Learning Innovations During the Pandemic in Improving the Quality of Geography Learning

Anwar Shidiq Santoso

Geography Education, SMAN 1 Pagaden, Indonesia

Corresponding Email: anwarsantoso71@guru.sma.belajar.id, Phone Number: 0812 xxxx xxxx

Abstract: The COVID-19 pandemic outbreak has had a serious impact on the education system. Usually, learning is done face-to-face, but with the COVID-19 pandemic learning must be done remotely. Changes in learning patterns require a learning innovation. By carrying out an innovation, it is hoped that the quality of learning can be improved. In this study, observing the implementation of geography learning during the pandemic. The research location was conducted at SMAN 1 Subang, SMAN 2 Subang, and SMAN 1 Pagaden. This research is qualitative descriptive, meaning that this research seeks to find interactive patterns of relationships and to gain understanding of meaning. The findings in SMAN 1 Subang, learning that was done virtually was considered less effective, while in SMAN 2 Subang online learning showed better results when compared to face-to-face learning. Online learning at SMAN 1 Pagaden shows good results with the implementation of a project based learning model using google earth media and the whatapps group. As a solution to the problems that arise is to implement the offline model of distance learning as well as the visiting teacher model.

How to cite:

This is an open access article under the CC-BY-NC-ND license
A. Introduction

Education is generally carried out face-to-face, but currently education is carried out virtually due to the COVID-19 pandemic. This unplanned and instantaneous change, of course, requires adaptive and creative behavior. Many of the teachers or students who experience obstacles in conducting distance learning.

The policy to carry out learning activities at home is an effort to prevent the spread of COVID-19. In view of the increasingly worrying spread of COVID-19, as the basis for the issuance of Circular No. 4 of 2020 concerning the Implementation of Learning Policies in the Emergency Period of the Spread of Coronavirus Disease (COVID-19), the Learning from Home process is carried out in the following ways: a) Learning from Home through online / distance education is carried out by providing meaningful learning experiences for students, without being burdened by the demands of completing all curriculum achievements for class improvement or graduation; b) Learning from Home can be focused on learning life skills as an example of introducing the dangers of the Covid-19 pandemic; c) Learning from Home activities and tasks can vary among students according to their potential, and consider the gaps in access / learning facilities at home; d) Facts or products of Learning from Home activities are given qualitative and useful feedback from the teacher, without being required to provide quantitative scores/values.

In its implementation, it turns out that the policy to implement Study at Home has encountered many obstacles, both technical and non-technical. The results of research attempted by Sari, et al. (2020) found obstacles in implementing distance learning such as inadequate gadgets (HP)/laptops and poor internet connection problems, not only that the success of the learning process was still low and ineffective.

In synergy, collaboration between parents, students, and teachers must be built in a sustainable manner. This discussion must be established to provide basic information regarding the psychological condition of students during distance learning. Most think that distance education is education that is tried online, but in its implementation online education is always accompanied by tasks due to the misconception of distance education. Tasks that accumulate will have an impact on students' psychology, this is caused by the deadline for collecting assignments that coincide with other subjects, but on the other hand there are many assignments that students have not understood because of the limited explanations in online learning.

To overcome the various obstacles that arise in distance learning, it is expected that every teacher conducts an initial diagnostic assessment. By conducting an initial diagnostic assessment, the teacher can formulate various cognitive and non-cognitive constraints of students during learning at home. Parents, students, and teachers can work together to design learning strategies that must be adapted to the conditions of students and teachers. The learning strategy (Darmadi, 2017) is “The components of education and learning are arranged in such a way that they can achieve the maximum learning objectives”.

Learning strategies need to be considered by teachers in improving the quality of learning. Reageluth and Merril in (Solikah, 2019) "the quality of learning can be measured through three learning strategies, namely organizing learning, delivering learning and processing learning”. More specifically (Yaumi, 2018) "In designing media and educational technology, it must be based on the characteristics of students associated with competence. The data obtained from the results of the analysis can focus the teacher on formulating educational goals.
Referring to the subject matter and learning objectives, teachers can carry out learning activities to achieve the expected competencies. However, in practice there are still many teachers who teach geography material in a monotonous way so that students' interest in learning geography becomes low. Students' interest in learning will have an impact on student learning outcomes, as seen in student learning outcomes at SMA Plus 'Bustanul Ulum' Puger Jember. "The results of the study show that the activeness and learning outcomes of geography in class X are still low, which can be seen from the results of the test, where on average many students get scores below the Minimum Completeness Criteria" (Kartika, et al, 2019). Because the activeness and learning outcomes of geography at SMA Plus 'Bustanul Ulum' Puger Jember are still low, it is necessary to take an action to improve learning outcomes through Classroom Action Research (CAR).

