

# The Impacts of the Covid-19 Pandemic on Education Processes: A Case Study

Muhammad Aulia Ridarma  
Universitas Syiah Kuala  
Banda Aceh, Indonesia

M.Dirhamsyah  
Universitas Syiah Kuala  
Banda Aceh, Indonesia

Rosaria Indah  
Universitas Syiah Kuala  
Banda Aceh, Indonesia

**Abstract:- This study explores teaching and learning processes in Aceh after the Covid-19 pandemic. This study utilizes a qualitative approach. The data were obtained from semi-structured interviews with teachers and high school students who experienced teaching and studying during the pandemic and afterward. The data were coded and analyzed using thematic analysis. The findings showed positive and negative impacts of the Covid-19 pandemic on the teaching-learning processes.**

**Keywords:- Covid-19 Pandemic, Teaching, Learning.**

## I. INTRODUCTION

Since December 2019, the world has been shocked by the emergence of Covid-19. On 14 February 2020, 1,381 deaths were reported globally out of 49,053 infected. The government of every country is trying to take various control measures to prevent the risk of the disease(1). The Indonesian government issued the Regulation Number 21 of 2020 concerning Large-Scale Social Restrictions. This regulation has an impact on all sectors, including the education sector.

In response to this government regulation, The Ministry of Education and Culture issued regulation number 4 of 2020 concerning education policies to prevent the spread of Covid-19 by conducting distance learning activities using e-learning/ virtual media. However, to some extent, the use of technology has left schools with ineffectiveness in the teaching and learning processes(2).

## II. IMPACT OF THE PANDEMIC ON THE EDUCATION SECTOR

The Covid-19 pandemic resulted in fundamental policy changes in Indonesian education. However, the most essential thing is changing the teaching and learning processes and replacing them with distance learning methods at home online. The study-at-home policy forces all parties to change their habits. With this new policy, teachers are confused because they have to look for the right pattern to carry out how learning from home can be done. One of the best ways chosen is to seek network-based learning or online learning (3).

Online learning is very different from conventional learning that takes place in schools. Teachers and students interacted in indirect sessions. However, this strategy allows teachers and students to be in different places simultaneously. The positive side of online learning is that there is encouragement for educators and students to take advantage of communication technology and adapt quickly. Teachers and students will still be safe learning even though they are in their respective homes without leaving the house and meeting face to face (4). Schools were closed and substituted by online classes.

Studies describe the positive impacts of Covid-19 on the education sector, including triggering the acceleration of educational transformation (5), the emergence of online learning applications & free online courses (6), the emergence of Unlimited Creativity (7), the creative collaboration between parents and teachers (8), application of knowledge within the family (8), building a positive mentality (2).

There are also negative impacts of the Covid-19 pandemic on education, including creating challenges for teachers to design appropriate online learning (9), and decreased learning effectiveness with online methods (2). Furthermore, not all teachers in Indonesia thoroughly understand the use of technology, and internet access is unsupportive toward implementing online learning (10).

Even though many studies describe the impacts of the pandemic on education, scant literature illustrates how the teaching and learning processes proceed after the pandemic. This study explores the impacts of the Covid-19 pandemic on the teaching and learning processes after the pandemic.

## III. RESEARCH METHOD

### A. Research Context

This study explored the life experiences of teachers and students in a high school located at a disaster-prone area in Banda Aceh. The school is situated in the highly populated area of the Kuta Alam subdistrict, which was heavily affected by earthquakes, the 2004 giant tsunami, and a red zone area for the Covid-19 pandemic, as can be seen in the hazard map below.



Fig 1. The Map Of Epidemic Hazards Of Banda Aceh  
 Source: Attachment to Regulation of the Mayor of Banda Aceh Number 68 of 2021 <https://peraturan.bpk.go.id/>

**B. Research Design**

This study used a qualitative paradigm and phenomenological approach. This approach allows the researchers to scrutinize deep into the life experiences of its participants, which were teachers and students of the highschool (11). The selection of participants in this study was carried out purposively. They were selected based on the inclusion criteria: people who had insight and knowledge about the research topic, which is the educational situation during the pandemic and the aftermath. In sum, the following list describes the participant criteria:

- Teachers who taught during the pandemic and are still teaching today and agreed to be interviewed
- Students studying at the school during the pandemic until now are undergoing the teaching and learning process during the Covid-19 pandemic

The admin assisted in the selection of participants to prevent coercion. The admin also considered gender balance. The admin selected ten teachers and ten third-year students.

**C. Data Collection**

The data were collected using a semi-structured interview, allowing the researcher to ask the participants questions. An interview is a conversation with specific aims and objectives between two parties, namely the interviewer who asks questions and the interviewee (12). Before the interviews, researchers prepared a list of questions based on relevant literature. The places for the interviews were determined by considering a convenient location for the interviewees. It should be underlined that all interviews were carried out with written permission and approval from the interviewees and then signed. The interview should be recorded and transcribed verbally to make it easier for the interviewer (13).

