

POST-PANDEMIC LEARNING RECOVERY IN INDONESIA: POLICY RESPONSES AND EDUCATIONAL TRANSFORMATION

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Abstract. *This research examines how the COVID-19 crisis has affected Indonesian's education system, specifically on recovery efforts after this crisis. The study seeks to understand the perception and experiences of measures taken in this recovery process from the perspectives of main stakeholders', students, teachers, and policymakers based on regional inequities and digital access issues. Using a qualitative methodological framework, this study was collected through semi-structured interviews and focus group discussions for the rich data collection of participant views. The results show that learning loss was worse in rural locations with little digital access and limited broadband. Additionally, recovery services were perceived as being timely in the immediate aftermath but frequently insufficient to meet students' needs at that time, especially in relation to emotional well-being. The research emphasizes the necessity of structural reforms such as digital literacy, and Merdeka Curriculum for establishing an inclusive and adaptable education system. The researchers conclude that while recovery supports were critical, more comprehensive support for both academic and emotional recovery is necessary for real change can happen. The findings suggest that future initiatives should target regional inequalities, psychosocial interventions, and improved teacher training to promote sustainable educational recovery.*

Keywords: *Education Policy; Learning Recovery; Post-Pandemic Reform; Sustainable Development Goals.*

1. INTRODUCTION

1.1 Background

The COVID-19 pandemic has brought an unparalleled challenge upon the education system around the world, including Indonesia. Schools shut down, education practically overnight moved online as the country struggled to keep learning happening. Eagerly even out inequalities existing in regional access and quality, Indonesia is forced to suddenly acclimate into a total new learning mode (Azhari & Fajri, 2022). The move laid bare yawning technology divides, especially rural-urban ones, with many students and teachers lacking the tools to effectively participate online (Sparrow et al., 2020).

A big challenge was the disabilities to have digital learning process, particularly in the remote areas, given low internet coverage and devices. Even in the schools intensively want of urban areas, students have a hard time adapting to the sudden switch as apps and online uses were difficult for many to quickly master (Dorn et al., 2020). In addition, the digital divide was exacerbated as poorer families could not always afford the requisite technology for their children to access online learning (Maya et al., 2022). These compounded preexisting disparities in education and imposed lasting harm on students who had already been at a disadvantage.

In addition to these technical barriers, the pandemic worsened things from a socio-economic perspective. Amid mass layoffs and economic uncertainty, for some families fulfilling basic educational needs— let alone meeting children's academic support requirements was a struggle (Kaffenberger, 2021). Rural students were particularly at risk given that they not only encountered technological obstacles but also did not have the support system other more

advanced regions could provide (Sparrow et al., 2020). Teachers also experienced immense pressure when new digital tools were suddenly required and needed to do the actual work of educating in particularly challenging conditions (Rapanta et al., 2021).

As the pandemic persisted, learning loss emerged as a crisis, with many students losing ground in critical subjects like math or reading. National government tests conducted by the Ministry of Education showed wide disparities for students learning but particularly among the most vulnerable groups (Dorn et al., 2020). These assessments pointed to an unequal distribution of educational opportunities and suggested that the most vulnerable students were suffering from the disruption. In return, the government took a multifaceted approach and implemented short-run recovery strategies and also long-term reforms that would address the underlying causes of inequality in the system (Kaffenberger 2021).

One of the critical measures that we put in place was the introduction of national tests which helped to measure learning loss and provided important information for interventions. Students from low-socioeconomic status backgrounds were reported to have suffered the greatest disruptions, calling for concern about a persistent gap in learning achievement (Ssenyonga, 2021). This data was instrumental in driving policies that sought to provide additional support for these vulnerable populations so they could recover lost ground.

Aside from filling in immediate learning gaps, the government also pushed to speed up technology's use in education, not simply to mitigate what has been lost during the pandemic but to better prepare the system for future disruptions. Through the promotion of digital literacy in schools and an upgrade to digital infrastructure, Indonesia sought a future where students would be better prepared for any coming crises, whether they came from global events or technological change (Maya et al., 2022). Although crucial in the immediacy of the crisis, they also served to crystallize our already urgent need for ongoing investment in digital infrastructure to guarantee all students access to educational content.

