Inovasi Model Pembelajaran Problem Based Instruction (PBI) Berbasis WhatsApp dimasa Pendemi Covid-19

Instructional Learning Model on WhatsApp Media Problem in a Pandemic Covid-19 Period

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Abstract
The purpose of this research is to find out the influence of learning (Problem Based Instruction) on learners at the elementary unit level (elementary school) in one of the schools located in the Pamekasan area. This study is qualitative descriptive, the study subjects are elementary school students as many as 150 students consisting of 78 men and 72 women. Techniques in this study use interviews and questionnaires. Research instruments are with concessioners, as well as data analysis techniques by sampling methods. The results of this study were from 150 students who joined three classes in each class containing 50 people in WhatsApp groups. Known on the interpretation scale is 336 ≤ 307 < 400 which is categorized very well done during the covid-19 pandemic online with WhatsApp from media. This study concludes that the PBI learning model is very suitable to be done at the elementary unit level or elementary school with social media platforms that are WhatsApp connected to their respective class groups (WAG).

Keywords: Instruction, Group, Online

Abstrak
dengan platform media sosial adalah WhatsApp yang terhubung pada grup kelas masing-masing (WAG).

Kata kunci: (Instruksi, Grup, Online)
Introduction

Primary school learning which is always doing face to face learning is now turning to online learning, which causes many students experience lack of understanding on what teachers or educators are explaining. The utilization of the social media becomes a solution to create conducive and sustainable learning (Sadikin & Hamidah, 2020). Since the pandemic is spread out, the development of various online learning media spaces, according to the government's letter contained in the circular of the Ministry of Education and Culture (Ministry of education and culture) Directorate of Elementary School No. 1 of 2020 on the prevention of the spread of Corona Virus Disease (Covid-19) in elementary schools. Through a circular, the Ministry of Education gave instructions to each school to conduct distance learning and advised students to learn from their homes (Firman & Rahayu, 2020).

Data from the Central Statistics Agency shows that primary school children who have readiness in school have an uneven number between the regions and social harmony that occurred in the community in the first quartile there is about 66.92 percent until the fifth quartile the figure increases sharply by 82.88 percent which will make learning during the pandemic even more unbalanced (badan pusat statitik nasional (BPS), 1386). Because of the readiness of online learning is not well established and students are not able to use the various learning platforms that have been provided, therefore to be able to carry out learning on a limited basis can be done by using the model of Problem Based Instruction (PBI) learning with a simple platform using WhatsApp as part of the implementation of the online learning model.

To be able to carry out learning in a limited and sustainable way, educators can hold learning process with WhatsApp media as a form of communication media that can be used by students because it is easier and able to be used quickly and easily (Salehudin, 2020). One alternative form of learning which can be used during the Covid-19 emergency is online learning. According to Moore, Dickson-Deane, & Galyen (2011) Online learning is learning that uses the internet network with accessibility, connectivity, flexibility, and the ability to bring up various types of learning interactions, especially with the presence of social media in the form of WhatsApp (Bulan & Zainiyati, 2020). With social media in the form of whatsapp, elementary school students are easier to
submit tasks and activities which are being done as a learning process which is in the middle of a pandemic which does not know when the pandemic will end.

Through WhatsApp application, it will facilitate learning during the pandemic to create social distancing to maintain distance to avoid the transmission of corona-virus in school clusters. Learning patterns with problem-based WhatsApp with instructions or in class with PBI will be a good alternative learning in carrying out online learning, where these tasks and learning will be structured and educators can assess what activities of students have been done during long distance learning (PJJ) during the pandemic (Pangestika, 2018).

The problem Based Instruction (PBI) learning model is a learning model that can provide instruction to elementary school students who have limitation in confiscating various of learning media platforms and it is very simple to be used to provide instruction to elementary school students in long distance or online learning which can be guided by parents in collecting assignments from learning materials submitted online and not face-to-face as a deterrent effort and transmission during the pandemic which is still running erratically and the spike has increased quite significant in the third quartile during the pandemic (Sulata & Hakim, 2020).

