.

1. INTRODUCTION

Education is structured communication carried out continuously, designed to support the improvement of student learning activities, which are vital for the development of a nation. Significant progress for a nation is determined by the quality of its human resources (HR). That is why it is important to improve the quality of education. Awareness of education is very beneficial for society before those who still care show development and change in the future that is crucial for individuals. No one is present without education, sharing information, and honing their skills. Education is essentially a process of developing humanity, to shape individual maturity and improve their behavior.

Education is an effort to improve knowledge obtained through both formal and informal institutions in order to produce quality individuals. If the desired quality is to be achieved, it is important to set appropriate educational goals. It is these educational goals that will determine success in the process of shaping quality human character, without neglecting the role of other elements in education (Aziizu, 2015). The national educational objectives outlined in the Preamble to the 1945 Constitution are to enlighten the life of the nation. (Indonesia, 2003) The intelligence referred to here is not limited to intellectual aspects alone, but encompasses a broader, more comprehensive understanding of intelligence. In line with this, Law No. 20 of 2003 concerning the National Education System in Article 1 paragraph (1) states that education is a planned and

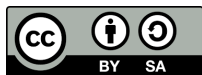
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conscious effort to create a learning climate or learning process so that students can hone their abilities to have spiritual and religious strength, self-control, character, intelligence, good moral values, and the skills required for themselves, society, the nation, and the state (No. 20, 20 C.E.).

21st-century learning requires students to have critical and creative thinking skills to face real-life challenges. One strategy that can be applied is the development of innovative and contextual learning media. Student Worksheets (SW) are one of the effective tools for fostering active student engagement in the learning process. The use of an appropriate approach in developing SW is key to creating meaningful and student-centered learning experiences. Previous studies have shown that the development of SW effectively enhances critical thinking skills and learning activities.

Based on these findings, it can be concluded that developing LKPD with the right approach is very effective in supporting meaningful learning. Therefore, developing deep learning-based LKPD in Christian Religious Education and Ethics subjects is an innovative step to shape students' critical and creative thinking spiritually and intellectually.

The use of teaching materials will greatly support the effectiveness of the learning process and the delivery of messages and lesson content. One method used by teachers to facilitate students' understanding and mastery of lesson content, especially in Christian religious education, and to support the effectiveness of the learning process, is to utilize Student Worksheets (LKPD) as teaching materials. These worksheets are compiled by subject teachers and used during the learning process. The selection of teaching materials should be based on the understanding that the materials offer student-centered activities that can be presented in the form of LKPD. (Hartati & Refa'i, 2019) These teaching materials are intended to serve as a guide for teachers in determining the steps of learning in their classroom instruction, but the fact is that schools do not have student worksheets provided by the school or student worksheets created by the teachers themselves. The absence of student worksheets (LKPD) in schools will impact students' creativity and thinking patterns. For example, one requirement in class is to provide an analysis of the material that has been taught in discussions, but they still do not understand the concepts of the material and are unable to articulate the results of their analysis. Therefore, it is still difficult to convey the material and achieve the desired objectives. The level of students' thinking is still limited to remembering and understanding the existing material, indicating that their thinking is still low and there is no stimulus for critical thinking. Another identified problem is the dislike or refusal to participate in learning, which affects students' low interest in Christian Religious Education and Moral Education lessons. Students believe that in Christian Religious Education and Moral Education lessons, teachers do not present new material and do not involve students in the learning communication process.

So far, there have been many complaints that LKPD only contains practice questions, and students are asked to work on them during free periods or as homework. Another problem that emerged from unstructured interviews or discussions with Christian Religious Education teachers at SMA Negeri 1 Sigi revealed several obstacles in the use of LKPD in schools, such as: (1) There are no Christian Religious Education LKPDs designed by teachers, (2) Teachers compile Christian Religious Education LKPDs using material taken from publisher sources, resulting in content that is generally generic and of low difficulty, making students feel unchallenged when answering the questions. As a result, when faced with question analysis requiring higher-order thinking, students struggle.

To overcome these limitations, teachers must be able to find solutions that suit the needs of students in the teaching and learning process. Teachers play a very important role in developing teaching materials that suit the needs of their students. Teaching materials need to be designed to support the learning process of students and can serve as additional learning resources besides textbooks or workbooks. One of the teaching materials currently being developed is the

Student Worksheet (LKPD), which is designed to help students solve learning problems that cover structured material and worksheets. To teach effectively, a teacher must have extensive knowledge and good social skills. (Gultom Andar, 2007)

In the learning process, there are many variations of learning resources that can be utilized by teachers, such as textbooks, supplementary books, student worksheets, and media. However, the various variations and innovations in teaching applied by teachers, including student worksheets, need to be adapted to the applicable curriculum, the level of student ability, and the location where students carry out their learning activities with a purpose (Prastowo, 2012). An appropriate lesson plan will influence the preparation of teaching materials and student worksheets by teachers. The materials contained in student textbooks and worksheets sold on the market are not in line with the lesson plans or teaching modules created by teachers. Therefore, teachers need to develop LKPDs that meet students' needs, as teachers typically rely on LKPDs to help students understand the material. According to Prastowo, to achieve targets aligned with success indicators, the instructional materials used by teachers must be supplemented with LKS (Prastowo, 2012).