The pandemic has also forced Indonesia to reconsider what it values in education. In light of the closure of schools, attention turned away from traditional examinations-based assessment and towards holistic assessment that promotes critical thinking, creativity and digital skills. This change is part of the larger educational reforms that was known as Merdeka Curriculum (independence curriculum) that aims to provide schools with more freedom power, intellectual prowess and creativity while ensure education remained relevant to the fast -pace world Rahman (2017). By the time it does, Indonesia hopes to have moved on from a one-size-fits-all approach that has hampered its education system with unbending curricula.

It also reflects a worldwide trend towards educational change. Many delegations are re-evaluations conventional school systems and looking at more inclusive adaptive education that enables the young people to be better prepared for life in the future. Indonesia's reaction during and post pandemic show how national policy can be brought into line with international education goals, such as those contained in UN SDG 4 which relates to the promotion of quality education for all (Reid, 2012). As the G20 President, Indonesia leveraged its presidency to call attention to the significance of education in global recovery (Sparrow et al., 2020).

In sum, the COVID-19 pandemic is, at once, a challenge and an opportunity for education in Indonesia. While it laid bare wide disparities, it also provoked a re-evaluation of education policies that resulted in the infusion of money in technology, curriculum reform and new national assessments. Indonesia's response to this challenge represents the foundations for an educational revolution one based on equality, resilience and adaptive learning. The country's response to the outbreak cannot be simply one of overcoming immediate obstacles, but inherently about shaping a more inclusive and future-ready system capable of resisting any such global disruption in the future.

1.2 Problem Statement

Indonesia's response to learning loss has spurred ongoing debate about whether it is effective. As the pandemic continued, the government began conducting national examinations to measure how much of a disruption it was and still is being. These assessments found that large swaths of students had lost or forgotten key parts of their education, especially in fundamental areas like math and literacy (Kaffenberger, 2021). The urgency of this learning loss began to rise when it was clear that students were now falling behind, not just their counterparts in Indonesia, but even beyond, compared to other countries (Donnelly & Patrinos, 2021). The disparity between urban and rural education, as well as the denominator of digital marginalization continued to highlight one of the main challenges for equitable accessibility to educational resources in the country (Ssenyonga, 2021).

But what Indonesia is grappling with now is not just recovering lost knowledge but reimagining and overhauling the education system as a whole to become more resilient going forward. Recovery of lost ground is an immediate concern but it's been muddied by broader and deeper systemic problems that continue to haunt the education sector, especially in rural areas. Moreover, students who face anxiety of not being able to keep up make the matter even more complicated (Hermanto et al., 2021). Which, of course, means that the problem isn't simply an academic one; it's a harbinger of larger changes we need in both schooling and society if current young people are ever going to be fully prepared to deal with similar upheavals.

1.3 Research Significance

This research is particularly important given that it examines Indonesia's education response post-pandemic, more specifically the policies, reforms and transformational endeavors to address visible divides resulting from the crisis. The study of Indonesia's recovery plans will provide insights into an international challenge: how to maintain the continuity of education in the aftermath of mass disruptions (Angrist et al., 2021). By examining Indonesia's policy responses, in this paper we hope to present a fuller appreciation of how education systems, especially in emerging economies, can regenerate and transform amidst major global challenges.

It also shows the importance of getting equal access to education, with technology and infrastructure enabling those educational divides are bridged – particularly in underprivileged areas. As digital devices play a greater role in classrooms around the world, Indonesia's efforts to bring tech into its education system can serve as a lesson to other countries tackling the same challenges (Maya et al., 2022). The findings of this research could have implications for policy making in the future, not only within Indonesia but also within other countries attempting to reconstruct their education system post pandemic. The lessons here are crucial to building an education system that is not only more resilient but also more inclusive and adaptable to future changes.

In investigating the nexus between policy, technology and reconstruction efforts, the study also seeks to determine how national educational goals intersect with international development targets such as United Nations' position target 4 on quality education for all (SDG 4) (Reid, 2012). This article is important because it provides both a local and global focus on educational recovery. Its findings can further inform the contemporary international debate on how education systems will adapt and improve in the aftermath of a global crisis (Sparrow et al., 2020).