Therefore, with the learning model Problem-Based Instruction (PBI) students will be more controlled in instructional and continuous learning, maintain the rules of learning, and refer to the procedures that have been determined in the syllabus and learning plans that have been made by teachers as facilitators in learning in every meeting which has been conducted face-to-face and continuously through social media WhatsApp as a tool in the confiscation of learning in pandemic period or online will provide freedom in learning, but directed and procedural conducted in online meetings (PJJ).

Technological innovations during the Covid-19 pandemic created a variety of online learning, including the development of the Problem Based Instruction triangular hangout model which was piloted in class VI and the results increased (Uyun et al., 2017). Then to improve the mathematical literacy skills of fifth-grade students through the Problem Based Instruction model, it can improve students' mathematical literacy
skills (Fatwa et al., 2019). Then with the Problem Based Instruction model with the help of PowerPoint which was carried out on social studies learning, it was able to improve the learning outcomes of social studies subjects in class 5 social studies (Hariata et al., 2017). And through the Problem Based Instruction model assisted by Student Worksheets (LKS) with a scientific approach to heat material and changes in form in class VIII students can build scientific characters in students (Pratiwi & Dwijananti, 2017).

Thus, this research is expected to be able to become additional research information during the COVID-19 pandemic, especially for learning innovations during the Covid-19 pandemic. In addition, the study of the Problem Based Instruction model at the basic unit level is still very limited, so further studies are needed. To achieve this goal, it is necessary to innovate is learning with a structured and measurable Problem Based Instruction model. Learning structures with various innovations will provide fun learning, making it easier for educators to measure and evaluate the results that have been achieved. This learning can also be done with various innovations using the Problem Based Instruction model to increase student motivation during the pandemic. The steps in the Problem Based Instruction from model learning activities dominate communication between educators and students because there are stages that of students must follow in participating in online learning processes and activities during the covid-19 pandemic.

**Method**

This research is descriptive qualitative research using a survey approach. By exploring various phenomena in the field that occur directly or at the present time based on the results of interviews and questionnaires in three different classes to find out the effectiveness of learning innovations with the Problem Based Instruction model during the pandemic.

The selection of respondents in this study was based on the readiness of the students, in following online learning conducted during the pandemic. The selection of research subjects are carried out in consideration. The subject of the study was 150 elementary school students who were willing to conduct interview and fill out questionnaires divided into groups of whatsapp (WAG) (Rais & Suswanto, 2017).
The data was collected in the form of exposure and explanation of online learning in elementary schools. In the era of disruption 4.0, we can face diverse challenges.

Questionnaire and questionnaire assessments were used to see how students' motivation responded to the Problem Based Instruction learning model during the pandemic. The assessment questionnaire is in the form of a test of student motivation during online learning during the pandemic. This is used to obtain a comprehensive picture of the implementation of the Problem Based Instruction learning model assisted by WhatsApp in motivating students to learn amid a never-ending pandemic. While the questionnaire is in the form of a test for students in the knowledge of using a WhatsApp social media during online learning amid a pandemic.

The scale used in this research instrument is the likert scale. While in the processed data, the scale that researchers use is ordinal. In this study, the interpretation scale was used to measure the satisfaction level of students with PBI learning model with the following is formula:

\[
\begin{align*}
\text{Maximum Score (S-max)} &= \text{many poll items} \times \text{many respondents} \times 5 \\
\text{Minimum Score (S-min)} &= \text{many poll items} \times \text{many respondents} \times 1 \\
\text{Range} &= S_{\text{max}} - S_{\text{min}} \\
\text{P} &= \frac{\text{Range}}{\text{Category}}
\end{align*}
\]
Table 1.1 Interpretations

