THE DEVELOPMENT OF A TREFFINGER MODEL BASED ON HYBRID LEARNING ON THE BHINEKA TUNGGAL IKA (PPSPS) THEME FOR THE FOURTH GRADE OF ELEMENTARY SCHOOL

Rizka Novi Irmaningrum¹, Oriza Zativalen², M. Arif Nurhidayat³

Universitas Muhammadiyah Lamongan, Indonesia¹,²,³
E-mail: rizkanoviirmaningrum@gmail.com¹, orizazativalen@gmail.com², marifnur2@gmail.com³

DOI: 10.14421/albidayah.v15i2.1074

ABSTRACT

The objective of this research is to develop a learning model in the Project of Pancasila Student Profile Strengthening (PPSPS). This model is a Treffinger model based on hybrid learning for elementary school students. The development of a Treffinger model based on hybrid learning in this research used a development model adapted from Plomp (1997). The development model by Plomp has five main stages, including (1) preliminary investigation, (2) design, (3) realization/construction, (4) test, evaluation, and revision, and (5) implementation. The subjects of this research were the students in class 4A and 4B of Muhammadiyah Elementary School (MES) 1 Babat. The instruments used were student learning outcomes and student responses to the learning process. The validation instruments in this research were the validation tests of the lesson plans/teaching modules, students worksheets, student books, model books, and assessment instruments. Based on the results of preliminary study, a hybrid-learning-based Treffinger model was designed. The model design in this study included (1) model book design, (2) design of learning components (student books, teaching modules, worksheets), and (3) instrument design to obtain data in the model development process. The development of the Treffinger model based on hybrid learning was tested for the validity, resulting in a percentage of 92%, whereas the effectiveness was tested based on teacher observations resulting in a percentage of 93%. The learning outcomes had a percentage of 83%, and the practicality test based on student responses resulted in a percentage of 97%. Based on these research results, the development of the Treffinger Model based on hybrid learning is considered suitable for use.

Keywords: elementary school students; hybrid learning model; treffinger model

INTRODUCTION

Educational progress is related to the context of students' lives and the challenges of the Indonesian nation in the 21st century, which is facing the industrial revolution 4.0.¹,²

In the independent curriculum at the primary school level, there is co-curricular learning (PPSPS) which aims to achieve-competencies in the profile of Pancasila student.³

---


Indonesian students are expected to have the competencies to become citizens with character, excellence, and productivity in the 21st century. Continuous learning to apply innovative strategies that enhance 21st century-skills. 21st century skills include critical thinking, problem solving, creative thinking, and cooperative work skills.

At the elementary school level, the curriculum currently used is the independent curriculum. The independent curriculum has three learning areas, including intracurricular, extracurricular, and co-curricular learning. This curriculum is an effort to reform the education system to improve student character. Co-curricular activities are activities at school carried out by students to strengthen, deepen, or enrich the subjects they have studied in extra-curricular activities. One of the co-curricular activities is the PPSPS which is designed to reinforce the efforts to achieve the competencies and characters that are in accordance with the Pancasila student profile prepared based on the

---


7 Ahmed Alismail.


Graduate Competency Standards. The project to strengthen the Pancasila student profile has a theme as a determinant for every project implemented in the education unit. The PPSPS themes in the elementary school education unit include sustainable lifestyle, local wisdom, diversity, engineering and technology to build the Republic of Indonesia, and entrepreneurship. The PPSPS theme in this research was the theme of diversity. Students recognize and promote a culture of peace and non-violence, learn to build respectful dialogues about diversity and the teaching values they adhere to.

The Pancasila student profile comprises some character traits and competencies that students are expected to achieve, which are based on the noble values of Pancasila. The character of Pancasila student profile in the project to strengthen the Pancasila student profile consists of having faith in God Almighty and having noble character, global diversity, working together, being independent, thinking critically, and being creative. Indonesian students are expected to have the competencies to become citizens with character, excellence, and productivity in the 21st century.