In a face-to-face learning situation, there are still many obstacles faced in achieving the expected competencies. Especially in the conditions of learning carried out in a Home Study situation which is clearly something new in the learning method for middle-level students. This gives new challenges in the world of education, especially in an effort to achieve the expected competencies in geography subjects.

To answer research related to "learning innovations during a pandemic to improve the quality of geography learning", a problem formulation was formulated which was described in the form of research questions, namely: a) What is the purpose of learning innovation during the pandemic to improve the quality of geography learning? b) How is the learning innovation program during the pandemic to improve the quality of geography learning? c) How is the evaluation of learning innovations during the pandemic to improve the quality of geography learning? d) What are the obstacles and solutions faced in learning innovation during the pandemic to improve the quality of geography learning?

B. Method

This research is descriptive qualitative, meaning that this research seeks to find patterns of interactive relationships and to gain an understanding of meaning. While what is meant by descriptive research according to (Ajat, 2018) is "research that seeks to describe phenomena that are real, realistic, actual, real and at this time, because this research is to systematically describe, reflect or paint, factual and accurate overrides the facts, characteristics and relationships between the phenomena under investigation".

The research was conducted from July to December 2020. The research data were collected at SMAN 1 Subang, SMAN 2 Subang, and SMAN 1 Pagaden as research objects. By taking the research location at SMAN 1 Subang, SMAN 2 Subang, and SMAN 1 Pagaden, it has represented the work background of the students' parents, income level, and education level. This is intended to seek the connection between environmental input and raw input. The three schools have the same accreditation, namely "A Accreditation".

C. Result and Discussion

Findings at SMAN 1 Subang

The Purpose of Learning Innovations During a Pandemic

The changing times that run dynamically have encouraged innovation and modernization to enter the world of education. Considerations of incorporating innovation into education have given rise to many theories about educational innovation, one of which
is the opinion of Ibrahim, 1998 (in Sutirna, 2018) which says that educational innovation is "innovation in the field of education or innovation to solve educational problems".

Responding to changes in the implementation of learning, an innovation in learning is needed. With this innovation, it is expected that students can respond to learning actively, innovatively, creatively and fun. This is in accordance with the 2013 Curriculum view that the teacher’s role is no longer the center of learning in the classroom. However, "the learning process must be directed at the condition of active students so that students' thinking abilities can be explored optimally" (Yanurati, 2018).

Efforts were made to present active and creative learning during the pandemic, the geography teacher of Class X SMAN 1 Subang developed a learning innovation in the form of discovery and receprory learning and contextual learning models. It is hoped that with the application of discovery and receprory learning and contextual learning models, students can carry out distance learning such as carrying out face-to-face learning (not awkward and rigid).

Learning Innovation Program During the Pandemic

As a superior school in Subang Regency, of course SMAN 1 Subang has good instrumental input. The use of a curriculum that refers to the 2013 curriculum can be implemented properly because it has human resources (educating and educational staff) who have a high work ethic.

In preparing the learning implementation plan (RPP) during this pandemic, several aspects must be considered, such as student psychology, the availability of BDR facilities (mobile or laptop), internet access (quota), and internet networks. In this case, the geography teacher of SMAN 1 Subang has prepared a lesson plan that considers these aspects but does not involve the role of parents/guardians in preparing the lesson plan. The involvement of parents/guardians when preparing lesson plans is needed to find out the learning difficulties faced by students during distance learning and to determine the psychological condition of students in implementing distance learning.

The learning program begins by setting Learning Objectives that refer to Basic Competencies. After setting the Learning Objectives, then compiling Competency Achievement Indicators to measure learning achievement. After determining the Learning Objectives, subject matter, and Competency Achievement Indicators, the next step is to create learning models and learning methods.

Based on the agreement and available facilities that are tailored to the characteristics of students and learning objectives. So it was agreed that the geography subject in class X SMAN 1 Subang used discovery and receprory learning and contextual learning models. As a source of offline learning, package books available in libraries and newspapers (mass media) are used. Meanwhile, to support distance learning, the online model of learning resources used is in the form of power point slides distributed through whatApps groups.