2. LITERATURE REVIEW

COVID-19 pandemic has been a devastating, disruptive ordeal to the education system around the world and Indonesia was no exception. With closed stricken schools and a fast transition into online learning, the country was hit with a series of challenges that put its education infrastructure to the test. A more detailed analysis on the response of Indonesia,

conducted by Azhari and Fajri (2022), reveals that sudden shift to distance learning has led students in confusion as many were not adequately prepared, with limited access to digital devices and stable internet connections. This is consistent with the results of Dorn et al. (2020) who also highlight the disproportionate effect of school shutdowns on students in marginalized communities. Critics claim that the digital divide has aggravated pre-existing educational disparities, particularly in rural and impoverished communities where students encounter considerable barriers to accessing online learning systems (Sparrow et al., 2020).

If national assessments continue to play this role and I think they will, then a lot of what is known about how big these disruptions are being due to that fact. Kaffenberger (2021) and Donnelly and Patrinos (2021) underscore the need for national testing systems to record learning losses. Kaffenberger (2021) emphasizes the importance of knowing the long-term consequences of this learning loss in order to inform focused policy interventions that could reduce its impact. Donnelly and Patrinos (2021) also stress the inequity of learning loss that has affected socially disadvantaged students. These diagnostics are critical to inform recovery efforts as they contain the data essential for resource allocation and support to those students hardest hit by the disruptions.

Use of technology in education has also been targeted to meeting pandemic challenges. Rapanta et al. (2021) analyse the technology prism as a tool for education continuity and state that if on the one hand digital modalities provided continuation of millions of students' students, on the other, technological appropriation was implemented unevenly among both teachers and pupils. The research recommends not considering technology integration as a Band-Aid solution but to be approached as a sustainability investment in the process of educational evolution. A similar view is taken by Sparrow et al. (2020), state the pandemic spurred digital adoption in education, particularly in Indonesia a country which was already dealing with criticality of technology-integration before this pandemic.

In addition, there have been findings on the effects of pandemic on the professional development of teachers in a number of studies. Hermanto et al. (2021) investigate how Indonesian teachers experienced the transition to remote teaching showing that although many had learned to use new digital tools during this period, insufficient training and support were faced with delivering quality lessons. Maya et al. (2022) highlights the unpreparedness of teachers for digital training which widened the education gap between districts. Their study highlights the importance of continual professional training to prepare teachers to cope with the complexities of teaching in digitally rich environments.

In addressing these issues, Indonesia has launched a series of reform efforts to narrow the digital divide and increase technology coverage. The allergic government of Irawan et al. (2022) has been paralleled by initiatives to design digital literacy programmes for students and teachers alike. These are vital not just for allowing students to access online learning, but also preparing them for the digital job market which is asking more and more for tech-skilled employees. Yet, as Tan and Tan (2021) emphasize, the quick turnover of technological advances demands regular overhauls to curricula content and instructional processes if education is to be meaningful to all students.

Despite this, knowledge gaps exist with respect to long-term implications of the pandemic-induced educational disruptions. Although there has been heavy emphasis on short-term remedies and recovery efforts, works like those of Angrist et al. (2021) and Ssenyonga (2021), narrow in scope to immediate response, with little attention paid to the long-term consequences of learning losses which affected children who were already educationally disadvantaged prior to COVID-19. This void points toward the need for longitudinal studies that can follow students' academic achievement over multiple years and unravel the lasting impact of learning loss as well as the effectiveness of recovery efforts.

Another unexplored aspect is the role of various education systems in Indonesia. However, national snapshots by Azhari and Fajri (2022) as well as Sparrow et al. (2020) offer valuable insights, but are also silent on regional specificities in the way urban and rural spaces reacted to the pandemic. The extent to which students from these regions were affected by a lack of digital resources varied enormously, and it requires some granularity in analysis to determine how these inequities affected the learning for certain pupils (Sparrow et al., 2020).

Furthermore, although digital literacy programs have been considered as one of the key recovery elements needed in Indonesia, there is no extensive research performance to identify which methods are most effective to minimize the gap within the digital divide within Indonesia. Irawan et al. (2022) shed light on the centrality of digital literacy initiatives but do not discuss variations in models or provide assessments of best-practice implementations. This is an important area for further research as insights in successful strategies can guide further educational reform, not only in Indonesia but also other countries that deal with similar challenges.