The results of field observations on July 8, 2023 showed that when the teachers conducted a self-development program, the students were given regular problem assignments or sent home earlier than usual. Once, when the school was conducting a teacher resource development, online learning was needed because it was impossible to serve students in face-to-face learning. There was also a problem when the students were able to learn, but it was not possible to go to school, as was the case with

---

16 Kemdikbudristekdikti, Panduan Pengembangan Projek Penguatan Profil Pelajar Pancasila.
20 Sun, Tjuandi, Kim
21 Xiaomin Li and Wenyian Hu, “Peer Versus Teacher Corrections Through Electronic Learning Communities and Face-to-Face Classroom Interactions and EFL Learners’ Passion for Learning, Speaking Fluency, and Accuracy,” Heliyon 10, no. 4 (February 29, 2024), https://doi.org/10.1016/j.heliyon.2024.e025849.
COVID-19. Students are expected to continue learning and remain in control of learning to achieve the learning goals, and it is expected that lost learning will not occur. In learning that involves projects, students are required to think creatively.\textsuperscript{23,24,25} By thinking creatively, they will be able to produce a project in accordance with the learning objectives.

The Treffinger model is a learning model with problems that must be solved. The preparation to solve the problems involves paying attention to important facts in the surrounding environment, then generating various ideas, and selecting the appropriate solution to be implemented in reality.\textsuperscript{26} The Treffinger learning model consists of 3 important components, including understanding challenges, generating ideals, and preparing for actions.\textsuperscript{27} The components of understanding challenges are determining goals, exploring data, and formulating problems. The component of generating ideals is generating ideas. The components of preparing for actions are developing solutions and building acceptance.\textsuperscript{28} The preliminary data indicates that there is a need for a solution to the problem; therefore, the researchers develop a “hybrid-learning-based Treffinger” learning model which is expected to provide offline-online facilities and provide stimulus to enable students to think creatively in making the projects for learning.

\begin{thebibliography}{9}
\bibitem{24} Simegn Alemneh and Girma Gebrie, “The Role of Project-Based Learning In Improving The Writing Ability and Sub-Writing Abilities of 10th Grade Amharic Speaking Students,” \textit{Social Sciences \\& Humanities Open} 9 (January 1, 2024): 100843, https://doi.org/10.1016/j.ssaho.2024.100843.
\bibitem{26} dkk Arifah, “Pengembangan Model Treffinger Berbasis Nilai Pendidikan Karakter Dalam Pembelajaran Menulis Teks Cerita Pendek Di SMA,” \textit{Journal Repository Upi}, 2023, 30–44.
\end{thebibliography}
Hybrid learning is a learning method that combines online learning with face-to-face learning. Teachers simultaneously conduct learning for students who study online and students who study in class by utilizing the existing technology. In this study, the design of the learning model used was the Treffinger model based on hybrid learning which combined online and offline learning simultaneously. This learning model was used in the activities of the strengthening project of Pancasila student profile with the Bhinneka Tunggal Ika theme for class IV of elementary school in both online and offline modes. The final project to achieve was that students were able to hold an Indonesian Independence Day festival according to the topic taken, which was the Independence Day festival held in the odd semester.

The results of the research conducted by showed that the Treffinger learning model is feasible and successfully applied in the learning process. According to, the hybrid learning model in learning can improve understanding of the teaching material and improve student learning outcomes. The Treffinger learning model can meet the validity test requirements. Developing a hybrid model can increase the competency of graduates


36 Handayani et al., “Development of Learning Tools Using Treffinger Learning Model to Improve Creative Thinking.”
The hybrid learning model can solve physics problems. According to these results of previous research show that the Treffinger and hybrid learning models can achieve the expected learning objectives.

The aim of this research was to develop a learning model in the project to strengthen the Pancasila student profile using the Treffinger model for elementary school students. The Treffinger model was developed with a hybrid learning model which combined online and offline learning by inviting students to think creatively in dealing with problems. The Treffinger model based on hybrid learning discussed the theme of Bhinneka Tunggal Ika (PPSPS) with the topic of Indonesian Independence Day for the fourth-grade elementary school students.