Evaluation of Learning Innovations During the Pandemic

Efforts made by the teacher to assess the affective domain (attitude) is to assess the accuracy in taking attendance as well as in collecting assignments. Students who are active in absenteeism become the main benchmark in affective assessment. In addition, the teacher makes a range of affective values by looking at the timeliness in collecting assignments. Students who are on time in submitting assignments will be given the highest score but students who are the last to submit assignments will be given the lowest scores.
In the psychomotor domain, the teacher uses tasks that involve students' psychomotor skills, such as the task of making a Map of the Distribution of Volcanoes in Indonesia. Students who have good psychomotor skills will be seen from the results of making the map, students who have good psychomotor skills will make maps according to the rules of making maps and the neatness of the final results of the map.

Table 1.
Differences in student learning outcomes on face-to-face learning and distance learning

<table>
<thead>
<tr>
<th>Learning Form (1)</th>
<th>Student Learning Outcomes/average (2)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Face-to-face learning on lithosphere material</td>
<td>93</td>
</tr>
<tr>
<td>Distance learning on lithosphere material</td>
<td>81</td>
</tr>
</tbody>
</table>

Source: Research data

From the table above, it can be clearly seen that face-to-face learning and distance learning have different learning outcomes. In face-to-face learning, student learning outcomes on the lithosphere material average students get a value of 93. But in distance learning, the average student learning outcomes on lithosphere material is 81. This can be understood because in distance learning the delivery of the subject matter delivered is very limited. Virtual communication that has been done is less effective and efficient.

Findings at SMAN 2 Subang

Carrying out learning by involving active students will be difficult if the method used in learning uses the lecture method. This is where the important role of a learning innovation so that students are fully involved in the learning process. Keeton and Kate, 1978 (in Kolb A. David, 2014) "learning in which the learner is directly in touch with the realities of being studied" This understanding gives the impression that a learning process that involves direct experience will have a better effect, because it involves both psychomotor and cognitive aspects simultaneously.

Realizing the importance of a learning innovation to implement distance learning. So the geography teacher Class X SMAN 2 Subang made learning innovations by designing an assignment learning model (recitation) based on various aspects. It is known that the average student of SMAN 2 Subang is a lower middle class family and the factors of online learning support facilities and learning objectives are the logical reasons in determining the assignment learning model (recitation), in addition to theoretical and pedagogical reasons.

Learning Innovation Program During the Pandemic

The Learning Implementation Plan (RPP) prepared by the geography teacher Class X at SMAN 2 Subang does not involve the role of parents/committees. This is an effort to implement health protocols that must limit large gatherings and to implement social distancing in preventing the transmission of COVID-19.

An important aspect in preparing the Learning Implementation Plan (RPP) in an emergency is to consider the psychological aspects of students. In this case, students experience culture shock due to changes in learning patterns that must be carried out remotely. Many students find it difficult to adjust to distance learning patterns. In this case
the geography teacher of class X is very concerned about this by making distance learning methods that are adapted to students' psychological factors.

Besides psychological considerations in preparing the lesson plan (RPP). The geography teacher of class X at SMAN 2 Subang also considers aspects of supporting distance learning such as ownership of a cellphone (mobile phone) and internet affordability. As a learning resource in distance learning, learning videos from the YouTube application are used as well as modules distributed through Google Classroom. While the learning method used in implementing distance learning is assignment (inquiry).

**Evaluation of Learning Innovations During the Pandemic**

Education provides legitimacy to individuals who experience the learning process. Education can be interpreted as a symbol of a person's dedication to think straight, mantiq, and in accordance with the rules of truth. Therefore, it is very important to build common awareness about the importance of education. Not giving a time limit to education (long life education) must be instilled and understood so as not to experience fatigue in learning.

The learning objectives according to Richey (in Hendratmoko, et al, 2017) are "to increase knowledge, skills, and attitudes that enable students to perform tasks according to certain standards". Individuals who learn will have a measurable view and recognize various possibilities so that they can solve various problems they face.

To measure students' understanding of a material, a test (evaluation) is carried out. The test instrument is prepared based on the Competency Achievement Indicators that have been previously set in the Learning Implementation Plan (RPP). To measure students' understanding of the lithosphere material, the teacher conducted a post test in the form of essay questions.

**Table 2. On face-to-face learning and distance learning**

<table>
<thead>
<tr>
<th>Learning Form</th>
<th>Student Learning Outcomes/average</th>
</tr>
</thead>
<tbody>
<tr>
<td>Face-to-face learning on lithosphere material</td>
<td>78</td>
</tr>
<tr>
<td>Distance learning on lithosphere material</td>
<td>86</td>
</tr>
</tbody>
</table>

Source: Research data

There are differences in student learning outcomes in the subject of Geography, Lithosphere material which is carried out face-to-face and distance learning. In face-to-face learning the average student learning outcomes on the lithosphere material is 78, but in distance learning the average student learning outcomes on the lithosphere material is 86. This significant difference is due to the teacher's teaching method using the assignment method.