This interview with the participants started with the problems covered in the interview guide. The sequence of questions did not have to be the same for each interviewee; the course of the interview depended on the interview process and each individual's answers. However, the prepared

interview guidelines ensured that the researchers could collect the same type of data from the interviewees (14). The processes of this research can be seen in the research flowchart below:

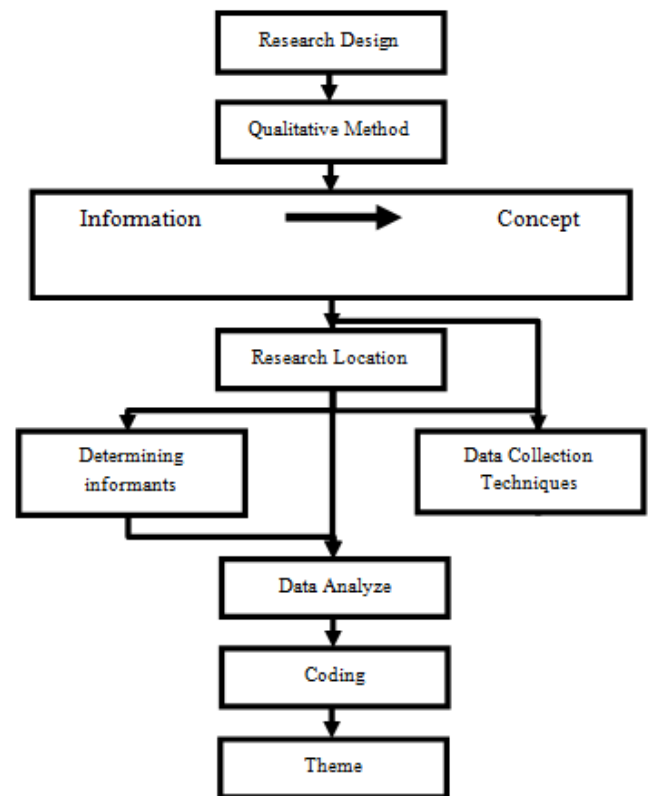


Fig 2. Research Flowchart

**D. Data Analysis**

After the data in the forms of audio recordings and field notes were obtained, the researchers started to analyze them in the following steps:

- All interview results are transcribed verbatim
- Researchers read and re-read the entire transcription results several times
- Researchers gave codes based on existing topics on a theoretical basis or freely based on emerging data or combine the two approaches (hybrid)

Therefore, the author feels it is important to discuss in depth the steps of data analysis in this study, especially coding, considering that the coding process is the core stage in qualitative data analysis.

➤ **Coding**

Coding is needed to reduce the amount of data and find the relationship between the data obtained and the resulting analysis (11). The data obtained in this research are in the form of interview transcripts and documents from secondary sources. Coding was a transition process between data collection and broader data analysis (15).

Before coding was carried out, several steps needed to be taken to determine coding strategies, including:

- *Data Preparation*

Before coding was carried out, the researcher had to prepare recorded interview data transcribed into text (16).

- *Pre-Coding Mark*

Pre-coding was done by marking powerful sentences, dominant ideas, and relevant insights that helped to answer the research questions. Essential parts were marked to allow researchers to pay more attention and be inclined to those parts (11).

- *Determine the general coding scheme.*

Two persons carried out hybrid coding processes. Initially, the coding processes were driven by the literature review conducted previously. Subsequently, the coding was done based on emerging data.

- *Coding memos*

The researchers made some memos during the coding process. These memos assisted them to remember and highlight certain aspects of the data. These memos recorded new ideas that emerged when the researchers read the data and helped researchers find relations with other data. Apart from being made when creating the code, memos are also made when the researcher combines the codes or rearranges the codes in the parental code, which explains the relationship between one code and another (17).

#### IV. RESULT AND DISCUSSION

The characteristics of the participants are listed in table 1 and 2 below:

TABLE I. THE CHARACTERISTICS OF THE TEACHER PARTICIPANTS

No	Teachers Name	Gender	Ages
1.	MF	M	27
2.	NZ	F	50
3.	RH	F	49
4.	DD	M	47
5.	WD	F	45
6.	KW	F	45
7.	NR	F	48
8.	SM	M	52
9.	MZ	M	50
10.	AS	M	51

TABLE II. THE CHARACTERISTICS OF THE STUDENT PARTICIPANTS

No	Students Name	Gender	Ages
1.	FR	M	17
2.	PJ	F	17
3.	SH	M	18
4.	SF	F	17
5.	WR	M	18
6.	AM	F	18

No	Students Name	Gender	Ages
7.	NF	M	17
8.	KN	F	18
9.	FH	M	17
10.	AL	F	17

According to the data analysis, two themes emerged: positive and negative impacts of the pandemic on teaching and learning processes. The positive impacts described by the participants include:

- *An increase in digital fluency*

After the pandemic, students returned to school to resume their educational program. Teachers observed an improvement in their ability to discover, evaluate, and use information on the internet.