The difference from previous research was in the development of the Treffinger model based on hybrid learning for elementary schools with the Bhinneka Tunggal Ika (PPSPS) theme. The scope of this research was the independent variable, which was the Treffinger model based on hybrid learning. This independent variable was developed into a model with the most recent outcomes. The limitation of this research was that it was carried out only for the fourth-grade students of MES 1 Babat in the odd semester of the 2022/2023 academic year. This research was conducted on the PPSPS theme of Bhinneka Tunggal Ika with the topic of Indonesian Independence Day.

RESEARCH METHODS

The trial phase was carried out in two stages, namely a small-scale trial and large-scale trial. The trial was carried out for class IV of elementary school in Semester 1 in August 2023. The small-scale trial was carried out at MES Sidoharjo with 5 students randomly selected. The large-scale trial was carried out at MES 1 Babat in the 1st semester in September 2023 for 2 classes each with 30 students.


The researchers used the content validation instruments to provide information about the validity of the hybrid-learning-based Treffinger model. The content validity test was given to two validators. The content validation indicators include material content, language, and depth of material. The data collection regarding the practicality of the hybrid-learning-based Treffinger model was carried out in a small-scale trial and large-scale trial. The instrument used was a teacher response questionnaire regarding the use of books. The indicators of teacher response were the quality of the content of the model explanation, ease of implementation, appearance of the book, and suitability of the steps in the book.

The development of Treffinger model based on hybrid learning in this research used the development model adapted from Plomp (1997). The development model by Plomp has five main stages, including preliminary investigation, design, realization/construction, expert validation test, trial, evaluation, revision, and implementation. The following are the stages of developing a hybrid-learning-based Treffinger model.

Figure 1
Plomp’s Development Stage
Source: 42

A preliminary investigation was carried out to examine and analyze the circumstances related to the implementation of the project to strengthen the profile of Pancasila students (PPSPS) and the theories related to its implementation the current

41 T. X Plomp, Educational and Training Systems Design: Introduction (Enschede: University of Twente, Faculty of Educational Science and Technology Enschede, 1997).
42 T. X Plomp, Educational and Training Systems Design: Introduction (Enschede: University of Twente, Faculty of Educational Science and Technology Enschede, 1997).
elementary school curriculum is the independent curriculum, which contains co-curricular learning or a project to strengthen the profile of Pancasila students. The PPSPS theme in this research was the unity in diversity with the topic of Indonesian Independence Day. The learning model was implemented in the project to strengthen the profile of Pancasila students. The learning components used were the student books, lesson plans, and worksheets as the supporting learning tools needed in the implementation of the learning model.

The students at the school where the study was conducted were in class IV of elementary school. The student analysis to be examined was the student character based on the Pancasila student profile in the dimensions of faithful, devoted to God Almighty with noble character; elements of religious morals and morals towards humans; global diversity, elements of acknowledging and appreciating the culture of the Indonesian nation and the world, independence; mutual cooperation; elements of collaboration and caring; independence; elements of understanding oneself and situations; critical reasoning, element of obtaining and processing information and ideas; creativity, elements of producing original ideas and producing original works and actions.\(^{43}\) The needs of students and teachers in implementing the learning model were identified, and a review of the theories and learning models that support the development of models related to the problems found in the initial investigation was conducted.\(^{44}\)

The hybrid-learning-based Treffinger model was designed by including the model book design, design of learning components (student books, teaching modules, worksheets), and instrument design to obtain data in the model development process.

The design of the model book included a description of the rationale for the Treffinger model based on hybrid learning, the supporting theories, the model components, and the instructions for implementing the model. The design of the learning model components included the student books, teaching module, and student worksheets.