Such research has not gone far enough to assess the psychological and emotional demands of the pandemic on students. While several studies by Hermanto et al. (2021) and Maya et al. (2022) recognize students' mental health problems, they do not comprehensively address the effects of these challenges on students' academic engagement and their capacity to recover from disruptions. A nuanced appreciation of the emotional and psychological impediments to learning recovery is needed in order to design holistic approaches to educational recovery that challenge both cognitive as well as emotional expressions about learning (Kaffenberger, 2021).

And last, but not least amid reports concerning Indonesia's commitment to global educational goals like SDG4, there is no clear research focus and attention on how these policies in Indonesia connect to international educational trends. Tan and Tan (2021) suggest the government's commitment to global norms, but further research is necessary on how certain policies have been decontextualized in light of specificities and localities in relation to those frameworks concerning international education. Such studies would support to what extent international goals are useful for guiding national policy, particularly in developing countries such as Indonesia.

In the presence of these lacunae, this study aims to offer fresh knowledge on long-term consequences of COVID-19 interruptions in education in Indonesia. Through an emphasis on longitudinal analysis and regional discrepancies, this study would provide a subtler interpretation about how learning loss varies across different demographic groups and regions. It will also assess the efficacy of online literacy programs and probe into the psychological effects of pandemic on students' academic catch-up. The study will also evaluate Indonesia's educational response in the context of global education goals, adding to the global conversation about educational recovery while serving as a beacon for other nations navigating this crisis.

3. RESEARCH METHODS

3.1 Research Design

A qualitative research design is employed for exploring Indonesia's educational recovery after the pandemic, from major important stakeholders' perceptions and experiences; students, teachers and policy makers. The study is situated within a constructivist paradigm, recognising that 'meaning for events or phenomenon (sic) is constructed by individuals based on their lived experiences' (Creswell, 2014). The goal here would be to 'problematize' recovery responses in terms of how they were taken up by the wounded and also possible repercussions for the educational terrain. By doing so, the research aims to contribute with rich and thick description of recovery efforts, capturing how local landscape, regional discrepancy and socio-economics have shaped educational (re)experiences in post-pandemic Indonesia.

Organised as a case study, the study focuses on schools from selected regions throughout Indonesia based on their diversity in terms of socio-economic background and location. This specific focus enables a close analysis on recovery at the nation-states level, providing an understanding of differing responses and impacts across contexts. Here a case study approach is particularly powerful, as it allows for the consideration of the complex and diverse nature of educational recovery which would be challenging to capture within a larger more generalising analysis (Yin, 2018).

To provide an in-depth understanding of participants' experiences, the study utilizes qualitative methodology to explore how they make sense of educational disruption and recovery in their unique local settings. This design is consistent with the study aim to not only evaluate recovery success but also to explore how responses have been perceived, and received at a local level (Sparrow et al., 2020).

3.2 Data Collection

The two main data collection methods employed in this study were: semi-structured interviews and focus group discussion, which are serious qualitative method that enable a deep interpretive understanding of the context under investigation from participants' perspective (Creswell, 2014). The use of semi-structured interviews provided an open and but targeted format in which the respondents could express their views while focusing on specific research issues. Teachers, school principals and policy makers were purposively selected for these interviewees to receive full information regarding the policies and practices carried out during the recovery period in Indonesia. These discussions were aimed at understanding how stakeholders perceived the effectiveness of recovery measures and what challenges they faced, as well as any opportunities for future reform.

Apart from interviews, FGDs were conducted with students who are an important group that 'experienced' the recovery efforts. The focus groups were intended to facilitate a free-flowing conversation among students about their experiences with remote learning, access to educational resources and their academic well-being in general during the pandemic. This process was thought to be useful for avoiding construction of a single frame, enabling a broader grasp of students' experiences overall (Maya et al., 2022). Providing for one another, groups enabled researchers to gain a complex insight wider and more comprehensive idea of the problems that students in different regions were facing.