2. Preliminaries or Related Work or Literature Review

The development of Student Worksheets (LKPD) has become a focus in improving the quality of learning, especially in fostering students' critical and creative thinking skills. Dewi Fairuz Zulaikha developed POE-based LKPD, which proved to be very effective with an average student response score of 3.32, indicating that the LKPD is suitable for use in high schools (Zulaikha, 2019). A similar study by Ariani also showed that LKPD based on discovery learning in heat-related material at junior high schools received a feasibility score of 3.27 with a feasibility index of 0.82, categorized as highly engaging (Ariani & others, 2020).

Furthermore, Aulia and Bahri stated that POE-based LKPD can improve students' critical thinking skills and learning activities, with a standard gain value of 0.726 (high category) for learning activities and 0.445 (medium category) for critical thinking skills (Aulia & Bahri, 2023). Other studies by Lovyantika (Lovyantika, 2021) and Havid (Havid, 2022) also support the importance of developing LKPD with a scientific, inquiry-based approach and the integration of 21st-century skills, particularly to foster critical and creative thinking skills.

Implementation of LKPD

In its implementation, Deep Learning can be integrated into the Student Work Sheet (LKPD), which is designed to develop higher-order thinking skills. The LKPD serves as an active learning tool that encourages students to explore concepts, analyze problems, express ideas, and develop contextual solutions. Deep Learning-based LKPDs not only present routine exercises, but also challenge students to think openly, reflectively, and innovatively.

In this regard, LKPD using the Deep Learning approach offers a great opportunity to design learning activities that help students reflect on Christian teachings in depth, think critically about current moral issues, and act creatively and responsibly in accordance with the values of the Gospel.

21st-century learning requires students to have high-level thinking skills, including critical and creative thinking, collaboration, and effective communication. In this context, students must not only master the material, but also be able to connect knowledge with real life and take an active role in solving problems in their environment. Deep learning is a learning approach that encourages students to understand concepts in depth, connect knowledge across fields, and apply it in real-world contexts through collaborative and reflective activities. (Fullan, 2018). Through this approach, students are required not only to understand the content, but also to create real solutions to various social, environmental, and spiritual issues.

Sharuan and this research lies in the development of LKPD based on Deep Learning in the context of Christian Religious Education and Character

Education, a field that is still relatively rarely touched in integration with 21st century learning. This approach presents a new world in the development of character and spirituality of students through a critical, creative, and contextual learning process. Stawa not only understands Christian values theoretically, but is also invited to relax and apply them in real life responsibly.

The benefits of this research, practically, are to provide innovations in learning media that support active student involvement, improve critical and creative thinking skills, and strengthen students' character and social awareness in the light of Christian teachings. Theoretically, this research contributes to enriching the LKPD development model with the integration of the Deep Learning approach in the field of religious education, which has not been widely developed before.

In the midst of the dynamics of globalization, teachers are required to not only master the teaching materials, but also be able to design learning that is motivating, contextual, and transformative. In this context, the professionalism of Christian Religious Education and Character Education teachers is very important, especially in developing learning media such as Student Worksheets (LKPD) that are relevant to the needs of the times. Professional teachers must be able to create learning that does not only emphasize human values, but also fosters critical thinking, patriotism, and selective Christian character towards real life.

One approach that can be adopted by professional teachers is Deep Learning, which is a deep, meaningful, and action-based learning approach (Fullan et al. 2017).

The research was conducted at SMA Negeri 1 Sig, Central Sulawesi Province, Sig Regency. This research involved several parties at SMAN 1 Sgi, namely, Christian religious education teachers, students of phase F class XI as research objects.

Gaps in Understanding and Participation

Several previous studies have shown the effectiveness of an active approach in developing LKPD Zulaikha (2019). Aulia & Bahri (2023), and Ariani (2020) have proven that LKPD based on POE and discovery learning can improve critical thinking and active participation of self. Research by Havad (2021) and Layyantika (2021) also emphasizes the importance of integrating scientific and inquiry approaches in developing critical and creative thinking skills. This research develops Student Worksheets Based on In-Depth Learning for Christian Religious Education and Character Education in Forming Critical and Creative Thinking Patterns in Senior High Schools which is different from previous research.

3. Materials and Method

This study used the research and development method (Research and Development) or abbreviated as R&D. Research and development focuses on a process or steps to develop stone products or improve existing products that can be considered. (Sugiono, 2019) by using the Rowtree model approach (Prawiradilaga, 2008 in the development of Kraten religious education learning products.