---


worksheets). The teaching module was designed by considering such aspects as emphasizing the creation of understanding (meaning), not memorization without understanding, and creating conditions that allow students to construct their knowledge both online and offline by applying the Treffinger model based on hybrid learning. The worksheets was designed by considering some factors, such as enabling students to achieve competencies according to the indicators or learning objectives set, allowing students to construct their knowledge, and supporting the emergence of brainstorming (brainstorming suggestions). The instrument design included instruments to assess the validity, practicality, and model effectiveness.

The results of the model design were then described in detail to become the realization/construction of the initial model or prototype. Model realization/ construction was the result of model development before testing the model validity. The results of the realization/construction of this model included drafts of the model book, student books, worksheets, teaching module, and model assessment instruments.

A model book is a successfully developed learning model packaged in the form of books. The model book realized in developing this model consisted of three chapters. In chapter 1, the theoretical basis of the hybrid-learning-based Treffinger model was described, which included the background, learning model, learning approaches, learning strategies, and learning methods. The relationship between the models, approaches, strategies, and methods can be seen in Figure 2. In chapter 2, the Treffinger model based on hybrid learning was described which included the study of the Treffinger model based on hybrid learning, basic principles of the Treffinger model based on hybrid learning, and components of the Treffinger model based on hybrid learning that consisted of syntax, social system, reaction principle, support system, as well as instructional impact and accompanying impact. A brief description of the five components of the hybrid-learning-based Treffinger model can be seen in Figure 1. In chapter 3, the instructions for implementing the hybrid-learning-based Treffinger model learning were outlined, which included preparing learning objectives for implementing learning, class organization, development of a Treffinger model based on hybrid learning, evaluation, preparation of

learning tools (teaching modules and worksheets), and examples of teaching modules and worksheets.\textsuperscript{46}

**Figure 2**

Treffinger Model Based on Hybrid Learning

Sources: \textsuperscript{47}

<table>
<thead>
<tr>
<th>Treffinger Model Based on Hybrid Learning</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Learning approaches</strong></td>
</tr>
<tr>
<td>(Student Centered/ Constructivist)</td>
</tr>
<tr>
<td><strong>Learning strategies</strong></td>
</tr>
<tr>
<td>(Project Based Learning, Creative Problem Solving, Inquiry, Cooperative)</td>
</tr>
<tr>
<td><strong>Learning methods</strong></td>
</tr>
<tr>
<td>(Lectures, Questions and Answers, Discussions, Assignments, Projects, Problem solving, etc.)</td>
</tr>
</tbody>
</table>

**Figure 3**

Relationship between the Model, Approach, Strategy, and Method

Source: \textsuperscript{48}


\textsuperscript{47} T. X Plomp, *Educational and Training Systems Design: Introduction* (Enschede: University of Twente, Faculty of Educational Science and Technology Enschede., 1997).

\textsuperscript{48} T. X Plomp, *Educational and Training Systems Design: Introduction* (Enschede: University of Twente, Faculty of Educational Science and Technology Enschede., 1997).
There were several tests carried out, including expert validation test for assessing the validity of the model and model components (student books, lesson plans, and worksheets) and after successfully assessing the validity of the model and its components as well as revising the model, then a trial of the model and its components to obtain results on the practicality and effectiveness of the hybrid-learning-based Treffinger model.49

Table 1
Expert validation of the model components grid

<table>
<thead>
<tr>
<th>Component</th>
<th>Criteria</th>
<th>Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>RPP / Teaching Module</td>
<td>Suitability of Learning Objectives</td>
<td>1 2 3</td>
</tr>
<tr>
<td></td>
<td>Suitability of Learning Steps</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Conformity Assessment</td>
<td></td>
</tr>
<tr>
<td>Worksheets</td>
<td>Fulfilling</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Presentation</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Language</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Graphics</td>
<td></td>
</tr>
<tr>
<td>Student book</td>
<td>Language</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Contents</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Effectiveness</td>
<td></td>
</tr>
<tr>
<td>Model Book</td>
<td>Syntax</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Language</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Design</td>
<td></td>
</tr>
<tr>
<td>Assessment Instrument</td>
<td>Suitability of learning objectives</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Appropriateness</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Usefulness</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Average</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Source: Personal Documents

The validator completed the table above with a score of 1 (poor), a score of 2 (good), and a score of 3 (very good). If the validation process resulted in a score of 1, there would be revisions according to the validator’s suggestions.