In the previous explanation that the weakness of the assignment method is the high level of subjectivity. At the time of doing the test students may be assisted by other people in the process, but the teacher cannot supervise to that extent. Unlike when the test is conducted face-to-face, the teacher can directly supervise the students when working on the questions. This possibility reduces the level of objectivity of the results of tests carried out on the assignment method.

In the evaluation of learning, it is measured not only in the cognitive domain but also in the psychomotor and affective domains. To measure the psychomotor domain in the
Lithosphere material, the teacher makes an assessment instrument based on the time span of collecting assignments. Students who collect assignments in the allotted time will get high marks, the later they are, the lower their grades. In addition, to measure students' skills, the teacher makes an assessment instrument based on the level of neatness of the tasks collected. These two indicators are used in making psychomotor assessments of students on the lithosphere material.

Another aspect of learning evaluation is the assessment of students' attitudes (affective). To measure students' affectiveness on the lithosphere material, the teacher makes an assessment instrument based on student attendance records and student activity in learning. Students who ask and answer in discussion sessions conducted on the Google Classroom application or whatapps group. Students who have good attendance records will get good grades and every student who asks and answers in the lesson will also get an assessment. These two indicators are used as a reference for teachers to assess students' affective domains on the lithosphere material.

**Findings at SMAN 1 Pagaden**

One of those affected is learning activities that are usually carried out in the classroom. With this pandemic, learning must be done online. A learning innovation is needed so that online learning can be carried out effectively and efficiently.

In the research of Kristiawan & Rahmat (2018) which says that "learning innovation is needed to increase students' learning motivation". So that students will feel a meaningful, fun, creative, and innovative learning atmosphere.

The explanation above is the reason for the Class X geography teacher at SMAN 1 Pagaden in making a learning innovation so that distance learning activities can be carried out properly. Interviews conducted with geography teachers in responding to distance learning, stated the importance of learning innovation so that students can respond positively to learning carried out in any form. Therefore, geography teachers took the initiative to make learning innovations by compiling learning models combined with communication innovations (whatApps application).

**Learning Innovation Program During the Pandemic**

With various logical and factual reasons regarding the COVID-19 pandemic situation, the Class X Geography teacher at SMAN 1 Pagaden decided to use the project based learning (PJBL) model as a geography learning innovation during the COVID-19 pandemic. As a method to apply the project based learning (PJBL) model, whatapps application is used.

Project-Based Learning is a learning procedure that uses projects/activities as media. Students carry out exploration, evaluation, interpretation, synthesis, and data in creating various kinds of learning outcomes. Project-based learning or project-based learning is a student-centered learning model in carrying out an in-depth investigation of a topic. Students constructively carry out deepening learning with a study-based approach to real and relevant cases and problems.

By using the PJBL model, students will be given the task of analyzing the landscape in their respective homes with the help of the Google Earth application. Remote sensing is a way of digitally interpreting the area. The teacher uses the google earth application to explain remote sensing material.
Google earth as a virtual global that can show houses, car colors, to shadows of people and road signs. The resolution depends on the destination, but the majority of the area (except some islands) is covered in 15 m resolution. Because it has a fairly detailed resolution and accuracy, Google Earth can be used for various purposes related to the region, such as analyzing the relationship between settlement forms, population density, disaster-prone areas, and others.

Students will be given assignments via the WA (whatsapp) group to identify their area using the Google Earth application. Students are given tasks, starting from looking for their respective homes. After finding the place of residence, students are required to identify the form of settlement, whether in the form of; elongated, centered, or around certain facilities.

Then students are given the task of observing the phenomenon of the area near where they live in order to find a correlation between the landscape and the type of livelihood, for example, if the area is a rice field area, it is certain that most of the population works as farmers. As the last assignment, students were given the task of making a compass map of the route from home to school. The assignment is an assignment report that must be collected in the form of an image sent via WA to the subject teacher.

**Evaluation of Learning Innovations During the Pandemic**

"Learning in the implementation of the 2013 curriculum based on character and competence should be carried out based on the needs and characteristics of students, as well as basic competencies in general" Mulyasa, (2013). Therefore, the principles and procedures of personality and competency-based learning should be used as a reference and understood by teachers, facilitators, principals, school supervisors, and education staff.