Rowntree's product model begins with the planning stage, followed by the development stage and the evaluation stage. The process in developing the third sheet of teaching materials for Christian religious education students (LKPD) is as follows.

1) **Рacчтанало** At this stage, the researcher observes the characteristics of the students, analyzes the needs of the students, formulates learning objectives, outlines and develops the material to be given.

2) **Development** At this stage, the researcher prepares the materials and drawings that will be used in the development of the Christian Religious Education and Character Education Student Activity Sheet (LKPD), as well as the equipment and human resources that will be used when designing the LKPD. Then the production of a prototype is carried out for students based on digital and printed materials.

3) Evaluation of the evaluation is to measure the validity of the product at the time and get responses from experts, as well as limited trials and field trials by the submitted team and improvements or revisions based on input.

Validation expert participants: 2 material experts, 2 language experts, 6 limited op student and 30 student for field testing.

The data collection instrument of the expert validation questionnaire used a Likert scale of 1-5, designed to obtain information in the form of reports on the personality or knowledge of respondents. (Prastowo. 2011) The questionnaire used as an instrument in this study was a student response questionnaire, observation and interviews to assess teacher and student responses.

Analysis of questionnaire data results will provide information to determine the effectiveness of the developed LKPD, quantitative data is analyzed to calculate the average validation score and learning outcomes are analyzed descriptively to improve LKPD teaching materials. Learning outcome tests, namely conducting pretests and posttests, are prepared by data, first an examination is carried out to see whether the data follows a normal distribution, in order to determine the most appropriate analysis method. Skewness, kurtosis coefficient, and graphs The histogram was analyzed to determine whether there was a deviation from the normal distribution of the pre and post intervention group data that was normally distributed ($p > 0.05$) and was suitable for the Paired t-test, while the control group data was not normally distributed and a non-parametric test was performed. For paired samples (pre-post control group) using the Wilcoxon sign ranks test (Woolson, 2005).

4. RESULTS AND DISCUSSION

The presentation of two main parts, the research results begin with presenting the results of the preliminary study, current student learning. 2) LKPD learning chapter development procedures: 3) model feasibility: 4) effectiveness of model development

Research result

Draft model 1 is a form of learning process development resulting from interviews and observations related to needs analysis. The next stage is to find a way to develop PAK and BP learning LKPD based on Deep Learning and form a unique and creative mindset using QR codes and printing. The success and effectiveness of learning is highly dependent on the design and development that focuses on needs analysis, which aims to create a learning atmosphere that is more supportive and in accordance with student characteristics. The model developed by the researcher is the Erasa learning model with the following steps I

Planning stage

Needs analysis. In this phase, needs analysis is conducted through observation to identify the problem situation and characteristics of students. In addition to conducting observations, researchers also provide questionnaires and conduct direct interviews with teachers and students. The results of this needs analysis will be the main guideline in the steps of development research.

Tabel 1. Learning Needs Analysis.

Number	Problems that occur	Current condition	Conditions that should be
1	Learning Materials LKPD	Learning materials LKPD not available	Learning materials should be provided to learners so that they can solve demands or problems in learning.

2	Student	students are passive because there is no attraction in the learning process	Students should be actively and independently involved so that the learning objectives can be applied.
3	Teacher	Teachers are not creative in managing learning Teacher-centered learning process Teachers are not creative in managing learning The learning process is teacher-centered (teacher center) there is no creativity in learning as a result the process learning is not fun	Teachers should be creative in managing learning It should be an independent student center because students are 16 years old and above.

Draft 2 is a model development resulting from

Research and Development carried out in a planned and systematic way through three phases, namely: (1) planning, (2) development, (3) testing and assessment, which is explained in the following steps of model development:

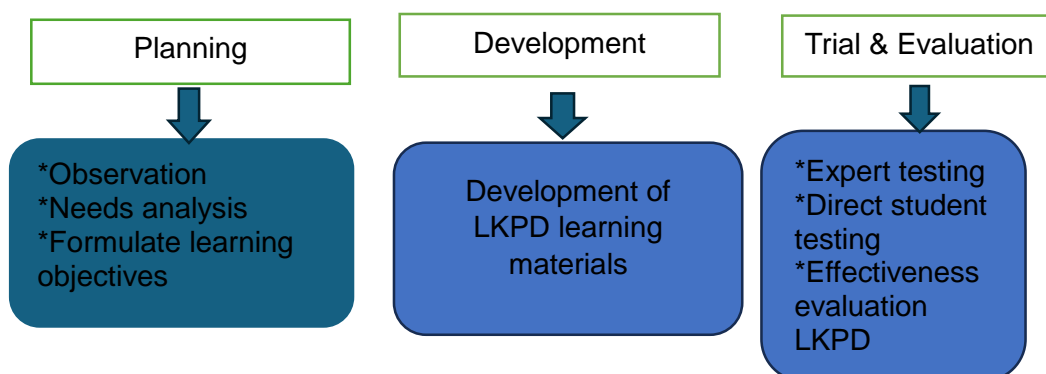


Table 2. Stage of Development

No	Stage of Development	Activity Description
1	Needs analysis Initial data collection, field observations, needs analysis and literature study.	Initial data collection, field observation, needs analysis and literature study.
2	Development of LKPD Model Development of LKPD model into semi-digital learning materials	Development of LKPD model into semi-digital learning materials
3	Evaluation of LKPD Learning Materials a. Expert trials; design, media, material / content and language Direct trials to students b. Evaluation of the effectiveness of the development of LKPD model	a. Expert testing; design, media, material/content and language Direct testing to students b. Evaluation of the effectiveness of the development of the LKPD model