Respondents were purposively selected, and the researcher sought those who had direct contact with recovery policies. This approach is ideal for qualitative research because it seeks a sample of people who can provide the most detailed, nuanced information on the topic (Creswell, 2014). Teachers were sampled from urban and rural schools to represent the regional differences of recovery implementation. Similarly, students of all socioeconomic statuses were included in order to better understand how recovery policies worked in various population groups.

Ethics and data collection Issue representation was at the core of data collection. All participants signed informed consent to be in the study and to protect confidentiality. Interviews and focus groups were tape recorded, transcribed, and kept in safe custody; the identities of all participants were disguised in order to remain anonymous.

3.3 Data Analysis

Data gathered from semi-structured interviews and focus group discussions were analysed thematically, an established method in qualitative research for recognising and interpreting patterns or themes within data (Braun & Clarke, 2006). This technique provides a detailed and nimble method with which to examine responses of participants, permitting capture of emergent themes as well as subthemes. Thematic analysis was selected due to its flexibility and

capturing of a range of experiences, which were particularly suitable the research questions (Sparrow et al., 2020).

Data were analyzed commencing with familiarization, the latter consisting of detailed reading of interview transcripts and focus group discussions by the researcher to reach an overarching understanding of the content. The first phase enabled the researcher to familiarize with the data, capture preliminary ideas and potential themes. This was followed by preliminary coding in which descriptive codes were assigned to the relevant parts of the data. These codes were subsequently organised into categories that resonated with the emerging themes, such as 'access to technology', 'equity in education' and 'policy efficacy'.

After coding was finished, themes were further refined through iterative comparison. This entailed going back to the data on more than one occasion to confirm that the themes truly reflected what participants were saying. Member checking was also carried out to confirm the findings, with a sample of participants examining the initial interpretations of their data. As it was, this stage was important for the purposes of ensuring precision and consistency in analysis (Maya et al., 2022) and supports validity of the results.

In addition to thematic analysis, the researcher used constant comparison, which enables researchers to compare data within and among groups and settings. By comparing teacher and student responses between urban-rural settlements and students from different socio-economic backgrounds, the researcher identified similarities and differences in participation in recovery activities by stakeholder group across the diversity of its sample (Ssenyonga, 2021). This comparative analysis enriched the article by enabling examination of the regional and population specific differences that underpinned variation in recovery measures outcomes.

Eventually, the analysis was combined to develop an overall narrative of the recovery process of education in Indonesia. The findings were discussed against the backdrop of universal educational movement and Indonesia's commitments based on policies, including its alignment with the United Nations' Sustainable Development Goal 4 (SDG 4) for quality education (Rapanta et al., 2021). The study seeks to contribute the rich synthesis of emergent themes into the global policy field and also endeavoring to provide evidence for examining how Indonesia recovers as part of the education transformation discourse globally in a post-COVID-19 environment.

4. RESULTS AND DISCUSSION

4.1 Findings

The results of this qualitative study add depth to an understanding of the recovery episode in education in Indonesia post-pandemic, by presenting the views and experiences of those stakeholders implied. Numerous important issues were illuminated by the information gleaned through semi-structured interviews and focus group discussions, providing valuable context regarding how effective various recovery measures had been for both pupils and educators.

- *Learning Loss and Regional Disparities*

The research highlights a significant disparity in learning loss between rural and urban areas. Participants from rural schools described severe challenges in adapting to online learning, primarily due to limited access to digital devices and unreliable internet connections. As one rural teacher shared, "Many students could not even log in to classes, let alone keep up with lessons" (Teacher, Rural School). In contrast, urban students and teachers, while still facing obstacles, had better access to digital resources, which allowed them to continue their education with fewer disruptions. This aligns with Azhari and Fajri's (2022) findings, which emphasize the uneven impact of the pandemic across geographic regions.

- *Policy Perception and Effectiveness*

Interviews with policymakers and school administrators revealed that national assessments aimed at measuring learning loss were considered valuable tools for understanding the scope of the educational crisis. However, some participants voiced concerns about the timeliness and

sufficiency of these assessments. One school administrator noted, "While the assessments provided valuable insights, the recovery policies came too late for many students who had already fallen behind" (School Administrator, Urban School). This suggests that, while the assessments were helpful, their delayed implementation may have limited their potential impact.