<table>
<thead>
<tr>
<th>Table 3. On Face-to-face Learning and Distance Learning</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Learning Form (1)</strong></td>
</tr>
<tr>
<td>Face-to-face learning on lithosphere material</td>
</tr>
<tr>
<td>Distance learning on lithosphere material</td>
</tr>
</tbody>
</table>

Source: Research data

Before learning begins, students are required to fill out the attendance list in the whatApps group. The presence of students is needed as a consideration to assess the affective aspects of students. In addition, student activity is also used as a reference for assessing students' affectiveness.

Meanwhile, the task of observing the phenomenon of the area near where he lives in order to be able to find a correlation between the landscape and the type of livelihood and making a compass map from the home to school route is a reference for assessing the cognitive and psychomotor aspects of students.

Student learning outcomes on remote sensing material with comparisons between face-to-face learning and distance learning show different results. However, these results are not so significant. Because the raw input of SMAN 1 Pagaden mostly has a cognitive level in the middle group.

The difference in learning outcomes that is seen is more due to the use of the project-based learning model with the help of the Google Earth application. In face-to-face learning,
the teacher in delivering remote sensing material always uses the lecture method. It is different from distance learning which requires teachers to innovate using learning models to implement health protocols.

**Constraints and Solutions in Learning Innovations During a Pandemic**

With the learning process, students are given academic responsibility to be able to develop their thinking skills and skills. However, due to the COVID-19 pandemic, learning cannot be done face-to-face. That is, in the distance learning process there are still many obstacles to be able to achieve the learning objectives. With new situations and new ways of carrying out the learning process, the learning objectives are often neglected. Teachers and students are more focused on methods to carry out the learning process to be effective and efficient.

The distance learning process is not as simple as carrying out face-to-face learning. Distance learning involves a lot of technology and information, mostly there are teachers and students who do not understand technology well. From the aspect of supporting distance learning online, it is also an obstacle faced by most teachers and students.

Teachers and students are required to have a gadget/laptop as a medium in carrying out online learning. On the other hand, gadgets (HP)/laptops require an internet connection to be able to access online learning applications. Indonesia's landscape is uneven and mostly highlands. In the highlands, the internet signal becomes an obstacle because many are blocked by high hills.

The uneven development in all regions of Indonesia causes areas in remote villages to be untouched by the internet network. The internet network is the main prerequisite in carrying out online learning. But this internet network has not yet reached rural areas.

The COVID-19 situation is not only causing health problems, but also having an economic impact. With COVID-19, many people have lost their livelihoods. As a solution to overcome the obstacles of online distance learning, So, teachers can apply distance learning offline models. Offline learning at home during the BDR period can be carried out through: 1) television, for example the Learning from Home Program through TVRI; 2) radio; 3) self-study modules and worksheets; 4) printed teaching materials; and 5) teaching aids and learning media from objects and the surrounding environment.

**D. Conclusion**

Learning innovation is needed to improve the quality of geography learning. Learning innovations can be in the form of learning programs and learning evaluations. Distance learning at SMAN 1 Subang is considered less effective because many materials cannot be understood by students as a result of the interaction between teachers and students in distance learning is very limited.

The assignment method by the geography teacher at SMAN 2 Subang can improve student learning outcomes. But student learning outcomes are very subjective because the tasks carried out by students may involve other people.

With the COVID-19 pandemic, geography teachers at SMAN 1 Pagaden implemented a project-based learning model to carry out distance learning. In face-to-face learning, geography teachers use the lecture method to deliver material so that in distance learning, student learning outcomes are better than in face-to-face learning.
The obstacles faced in implementing distance learning online can be in the form of human resources and supporting facilities. Many of the senior teachers have difficulty operating technology and information to support online learning. Another problem in implementing online model distance learning is the limitations of the devices owned by students (HP/Laptop). The uneven topography of the Indonesian region is another problem in online learning, in the highlands it is very difficult to reach an internet signal because it is blocked by high hills.

The impact of the COVID-19 pandemic not only has an impact on the health aspect but also has an impact on economic activity. Many parents of students have lost their livelihood and income. So they cannot meet the needs of their children's quota to carry out online learning.

For those who experience obstacles to implementing distance learning online models can use the offline model. Offline learning at home during the BDR period can be carried out through: 1) television, for example the Learning from Home Program through TVRI; 2) radio; 3) self-study modules and worksheets; 4) printed teaching materials; and 5) teaching aids and learning media from objects and the surrounding environment.

In an effort to provide convenience to students in carrying out distance learning, then the teacher is obliged to make visits with the intention of providing encouragement and direction to keep the spirit in implementing distance learning. For students who cannot carry out distance learning using online or offline models, teachers can conduct visiting teacher model learning.

References