The results of this development produce LKPD learning materials in printed form, and semi-digital used by students, and will produce a new paradigm shift for students in constructing learning in their daily lives. The benefits of learning materials developed for students are; (a) students have a guide to learning and teaching, (b) learning has more of its own appeal because LKPD learning materials are equipped with a QR Code which when scanned students will get a variety of video material, (c) students have the opportunity to test their own abilities. so that the value of LKPD learning materials in its application is more efficient, effective and has its own appeal, starting from the components:

instructions for use, objectives, material descriptions, illustrations in the form of images and QR codes, tasks, feedback, reflections, and bibliography.

Prototype 1: Figure 1 prototype of LKPD learning material script before expert validation



Cover Picture

Picture of Material

Figure 1. final LKPD learning material script Exposure Video

Prototype 2 produces printed LKPD scripts and digital material using the QR Code is ready to be distributed.



Figure 2. final LKPD learning material script

Cover Image

Material Exposure Video Image

The results of this development create printed and digital QR Code LKPD teaching materials that can be used by students, which are expected to bring changes in new ways of thinking for students in building learning in everyday life.

The benefits of the developed LKPD teaching materials for students are; (a) students have a reference for peer learning and teaching, (b) the learning process becomes more interesting because it is equipped with a QR Code which provides various materials when scanned by students, (c) students have the opportunity to test their own abilities, (d) students can teach each other. as peer tutors. This deep learning-based Christian Religious Education and Ethics LKPD teaching material consists of several elements so that its implementation becomes more efficient, effective, and interesting. These elements include: instructions for use, elements

and, sub-elements, CP phase F, objectives, material summary, QR Code Material Exposure Video, assignments, reflections, and bibliography.

Model Feasibility Validation Results

Several aspects were evaluated including content feasibility, presentation feasibility, and language assessment. In this process, researchers used a questionnaire designed for material experts, language experts and media experts. The questionnaire used a Likert scale of 1-5, with assessment criteria referenced from Widoyoko, 2017. (Widoyoko, n.d.)

Table 1. Assessment Criteria Average Score

Average Score	Classification
>4,2	Very Good
>3,4-4,2	Good
>2,6-3,4	Fair
>1,8-2,6	Deficient
≤1,8	Very Deficient

Expert Review

Expert review, the product that has been designed will be observed, assessed and evaluated by experts. Their input will be used to improve the learning package that has been developed. Feedback and suggestions from the validators will be recorded on the validation sheet as a basis for making revisions, as well as to determine whether the design is valid or not. At this stage, the LKPD will be assessed by experts in their fields, namely: media experts, material, language experts. The experts produce the results in table 2 as follows:

No	Expert	Average	Category
1	Material	4,25	Excellent
2	Language	4,6	Excellent
3	Media	4,8	Excellent