<table>
<thead>
<tr>
<th>Score Total</th>
<th>Interpretation</th>
</tr>
</thead>
<tbody>
<tr>
<td>80 ≤ ST&lt;144</td>
<td>Very Bad</td>
</tr>
<tr>
<td>144 ≤ ST&lt;208</td>
<td>Bad</td>
</tr>
<tr>
<td>208 ≤ ST&lt;272</td>
<td>Enough</td>
</tr>
<tr>
<td>272 ≤ ST&lt;336</td>
<td>Good</td>
</tr>
<tr>
<td>336 ≤ ST&lt;400</td>
<td>Very Good</td>
</tr>
</tbody>
</table>

Source: (Mulyono, 2019)

Respondents who answered Strongly Agreed n x 5 = n
Respondents who answered Agree n x 4 = n
Respondents who answered Disagree n x 3 = n
Respondents who answered Disagree n x 2 = n
Respondents who answered Strongly Disagreed n x 1 = n

Description: N is the amount of data

Result

Learning Model Instruction (Problem Based Instruction)

The Covid-19 pandemic has impacted all aspects of life as outlined earlier, including education. Education is defined as a means to form people into individuals who can face the challenges of the times, so education must also be ready to respond to all forms of change in the times itself. So it can be said that innovation in the world of education is also a must (Rahmawati et al., 2020). PBI method is one of the learning models which can evoke students’ activities and reasoning so that students’ creativity can develop optimally. This is very possible, because in PBI students are trained to be able to answer a real problem related to daily life. Problem-based learning is the interaction between stimulus and response, which is the relationship between two directions of learning and the environment. The environment gives students input in the form of help and problems, while the nervous system of the brain serves to interpret the aid effectively so that the problems faced can be investigated, assessed, analyse, and searched for solutions well.

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PBI is not only designed to assist teachers in providing as much information as possible to students, but also to help students develop thinking skills, problem-solving, and intellectual skills. Teacher participation is limited to its role as facilitators and learning partners of students, for example by stimulating and presenting a situation of thinking on an authentic problem of material through the application of concepts and facts. It is expected that students tend to give meaning to problems and circumstances (Darmalaksana, 2020).

Learning On WhatsApp Media

The influence of social media in the age of technology makes people dependent on communication and interaction through social media rather than meeting in person. Social media allows its users to socialize and interact with each other, share information, and collaborate. Among the various types of social media which make it easy for users to interact and communicate with each other, and can be used as a means of discussion and dissemination of learning materials, one of which is WhatsApp. WhatsApp is an internet-based media application that is one of the most popular impacts of the development of information technology. This internet-based application is very potential to be used as a medium of communication because it makes it easier for its users to communicate with each other and interact without spending a lot of money on its use because WhatsApp uses internet data (Marbun et al., n.d.).

The use of WhatsApp application as a means of learning discussion is included in the effective category. The use of Whatsapp program is very effective with the support of its features compared to other instant messaging applications. The many conveniences available make this app very popular. Whatsapp provides advantages or convenience in communicating such as low cost and easier usage. Therefore Whatsapp is a chat application which can be an effective and useful communication media for its users (Salehudin, 2020). Whatsapp is one of the social medias today which is using for the benefit of socializing as well as the delivery of messages both by individuals and groups. But the extent of the use of Whatsapp by its users, therefore from the explanation above can be taken the problem of how much use of Whatsapp as a medium of communication and satisfaction in the delivery of messages among the Community.
While the purpose of this study is to obtain data and information about the utilization of Whatsapp as a medium of communication and satisfaction in delivering messages to students (Sujendra Diputra et al., 2020).

**Learning in The Midst of a Pandemic**

The Corona virus Diseases 2019 (COVID-19) is a new type of disease which has never been identified before in human civilization. Common signs and symptoms of COVID-19 infection include respiratory disorders such as fever, cough, and shortness of breath. The spread of the corona virus initially had a huge impact on the world economy that began to decline, but now the impact is felt also by the world of education. Policies are taken by many countries including Indonesia by limiting all educational activities, the government and related institutions must present alternative educational processes for students and students who cannot carry out the educational process in educational institutions. Activities involving groups of people are now starting to be restricted such as school, work, worship, and so on. The government has urged people to work, study and worship from home to reduce the number of patients exposed to COVID-19 (Marbun et al., n.d.).