The implementation stage was the stage of using the product of the hybrid-learning-based Treffinger model created in the implementation of the project to

strengthen the profile of Pancasila students for the fourth-grade students of elementary school to instill student character.

Table 2
Student responses to the efficiency of Treffinger model based on hybrid learning

<table>
<thead>
<tr>
<th>Criteria</th>
<th>Score Results</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1 (less suitable)</td>
</tr>
<tr>
<td>Interesting</td>
<td></td>
</tr>
<tr>
<td>Pleasant</td>
<td></td>
</tr>
<tr>
<td>Flexible</td>
<td></td>
</tr>
</tbody>
</table>

Source: Personal Documents

RESULTS AND DISCUSSION

The implementation of the hybrid-learning-based Treffinger model research activities can be described as follows.

Initial investigations or initial studies are carried out to examine and analyze the conditions related to the implementation of learning. In this research, an initial investigation was carried out for the project to strengthen the profile of Pancasila students (PPSPS) and theories related to its implementation for class IV students of MES 1 Babat, which showed that:

The current elementary school curriculum is the independent curriculum, and one of which is the co-curricular learning or a project to strengthen the profile of Pancasila students. The PPSPS theme in this research was diversity with the topic of Indonesian Independence Day. The learning model implemented in the project to strengthen the profile of Pancasila students only focused on one character while it had to be able to achieve the learning objectives of at least two P3 characters. The learning component used was only a student’s book without any other components. There should have been student books, teaching modules, worksheets, and assessments as the supporting learning tools needed in implementing the learning model.

The condition of the students at the school where the study was conducted was the students in class IV Semester 1 of Elementary School. The student analysis to be

examined was the character profile of Pancasila students in the following dimensions: belief, having faith in God Almighty, and having noble character, elements of religious morals and morals towards humans; global diversity, elements of knowing and appreciating the culture of the Indonesian nation and the world, independence; cooperation, elements of collaboration and care; independence; elements of self-understanding and situations; critical reasoning; elements of acquiring and processing information and ideas; creativity; elements of producing original ideas and producing original works and actions.

The needs of students and teachers in implementing the learning model were identified, and a review of the theories and learning models that supported the development of the model related to the problems found in the initial investigation was conducted.

The initial investigation in this research aimed to determine the background and initial abilities possessed by students. Based on the results of the initial investigation on the students of class IV semester 1 with the Bhinneka Tunggal Ika theme and the topic of Indonesian independence, it was found that there was a lack of interesting and motivating learning models for students, especially in PPSPS activities as new activities in the independent curriculum. The PPSPS activity guides students to be able to produce student characters that match the Pancasila student profile. This has moved the researchers to develop a new model that can produce students with character according to the goals they want to achieve.\textsuperscript{52} The learning model was the Treffinger model based on hybrid learning. This model could overcome the background problem of class IV students at MES 1 Babat.

Based on the results of the initial study, a hybrid-learning-based Treffinger model was designed to include the model book design, design of learning components (student books, teaching modules, worksheets), and instrument design to obtain data in the model development process.\textsuperscript{53}


The design of the model book included a description of the rationale for the Treffinger model based on hybrid learning, supporting theories, model components, and instructions for implementing the model. The design of the learning model components included student books, teaching module, and student worksheet (worksheets). The teaching module was designed by considering several aspects, such as emphasizing the creation of understanding (meaning), not memorization without understanding, and creating conditions that allowed students to construct their knowledge both online and offline by applying the Treffinger model based on hybrid learning.

The worksheets was designed by considering several factors, including enabling students to achieve competencies according to the indicators or learning objectives set, allowing students to construct their knowledge, and supporting the emergence of brainstorming (brainstorming suggestions). The instrument design included instruments to assess the validity, practicality, and model effectiveness.