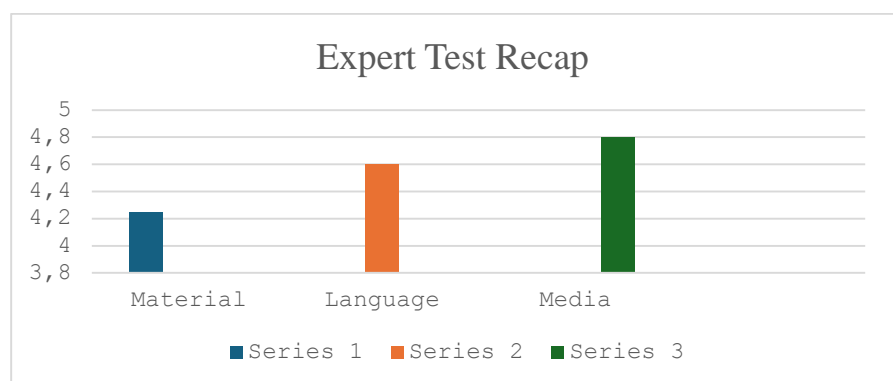


Figure 3: Expert test graph

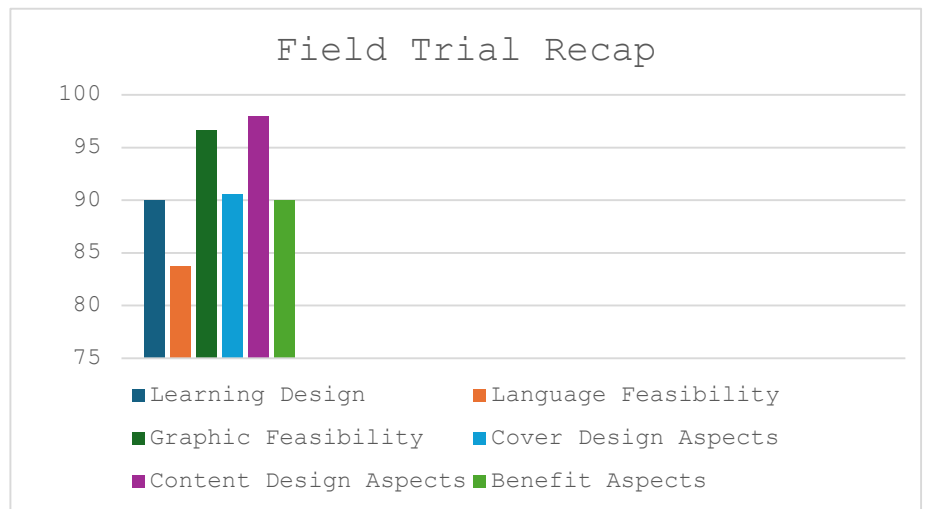


Figure 4: Graph of Recapitulation of Product Assessment in the field trial

Field Trials

Field trials conducted on 30 students were evaluated from various points of view such as learning design, language suitability, graphic feasibility, cover appearance, design content and advantages or benefits.

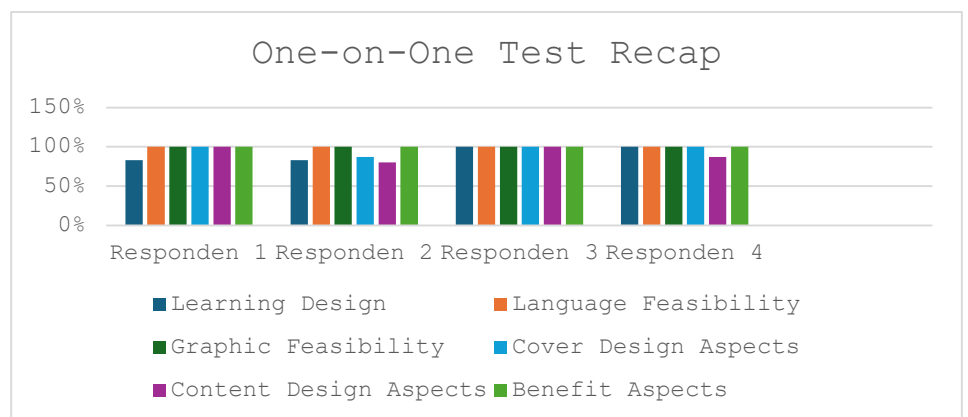


Figure 5. One-on-one Test Recapitulation Chart

One to One Test

Results of in-person testing In-person testing was conducted for 4 students with a background of crafts and behavior in attending classes, namely active, rarely present, present but lazy, almost never present in class.

Table 3. Recapitulation of Evaluation Results of Feasibility of Learning Materials LKPD

No	Evaluation	Average	Category
1	Material Expert	4.25 %	Very good
2	Language Expert	4.6 %	Very good
3	Media Expert	4.8 %	Very good
4	One to one test	95.6 %	Very good
5	Field Test	91.5%	Very good

Effectiveness of LKPD learning materials

The table below for pre and post data of the intervention group the data is normally distributed ($p > 0.05$) so it is feasible to continue to the Paired t test while the control group the data is not normally distributed and will be tested non-parametric. For paired samples (pre-post control group) using Wilcoxon sign ranks tets and for independent groups (post tets scores of intervention group and control group) using non-parametric mann whitney test.

Table 4. Learning Outcomes

	N	Minimum	Maximum	Mean	Std. Deviation
intervention group minimum completeness pretest score	19	30	78	54.37	13.459
intervention group minimum completeness post test score	19	78	95	85.16	5.231
control group minimum completeness pre test score	26	30	79	52.23	19.457
control group minimum completeness post test score	26	30	80	52.31	19.559

Table 6. Data Distribution Normality Test Results

	N	Mean	Kolmogorov-Smirnov ^a Sig.
intervention group minimum completeness pretest score	19	54.37	.200 ^{cd}
intervention group minimum completeness post test score	19	85.16	.200 ^{cd}
control group minimum completeness pre test score	26	52.23	.011 ^c
control group minimum completeness post test score	26	52.31	.011 ^c

(Woolson,2005)