*I saw a big difference in digital information proficiency of the students. They seem to know a lot more than the students on the same level before the pandemics.* (MF, male, teacher)

*We were lucky that the learning platform such as Zoom and Google meet, and others offer almost unlimited sources of learning in unlimited time during the pandemic.* (AM, female, student).

- *Being grateful of the opportunity to interact in person resulting in better learning and more cost-effective.*

Before the pandemic happened, face-to-face interactions were taken for granted. After being forced to interact indirectly during distance learning, and then back to the new normal, the opportunities for direct interactions were more appreciated and learning significantly became better and less expensive.

*We are happy that when we cannot understand something, now we can ask our teachers directly.* (SF, female, student)

*Right after the offline learning started, the teacher-student communication became better, and if they didn't understand some things, they asked us right away.* (KW, female, teacher)

*“I am happy that the offline classes have started. Online learning is hard because we need to prepare gadgets and internet access while preparing food on our table is difficult. I only got a second-hand computer, and I had four children. No wonder my children fought over the turns to use the computer to do their homework and attend classes.”* (RH, female, teacher)

- *Recognizing the importance of health*

The pandemic teaches people the importance of taking good care of personal hygiene, sanitation, and health in general, both in personal and public spaces.

*One of the blessings of the pandemic is that we care more about our health and others, which is good.* (RH, female, teacher)

In addition to the positive impacts, students and teachers also revealed the negative impact of the pandemic on the teaching and learning processes, including:

➤ *Learning loss*

Teachers and students think that students should learn the topics that should have been understood during the pandemic.

*I felt like I couldn't understand many topics and needed to relearn them. I feel so dumb.* (FR, male, student)

*Seeing the situation of our students, it looks like we need to repeat many learning topics from the beginning. It seems like they only got 20% of the understanding. Therefore, we must ensure they understand the previous topics before moving on to the next one.* (MF, male, teacher)

➤ *Problems in handwriting*

During online learning, students responded to the learning by typing in their computer/laptop instead of handwriting. Therefore, when offline learning started, they experienced challenges in practicing handwriting.

*"Taking notes using handwriting is difficult for me because I rarely write using pen during online classes"* (FR, male, student)

*"My hand is stiff when it comes to writing. During the pandemic, I rarely had to write, so it takes time to adapt to going back to handwrite again."* (SF, female, student)

➤ *Challenges in time-management*

Online classes did not require students to get ready and wake up early. Students may start learning later in the morning. Therefore, when offline learning and students have to get ready much earlier, they have challenges, and it takes several months to change their habits.

*Waking up early in the morning is hard. I used to sleep again after the dawn prayer. Now I cannot sleep again after the prayer because I must prepare for school.* (NF, male, student)

*When offline learning started, I felt sleepy during the morning classes. Perhaps because I used to sleep again after the dawn prayer when I had online classes.* (AL, female, student)

These findings indicate the pandemic's positive and negative impacts on the education processes in high school. The positive impacts, such as the advancement of students' digital technology skills, require teachers, parents, and education institutions also to advance their technology (18). The pandemic served as a catalysator to improve teachers' technological ability, especially in using educational platforms to connect with their students (19).

The pandemic also has negative impacts on the educational processes. In this research, students admitted to facing challenges in understanding concepts and practicing skills such as handwriting and other competencies. This phenomenon was described in previous studies and called learning loss. It is defined as the loss of knowledge and skills, both general and specific, in formal education due to a long gap in the learning processes (20).

In addition, distance learning provides time flexibility, making it difficult for students to manage their learning routines and disciplines because they are still carried away by online learning during the pandemic. The pandemic atmosphere that is still lingering can also affect student motivation and learning focus.

In previous research during the Covid-19 pandemic, teachers had to change their teaching and learning strategies. The use of appropriate teaching methods and teacher behavior and attitudes in managing the teaching and learning processes is needed during the learning-from-home program (9). These factors can hinder learning effectiveness and affect students' academic achievement. Students also face various obstacles in distance learning, such as difficulty understanding the material, limited internet access, and lack of preparation for online learning.

In addition, some teachers and students had to deal with their family's economic issues that affected their access to technology and adequate learning facilities. According to a previous study, facilities and infrastructures in Indonesia were inadequate to support online learning (2).

The challenge of time management among students calls for parents, school managers, and the government to pay special attention to students' social and psychological aspects by providing social support and creating an inclusive environment. Together with the effect of learning loss, these challenges decrease mastery of student competencies (21). Students also become undisciplined, unpunctual in collecting assignments, and addicted to the internet (22). In addition, access to the Internet was limited due to weak infrastructures (10). This problem calls for improvement in planning the area's development by the government involving academia.

## V. CONCLUSION

This study explores the impact of the Covid-19 pandemic on the teaching and learning process at a school in a disaster-prone area in Banda Aceh. Several themes emerged from this study after collecting data from teachers, students, and researchers' observations. The positive impacts of the pandemic that can be observed post-pandemic include increased digital fluency, gratitude for the opportunity to interact in person, and increased health awareness. The negative impacts of the pandemic on educational processes include learning loss, problems in handwriting, and time management.

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