The module and learning tool design stage is used to prepare the presentation of the module and learning tool development. The development of hybrid-learning-based Treffinger model books and learning tools was done via Microsoft Word assisted using Canva and Corel applications.

The results of the model design were then described in detail to become the realization/construction of the initial model or prototype. The model realization/construction was the result of previous model development before the model validity testing was carried out. The results of the realization/construction of this model included drafts of the model book, student books, worksheets, teaching module, and model assessment instruments.

A model book is a successfully developed learning model packaged in the form of books. The model book realized in the development of this model consisted of three


chapters. In chapter 1, the theoretical basis of the hybrid-learning-based Treffinger model was described, including the background, learning model, learning approaches, learning strategies, and learning methods.\(^{57}\) In chapter 2, the Treffinger model based on hybrid learning was described, including the study of the Treffinger model based on hybrid learning, basic principles of the Treffinger model based on hybrid learning, and components of the Treffinger model based on hybrid learning which included syntax, social system, reaction principle, support system, as well as instructional impacts and accompanying impacts (description of the five components of the hybrid-learning-based Treffinger model).\(^{58}\) In chapter 3, the instructions for implementing the hybrid-learning-based Treffinger model were outlined, which included preparing the design of learning objectives, implementing learning, organizing the class, developing the hybrid-learning-based Treffinger model, assessment, preparation of learning tools (teaching modules and worksheets), and examples of teaching modules and worksheets. In the realization stage, the researchers made a plan for the Treffinger Module based on hybrid learning as follows.

Figure 4
Creating a Treffinger Module Based on Hybrid Learning
Source: Personal Documents

---


After creating the Treffinger module based on hybrid learning as a reference in creating a learning component design to reflect this, it contained the concept maps, learning outcomes, learning objectives, and learning materials listed in the student book as follows.

![Student book with the Bhinneka Tunggal Ika theme for Class IV of Elementary School](image1)

**Figure 5**
Student book with the Bhinneka Tunggal Ika theme for Class IV of Elementary School  
Source: Personal Documents

After creating a Student Book, the next step was to create a Teaching Module as a reference for teachers in the project of strengthening Pancasila student profiles which contained general information, core components, and attachments as follows.59

![Teaching module on the theme of Bhinneka Tunggal Ika (PPSPS)](image2)

**Figure 6**
Teaching module on the theme of Bhinneka Tunggal Ika (PPSPS)  
Source: Personal Documents

---

After creating the teaching module, the next step was creating an worksheets which contained the learning outcomes, learning objectives, materials, steps for use, and sheets for students working on assignments given by the teacher as follows.\textsuperscript{60}

![Figure 7](image1.png)

**Figure 7**
Worksheets with the Bhinneka Tunggal Ika (PPSPS) theme
Source: Personal Documents

The hybrid-learning-based Treffinger model assessments included the diagnostic, formative, and summative aspects as follows.

![Figure 8](image2.png)

**Figure 8**
Instrument for assessing the Bhinneka Tunggal Ika (PPSPS) theme
Source: Personal Documents

There were several tests carried out, including (1) the expert validation test to assess the validity of the model and model components (student books, lesson plans, worksheets).\textsuperscript{61}


\textsuperscript{61} Ming-Yueh Hwang, Jon-Chao Hong, and Yung-Wei Hao, “The Value of CK, PK, and PCK in Professional Development Programs Predicted By The Progressive Beliefs of Elementary School
## Table 3
Results of expert validation of model components