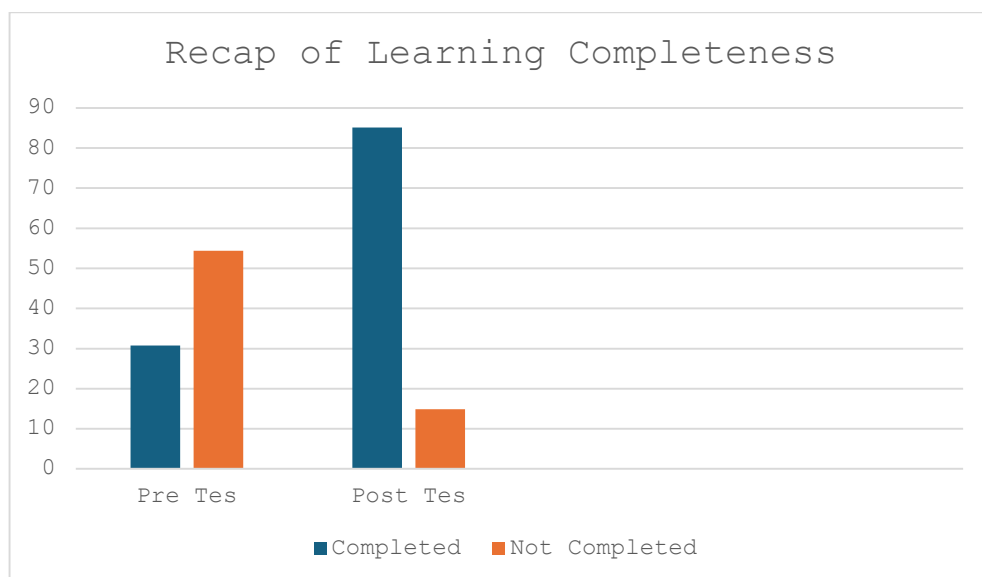


Figure 6. Graph of learning completeness

Measuring Creativity

measuring creativity to see if creativity The indicators observed include: 1) Able to convey many ideas in the discussion 2) Ideas presented are unique and unusual 3) Ability to see problems from various perspectives 4) Able to explain and develop ideas in detail using a score of 1 – 16

Table 7. Creativity

No	Score	Category
1	1 - 6	Low
2	7 - 10	Medium
3	11 -14	Good
4	15 - 16	Excellent

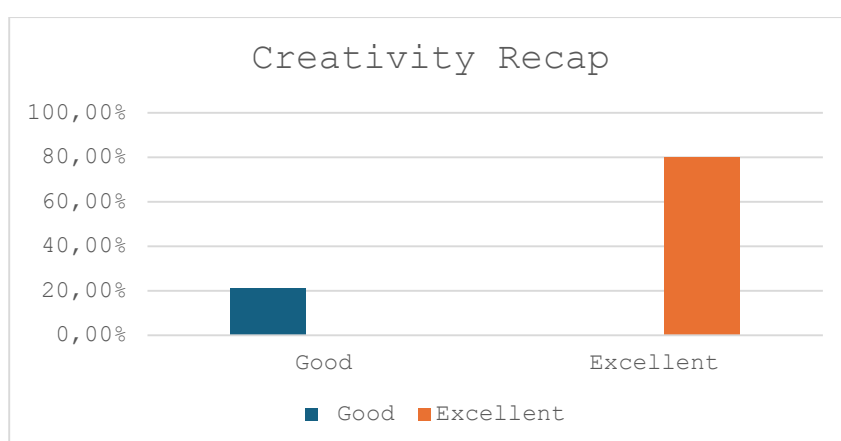


Figure 7. creativity graph

Measurement of Critical Thinking

Based on the results of the Pretest and Posttest of students in terms of answering questions, the ability to think critically is seen from the indicators; 1) logical point of view, 2) Able to assess evidence and sources

of information, 3) Draw logical conclusions based on analysis, 4) Develop solutions that are relevant and in accordance with the values of faith, using a score of 1 to 4 with a maximum total score of 20.