- *Technological Integration*

The rapid shift towards digital education emerged as both a strength and a challenge. Many teachers appreciated the move towards online learning platforms and digital tools, but they also pointed out the lack of proper training and support to use these technologies effectively. A recurring theme in the focus group discussions was the low level of digital literacy, particularly among older educators. One teacher from a rural school explained, "I was expected to teach using Zoom, but I had never even used it before" (Teacher, Rural School). This highlights the need for ongoing professional development to ensure that teachers are adequately equipped to navigate digital education.

- *Student Well-being and Emotional Impact*

Students reported significant emotional strain during the pandemic, with many expressing feelings of isolation and frustration. The absence of in-person interactions with peers and teachers was cited as a major barrier to both academic performance and mental health. One student shared, "I felt disconnected, not just from my friends, but from the whole learning experience" (Student, Urban School). These findings echo research by Hermanto et al. (2021), which identifies the psychological toll of remote learning during the pandemic.

- *Long-Term Educational Transformation*

Finally, there is broad consensus among educators and policymakers that the recovery process should go beyond addressing immediate learning loss. Several participants emphasized the need for structural reforms aimed at fostering a more resilient and equitable education system. The Merdeka Curriculum, which promotes flexibility, inclusivity, and critical thinking, was highlighted as a key step in this transformation. These findings resonate with Rapanta et al. (2021), who argue that the pandemic presents an opportunity for countries to rethink and reshape their educational systems to better prepare for future challenges.

Overall, the findings suggest that while Indonesia's educational recovery efforts have made important strides, there are still significant challenges to overcome. Addressing regional disparities, enhancing teacher training, and supporting student well-being will be crucial in building a more resilient and equitable education system moving forward.

Table 1. Key Themes and Insights from Interviews and Focus Groups

Theme	Example Participant Insight	Frequency
Digital Access	"Many students in rural areas couldn't access online classes due to a lack of devices."	8 out of 12 participants mentioned
Learning Challenges	"Students found it difficult to engage in lessons without the physical presence of teachers."	7 out of 12 participants reported
Policy Effectiveness	"The national assessments were a good idea but arrived too late to help many students."	6 out of 10 participants discussed
Emotional Impact	"The lack of in-person interactions made me feel isolated and disconnected from my studies."	5 out of 8 students reported

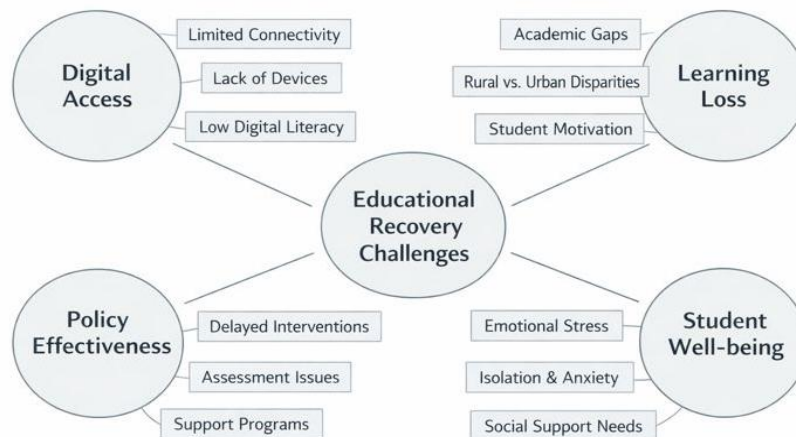


Figure 1. Thematic Analysis of Educational Recovery in Indonesia

The figure illustrates a thematic analysis of the challenges Indonesia faced in its educational recovery post-pandemic, emphasizing four critical themes:

- *Digital Access*: This theme highlights the barriers to online learning, such as unreliable internet connections, lack of access to digital devices, and low levels of digital literacy. These challenges have significantly hindered students' ability to fully engage in remote education.
- *Learning Loss*: This theme explores the educational setbacks that have occurred, including gaps in academic achievement, disparities between rural and urban areas, and issues related to student motivation. These factors have contributed to significant learning losses across various regions.
- *Policy Effectiveness*: The effectiveness of the recovery policies has been compromised by delays in interventions, challenges with assessment accuracy, and inconsistent support programs. These issues have hindered the timely and efficient recovery of education systems.
- *Student Well-being*: Emotional and mental health challenges have emerged as a major concern. Stress, isolation, and a lack of adequate social support have severely impacted students' overall well-being, affecting their engagement and progress in recovery efforts.