<table>
<thead>
<tr>
<th>Component</th>
<th>Criteria</th>
<th>Appraiser I</th>
<th>Assessor II</th>
</tr>
</thead>
<tbody>
<tr>
<td>RPP / Teaching Module</td>
<td>Suitability of learning objectives</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Suitability of Learning Steps</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Conformity Assessment</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>Worksheets</td>
<td>Fulfilling</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Presentation</td>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>Language</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Graphics</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>Student book</td>
<td>Language</td>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>Contents</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Effectiveness</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>Model Book</td>
<td>Syntax</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Language</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>Design</td>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td>Assessment Instruments</td>
<td>Suitability of learning objectives</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Appropriateness</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Usefulness</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td><strong>28.12</strong></td>
<td><strong>27.5</strong></td>
</tr>
<tr>
<td><strong>Average</strong></td>
<td></td>
<td><strong>2.78</strong></td>
<td></td>
</tr>
</tbody>
</table>

Source: Personal Documents

Based on Table 1, the components of the RPP/teaching module, worksheets, student books, model book, and assessment instruments received an average of 2.78 from assessor I and assessor II with criteria 1 being not good, 2 being good, and 3 being very good. This validation result shows that 92.7% of the model components can be used or are feasible in the model development research.\textsuperscript{62}

The implementation stage was the stage of using the product of the Treffinger model based on hybrid learning on the theme of Bhinneka Tunggal Ika (PPSPS) for the
fourth-grade students of elementary school. This implementation stage cannot be carried out before the validation test stage is completed.63

The development of Treffinger model based on hybrid learning on the theme of Bhinneka Tunggal Ika was tested on class IV students in two study groups, A with a total of 23 students and B with a total of 25 students of MES 1 Babat. In this study, the fourth-grade teachers of MES 1 Babat were observed by two observers from the author's partner.

Table 4
Teacher observations for the Treffinger model based on hybrid learning

<table>
<thead>
<tr>
<th>Criteria</th>
<th>Percent Score</th>
<th>Teacher I</th>
<th>Teacher II</th>
</tr>
</thead>
<tbody>
<tr>
<td>Application</td>
<td></td>
<td>8</td>
<td>8</td>
</tr>
<tr>
<td>Practicality</td>
<td></td>
<td>8</td>
<td>9</td>
</tr>
<tr>
<td>Teacher Understanding</td>
<td></td>
<td>9</td>
<td>8</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>25</td>
<td>25</td>
</tr>
<tr>
<td>Average</td>
<td></td>
<td></td>
<td>8.33</td>
</tr>
</tbody>
</table>

Source: Personal Documents

Based on the data in Table 2, the teacher observations in using the hybrid-learning-based Treffinger model yielded an average of 8.33 with a percentage of 93%. Teacher observation is conducted to examine the effectiveness of learning. This teacher observation has several criteria, such as implementation, practicality, and teacher understanding.64 This shows that the teacher's response to the Treffinger model based on hybrid learning is suitable for use.65

The student learning outcome tests for class A and class B were seen from the increase in Meeting I and Meeting II to determine the effectiveness of learning.

---


Table 5
Results of Learning Tests I and II

<table>
<thead>
<tr>
<th>Class</th>
<th>Meeting</th>
<th>Average Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>I</td>
<td>75.5</td>
</tr>
<tr>
<td></td>
<td>II</td>
<td>88.8</td>
</tr>
<tr>
<td>B</td>
<td>I</td>
<td>73.4</td>
</tr>
<tr>
<td></td>
<td>II</td>
<td>97.4</td>
</tr>
</tbody>
</table>

Source: Personal Documents

The tests of learning outcomes I and II showed that there was an increase from meeting I to meeting II. The evidence of the increase was shown by the average result of class A in meeting I and meeting II of 75.5 and 88.8, respectively, while in class B, meeting I had 73.4 with an increase in meeting II of 97.4. The increase in the learning outcome test in class A is 82% and 85% in class B. Based on the teacher observations and student learning outcomes tests, it is proven that the effectiveness of the model is deemed feasible. This is proven by the implementation of the hybrid-learning-based Treffinger model carried out by the teachers. This results in increased student learning outcomes.66

After successfully assessing the validity of the model and its components as well as revising the model, a trial and implementation of the model and its components was then carried out to obtain results on the effectiveness of the hybrid-learning-based Treffinger model.67 Next, a practicality test was carried out by looking at student responses.