Table 8. Critical Thinking

No	Score	Category
1	1	Poor
2	2	Fair
3	3	Good
4	4	Excellent

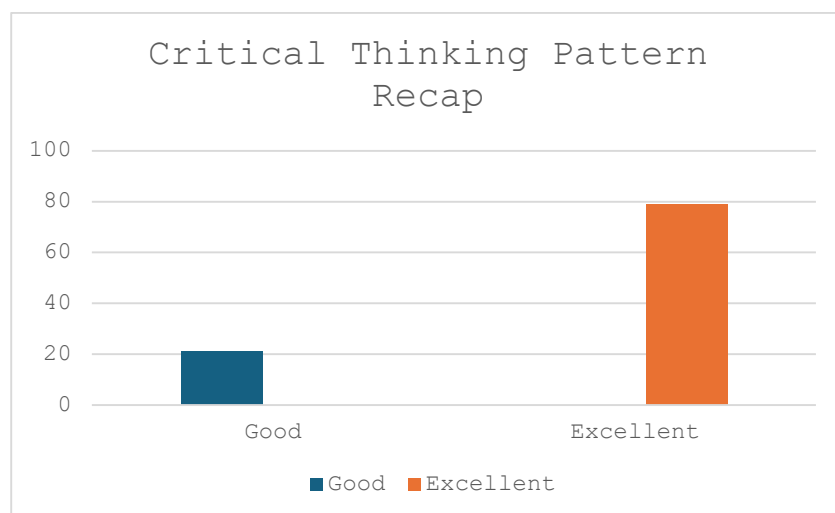


Figure 8. critical thinking graph

Discussion

The preliminary research results show that the teacher is still the center of learning. Learners are only loyal listeners, teachers do not have student worksheets or design them to share with students, so they experience difficulties in the learning process.

This can be overcome by providing learning materials, namely student worksheets (LKPD) in forming a critical and creative mindset. This teaching material was developed involving several parties such as; material experts, language experts, media experts, teachers, as well as through one-on-one evaluation and field evaluation. Experts will be able to provide various inputs to ensure the quality of teaching materials based on high content and test research materials.

Learner worksheet learning materials for students were developed using the Rowntree model. The connection of the developed models resulted in a new model named the Fresa development model, which stands for Freliyanti Sarimin. The development steps are as follows;

Planning stage

Needs analysis, conducting observations to see the problems, circumstances and characteristics of students. direct interviews with Christian education teachers and also to students. Formulation of learning objectives

Development stage

Topic development, drafting and producing prototype products that students will use to learn.

Evaluation stage Self evaluation, analyzing learners, analyzing devices or materials to be developed.

Expert review, products that have been designed are examined, assessed and evaluated by experts. 1). validation is carried out by media experts, material and language experts. At this stage, responses and suggestions from experts (validators) about the design that has been made are written on the validation sheet as material to revise and state that this design is valid or not, so that the weaknesses of the product can be identified and further revisions are made.

face to face tryout, researchers tested learning materials that had been developed to students, who were diligent, attended classes, sometimes attended classes, and were lazy to attend classes. At this stage the learners were asked to provide feedback or comments on the validation sheet provided for the prototype product. The results of this exercise are used to revise the design that has been made.

Field trials, the results of the trials on the prototype are used as the basis for revising the design of the second prototype. field trials involving learners who participated in the field test as many as 30 responses

Revision, trials must be evaluated to determine whether changes to the learner worksheet are needed.

Feasibility of learning materials LKPD

Based on the assessment of material experts, the material meets the criteria of complete, consistent, and easy to understand. Second, linguist validation aims to determine the feasibility of language so that readers are interested in learning the contents of the LKPD. Fourth, media expert validation is collected using an instrument. According to media experts, LKPD learning materials are suitable for use in learning as shown in table 2, but there are several things that need to be added, namely converting links to QR codes. After improving the learning materials according to the requests of material experts, linguists, and media experts, the learning materials were tested on students.

One-on-One Trial

This trial was conducted after the data from the revised experts were tested one by one. The aim is to assess the applicability, effectiveness, and efficiency of LKPD learning materials in the learning process. Each trial aims to draw conclusions from the results of data analysis, which will explain the product or learning LKPD model being developed. From here, it will be determined whether the learning materials produced need to be revised or not. The decision to make revisions must be supported by the fact that after the material is improved, the model is expected to be better, more effective, efficient, and more attractive to learners as in Figure 2. Graph. recapitulation of the test one by one, obtained the following assessment: the learning design aspect recorded an average score of 91.5%; the language feasibility aspect achieved a perfect score of 100%; the graphic feasibility aspect also scored 100%; the cover design aspect was 96.7%, the content design was 88.5%, and the benefit design scored 96.7%. Thus, the product of learning materials for student worksheets (LKPD) has an average score of 95.6% based on these six aspects. If interpreted through the test one by one, this learner worksheet learning material is considered very good, which indicates that this product is suitable and feasible to use in the learning process. This individual trial involves students

to ensure that the learning materials developed can be applied appropriately. The results of this trial will be revised again, so that the Learner Worksheet learning materials are ready to be tested in the field.

Field Trial

Based on the results of the field trial in Figure 3. The recapitulation graph obtained an overall average score of 91.5%. These results indicate that the learning materials, which were assessed from various aspects such as learning design, language feasibility, graphic feasibility, cover design, content design, and benefits, proved to be suitable for use in the learning process. At this stage, the main focus of the pilot test is on the efficiency and attractiveness of the learning materials, which is based on the results of the improvement of the draft materials.

The effectiveness of LKPD learning materials

Based on the results of the pre-test and post-test trials, it was found that there was an increase of 30.79% after using LKPD teaching materials so it can be concluded that the learning materials for the Learner Worksheet were proven. researchers then conducted a creativity test to identify the creativity of 4 students already had good creativity, while 15 people had very good creativity.