With the emergence of the COVID-19 pandemic, teaching and learning activities which were originally also implemented in schools are now becoming home-study online. Online learning is done with the ability of each school. Online learning can use digital technologies such as google classroom, home learning, zoom, video conference, phone or live chat, and others. But what must be done is the assignment through monitoring mentoring by teachers through whatsapp groups so that children can learn. Then the teachers also work from home by coordinating with parents can be through video calls and photos of children's learning activities at home to ensure interaction between teachers and parents (Huljannah, 2020).

The spread of COVID-19 is rapid and widespread because it can be transmitted through human-to-human contact, until now news about COVID-19 is still the main concern of all countries to be vigilant and remain vigilant in the face of COVID-19 that has not been found in drugs and vaccines. Therefore, the main focus of countries today is on the development of new therapies, including anti on virus and vaccines. In essence,
there is an extraordinary panic that hit the country in various parts of the world, related to the emergence of Covid-19 so suddenly and mysteriously (Tanaya, 2020).

**Problem Based Instruction Lesson In The Midst Of a Pandemic**

The first thing that can also be done in implementing whatsapp-based PBI learning model is to be able to create groups from whatsapp classes. Learning is carried out once the material is delivered in the form of leaves. When the learning starts students do attendance in whatsApp groups by taking self and writing the word "Present" then by doing so the learners are considered to be present in the learning activities. In Figure 1 the following is the format of student attendance results through whatsApp groups.

![Figure 2 Student Attendance](image)

Maximum Score (S max) = many poll items × many respondents × 5
= 10 × 50 × 5 = 2500

Minimum Score (S min) = many poll items × many respondents × 1
= 10 × 50 × 1 = 500

Range = S max - S min
= 2500 - 500
= 2000

P = Range: Category
= 2000: 5
= 400
Instructional Learning Model on WhatsApp...

From the data obtained from online learning results, the results obtained on a scale of 400 are very well-typed if applied in online learning applied at the level of primary education or elementary school. In each class with 150 students are divided into three classes online or long-distance learning, graphs are obtained in three different lines found in the three classes. In the first grade, the opinion given by the student continues to rise until it reaches a score of 22 opinions, while in the second class it reaches a score of 18 opinions that continue to increase according to the graph in Figure 2 which is a graph of the increase of students' opinions at the time of online learning and for the last class is the 21 opinions of students who agree to learn with a Problem Based Instruction learning model that can be done online or distance learning that adheres to health protocols during the pandemic that entered the third quartile in the history of online learning during the pandemic. The problem-based instruction learning model presented in Figure 2 is already linked graphically from the opinion of students.

Table 2.1. Student Poll Data On Problem Based Instruction Model

<table>
<thead>
<tr>
<th>No.</th>
<th>Class A</th>
<th>Class B</th>
<th>Class C</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>1</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>2</td>
<td>8</td>
<td>6</td>
<td>5</td>
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<td>3</td>
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<td>11</td>
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</tr>
<tr>
<td>4</td>
<td>11</td>
<td>15</td>
<td>14</td>
</tr>
<tr>
<td>5</td>
<td>22</td>
<td>18</td>
<td>21</td>
</tr>
<tr>
<td>Amount</td>
<td>50</td>
<td>50</td>
<td>50</td>
</tr>
</tbody>
</table>

From the data above, it is known that the results of the questionnaires of elementary school students and the questionnaires that have been distributed in each group consisting of three classes that the opinion of students in three classes with the Problem Based Instruction model in learning is satisfactory because in Table 2.1 the questionnaire data shows that the level of Problem Based Instruction Instructions for student learning motivation increased because of the WhatsApp-based Problem Based Instruction learning model. Social media can coordinate students remotely, it is understandable and makes learning for elementary school students more enjoyable because some of what has been presented in the Problem Based Instruction learning model.
model provides solutions in online learning which has also been developed by educators as an alternative learning to revive motivation for learning during the covid-19 pandemic which lasted more than a year.