Table 6
Table of student responses to the efficiency of the Treffinger model based on hybrid learning

<table>
<thead>
<tr>
<th>Criteria</th>
<th>Score Results</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Class A</td>
</tr>
<tr>
<td>Interesting</td>
<td>65</td>
</tr>
<tr>
<td>Pleasant</td>
<td>63</td>
</tr>
<tr>
<td>Flexible</td>
<td>67</td>
</tr>
<tr>
<td>Total</td>
<td>135</td>
</tr>
<tr>
<td>Average</td>
<td>2.82</td>
</tr>
</tbody>
</table>

Source: Personal Documents

66 Sun et al., “Detecting the Correlation Between Mobile Learning Behavior and Personal Characteristics Among Elementary School Students.”
Based on Table 4, the students' responses to the practicality of the hybrid-learning-based Treffinger model are feasible with criteria 1 as less, 2 as suitable, and 3 as very suitable from 23 students in class A and 25 students in class B. This is proven by the average response of 2.82 with a percentage of 94% in the criteria of being interesting, fun, and flexible.

The discussion in this research based on the findings indicated that the expert validity test of the model components reached a percentage of 92.7%. The model effectiveness identified from the teacher observations and student learning outcomes was declared adequate with a teacher observation percentage of 93% and average student learning outcomes of 83%. The practicality test of the model showed that it was feasible based on the student responses with a percentage of 94%.

Based on the results of the validity test, effectiveness test, and practicality test, the Treffinger model based on hybrid learning was declared feasible. The results of this research were able to answer the problem formulation in this research, in which the Treffinger model based on hybrid learning was successfully developed. These results show conformity with an existing theory stating that the Treffinger model is able to solve problems that must be faced and, that problem solving can be done online and offline, which can be developed into the latest model for elementary school students. The results of the research are also in accordance with previous research on the Treffinger model and hybrid learning both of which prove that these two models are capable of becoming the newest output models for elementary school students.

CONCLUSION

The results of the expert validity test showed that the model components were declared feasible with a percentage of 91.7%. The effectiveness of the model was good based on the results of teacher observations and learning outcome tests. These results showed a percentage of 93% in teacher observations and 83% in student learning.

---

69 Abdulhak et al., “The Development of Hybrid Learning Curriculum Model for Improving Teachers Competencies in Teacher Education Institutions in Indonesia and South Korea.”
70 Lestari et al., “Hybrid Learning on Problem-Solving Abilities in Physics Learning.”
outcomes. The practicality was declared good based on the student response results of 94%. Based on the validity test, effectiveness test, and practicality test, the development of a hybrid-learning-based Treffinger model was declared suitable for use. It is expected that future researchers will examine the effectiveness of this learning model in instilling the character profile of Pancasila students.

ACKNOWLEDGMENTS
The researchers thank the LLDIKTI VII for the support for this research through the PDP grant.

DECLARATION OF CONFLICTING INTERESTS
-

FUNDING
The research funding was obtained from the LLDIKTI VII under the PDP research grant scheme.

ORCID iD
Rizka Novi Irmaningrum
Oriza Zativalen
M. Arif Nurhidayat

REFERENCES


Eva’atussalamah, Eva’atussalamah, Agus Zainul Fitri, and Choiruddin Choiruddin. “Development of Thematic E-Modules Based on Al-Qur’an Verses to Improve Student Learning Outcomes.” Al-Bidayah : Jurnal Pendidikan Dasar Islam 14,


Li, Xiaomin, and Wenyan Hu. “Peer Versus Teacher Corrections Through Electronic Learning Communities and Face-to-Face Classroom Interactions and EFL Learners’ Passion for Learning, Speaking Fluency, and Accuracy.” Heliyon 10, no. 4 (February 29, 2024). https://doi.org/10.1016/j.heliyon.2024.e25849.


X Plomp, T. *Educational and Training Systems Design: Introduction.* Enschede: University of Twente, Faculty of Educational Science and Technology Enschede., 1997.