		Frequency	Percent
Valid	11-14	4	21.1
	15-16	15	78,9
	Total	19	100

Based on the creativity test, students obtained results of 21% have good creativity and 78.9% have very good creativity, so it can be concluded that creativity is high. In addition, the LKPD developed has formed a good critical mindset as many as 4 (21.1%) students, and 15 (78.9%) students have formed a very good mindset.

		Frequency	Percent
Valid	14-17	4	21.1
	18-20	15	78,9
	Total	19	100

Creativity Measurement

Based on the results of the data in Figure 5, it shows that 21.1 percent of students' creativity is categorized as good, while 80 percent of students have very good creativity. The developed LKPD learning materials contain video material exposure on the link in the form of a QR Code so that students can watch videos related to the material. Creativity can develop through the developed learner worksheets.

Measurement of Critical Mindset

Based on graph 6, it shows that 21.1 percent of students have a critical mindset with a good category, while 80 percent of students show a very good mindset. The LKPD learning material developed contains a video presentation of the material on the link in the form of a QR Code that students can connect to the material. Learners can increase learning activities in forming a critical mindset through the developed learner worksheets (LKPD), to increase learning activities and critical thinking skills of high school students that; very good and feasible to use there is an increase in critical thinking skills after using LKPD.

5. Comparison

Previous research has generally focused on developing student worksheets (LKPD) based on active learning models such as Prediction, Observation, and Explanation (POE), discovery learning, and scientific approaches to improve students' critical and creative thinking skills. Dewi Fairuz Zulaikha's research demonstrated that POE-based LKPD effectively increased student response and engagement, with an average score of 3.32. Ariani's research also demonstrated that discovery learning-based LKPD for science subjects was categorized as very feasible and interesting, with a feasibility index of 0.82. Furthermore, Aulia and Bahri's research confirmed that POE-based LKPD can enhance students' learning activities and critical thinking skills through an active learning approach. Another study by Lovyantika and Havid also emphasized the importance of scientific approaches and inquiry in developing 21st-century skills.

However, these studies focused on general subjects such as science and did not specifically develop LKPD in the context of Christian Religious Education and Character Education. Furthermore, most previous research has focused solely on improving critical thinking skills through active learning approaches, without integrating the dimensions of faith reflection, spiritual values, cultural context, and science and technology as part of the learning process.

This research is novel because it develops a deep learning-based worksheet (LKPD) in Christian Religious Education and Character Education to foster critical and creative thinking in high school students. This research not only emphasizes cognitive aspects but also integrates:

- reflection on Christian faith,

- contextual case studies on culture and science and technology as gifts from God,

- mission-based learning,

- and authentic project-based evaluation and spiritual reflection.

The main differences between this study and previous research lie in:

Subject Context

Previous research has largely focused on science subjects, while this study focuses on Christian Religious Education and Character Education.

Learning Approach

Previous research used POE, discovery learning, and a scientific approach, while this study uses a deep learning approach based on faith reflection and contextualization of culture and science and technology.

Development Objectives

Previous research focused more on improving student learning outcomes and activities, while this study aims to foster critical and creative thinking patterns based on Christian values.

Student Worksheet Characteristics

The student worksheet developed in this study is designed to be more interactive through:

- real-life case studies,

- reflective projects,

- cultural and technological exploration,

- and the integration of spiritual values into the critical thinking process.

Spiritual and Character Dimension

This study adds elements of character building and Christian spirituality as an integral part of developing students' critical and creative thinking skills.

Thus, this study provides a new contribution to the development of student worksheets for Christian Religious Education and Character Building that are oriented not only toward academic abilities but also toward character building, faith reflection, and student readiness to face cultural challenges and developments in science and technology in the modern era.

6. CONCLUSION

Based on the description that has been put forward regarding the development research process, the feasibility of the model, the effectiveness of the model, and the discussion that has been described, it can be concluded that the LKPD developed is very good and feasible to use.

This research and development produces a product in the form of: teaching materials for students' worksheets (LKPD) for Christian religious education and deep learning-based character in shaping critical and creative thinking used Sugiyono's research and development steps with a modified model from the Rowntree model, the combination of the two models is named the Fresa development model which stands for Freliyanti Sarimin which consists of three main stages of development, namely: the planning stage, the development stage, and the evaluation stage.

Validation or expert testing of this product is carried out by experts in their fields; based on the assessment of material experts, meeting the complete criteria, this LKPD is considered very good, which means that this product is suitable and suitable for use in learning. Linguists assess learning materials in terms of language are very good and feasible to use. Media experts, interested because related to the appearance of the learning materials developed, this product is suitable and suitable for use.

The learning outcomes of students seen from the pretest and post test results show an increase as an experimental class after using LKPD, compared to control schools that do not use LKPD. Based on the data processed, students have also formed a critical and creative mindset and experienced an increase in learning, this LKPD developed is proven to be effective as teaching material, and shows that Fresa products make a significant contribution to improving learning.

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