From is Table 2.1. It is known that students can learn in accordance with the instruction presented by educators in delivering learning materials. WhatsApp-assisted Problem Based Instruction model can be run well and simply, so it can be operated both by educators and by students during online learning. The ability to receive instruction by educators will be well-coordinated using WhatsApp and problem-based instruction models because in online learning educators can arrange types of fun instructions for elementary school students who are divided into three classes in online learning.

**Student Opinion Chart**

![Student Opinion Chart](image)

**Figure 3 Student Opinion Chart**

Based on the calculation scale above obtained a total score of = 400 which is in the range of 336 ≤ 307 < 400 with the interpretation "Excellent". So, the response of students about learning innovations conducted by researchers using the Whatsapp-based PBI learning model is quite good because this learning is something new for students to warn that this has never been done before. That pbi learning model is a learning model which can improve the activities and learning outcomes of learners. In addition, the

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combination PBI learning model with Whatsapp media makes online learning activities more interesting and able to increase students’ motivation and learning interests. That the media resources self-learning application-based. Whatsapp service can increase the motivation and learning outcomes of learners.

Thus the PBI learning model is very well done during the pandemic online or distance learning that can be done to elementary school or elementary school level, this is following the statement of the (Kristanto, 2020) which states that freedom of learning for elementary school students with learning models with learning innovations using the platform and learning instruction will provide creativity to students and foster the independence of learning, but must be given direction or instruction as not to lose direction in online learning or distance learning with the use of social media in the form of Whatsapp.

PBI learning model pattern is a learning model which can be used to assess the work of their friends, they do the process of comparing their work with the work of their friends who corrected. From this process they do the process of reflection, either about the mistakes in their work or vice versa. This reflection will provide action for the assessor to correct his mistakes in the future or provide corrective or elaborative feedback on his friend’s work. This kind of process if facilitated by appropriate technology will have the potential to create deep learning. This is following the (Aisa & Lisvita, 2020) i.e. the level of development of learners in responding to the material delivered. There are many challenges faced in online learning with the use of this information technology, but there are also opportunities for the utilization of information technology which needs to be developed by educators innovatively and will certainly very useful in the world of education in this digital age. Although it may face various of obstacles and limitations, however, it is an improvement that should be appreciated and used to utilize technology in the learning process.

Conclusion

Students have a good response and interpretation with the innovation of online learning using this Whatsapp-based PBI (Problem Based Instruction) learning model. In addition, the use of the PBI learning model which is a new learning model for students
makes learning more interesting and learners become very enthusiastic. However, some obstacles occur in this online learning, including gadgets, signals, and internet quotas. At this time of pandemic covid-19 uses WhatsApp-based PBI learning model in online learning is one of the alternatives which can be done. The suggestion in this study is to create an online learning media whom we open every time because we need it and update the learning media to make learning more effective and fun and learners become motivated and increase the spirit of learning even though learning is done online. Further studies are also needed to be able to reanalyze the use of Problem Based Instruction learning models because there are still many shortcomings of learning research which can be found, especially by using social media in the form WhatsApp application is conducted through online classes or distance learning to avoid crowds or social distancing.

Acknowledgment

Thank you to all those, who is have provided. Is facilitate and facilities in the creation of PBI-based learning innovations. The learning models which can be applied at the elementary school unit level online and directed so that students can learn based on their needs. With the school's PBI learning model, it can direct students in a directed and sustainable manner. Thanks to the subsection of educational technology in the education and culture office which has helped a lot in providing direction and guidance to use the platform in social media WhatsApp so that the learning is measurable and directed towards students.

References