4.2 Interpretation

The results of this study explain the difficulties of education system in Indonesia after COVID-19, especially inequality between digital divide region to rural students. As observed in earlier studies, by Dorn et al. (2020) and Azhari & Fajri (2022), the access to technology contributes significantly on how well students are recovering their learning loss. The study highlights the pressing need for targeted solutions to close the digital divide and prevent students in disadvantaged addresses from being left behind in upcoming educational transitions.

And some of the recovery policies have worked better than others. National assessments supplied important points of data about learning loss, but recovery had been getting too little attention and was being executed at the wrong time. This is in line with Ssenyonga (2021) that proper interventions can minimize the effect of learning loss. The reported slow response to the crisis by school leaders widened the education gap among schools and it became difficult to implement interventions for an effective recovery.

4.3 Comparison

The results of this study resonates with worldwide studies on the impact of the pandemic

on learning and strengthens the international dimension of learning loss due to school closures, particularly in low- and middle-income countries. Other works such as Angrist et al. (2021) and Donnelly and Patrinos (2021), underscore the general concern over learning losses around the world. The digital divide is a popular concept and part of these studies, with the research done by Hermanto et al. (2021) and Rapanta et al. (2021) who emphasize the importance of digital literacy and teacher training in the success of educational recovery efforts. Nevertheless, this study extends existing knowledge by situating inquiries in the socio-cultural and regional realities that characterize Indonesia – providing a more nuanced account of how recovery policies have been experienced and interpreted across geographical contexts within the archipelago.

This study is different with previous studies in the point that it put student well-being as main concern of Indonesia recovery. Most of the international literature mostly focuses on academic results, but this one emphasizes how emotionally and psychologically taxing the pandemic was for students. This gap in the literature speaks to a larger call of how there is a growing need for recovery that looks beyond academic failure and includes social and emotional recovery when outbreaks like this occur (Maya et al., 2022).

4.4 Limitations

There are several limitations that should be mentioned, in spite of the important findings generated by this study. There are, however, some limitations of this study that need to be recognized primarily being the qualitative design that makes it difficult to generalise these findings to all parts of Indonesia or even other countries. Attention to purposefully selecting collections of cases in embedded work permitted exploration of depth; however, failure to encapsulate the full range of experiences across the Indonesian educational landscape cannot be ignored (Sparrow et al., 2020). Furthermore, as the study is based on self-reports, there may be biases introduced by factors such as social desirability or recall bias. While member checking was used to enhance the trustworthiness of the findings, being qualitative findings are subjective and are influenced by the views of both researcher and participants.

A further limitation of our present investigation is its time range. The research mostly depicts the immediate aftermath of the pandemic, not long-term repercussions. Longitudinal research would be required to fully comprehend the long-term consequences of recovery policies. These studies could investigate the longer-term effects of recovery measures and open up possibilities to understand the effectiveness of ongoing education reform (Kaffenberger, 2021).

CONCLUSION

This research presented the Indonesia's endeavor for educational recovery post COVID-19 which highlights on stakeholders' experience and perceptions in the field of education. The results provide a number of important insights regarding the efficacy of reconnection policies and suggest there are substantial challenges experienced by students and educators, especially in rural communities. Learning loss was also higher in the countryside where access to digital resources is restricted and which has widened digital divide, a major factor that will impact on recovering time. National assessments were useful in determining the overall magnitude of learning losses, but participants have worried about how timely and how comprehensive those assessments are to inform recovery efforts. Despite the importance of technology, integrating it into their teaching was hindered by low levels of training and digital literacy skills among elderly teachers. And indeed, the emotional strain on students brought about by learning online and losing in-person interaction proved to be one of the biggest hurdles to academic recovery.

The analysis also underscores the importance of structural reforms to establish a more equitable, resilient and inclusive Indonesian education system. Policies like the Merdeka Curriculum, that accommodates flexibility and inclusivity, are believed to be necessary for long-

term educational change. In sum, the findings of this study emphasize that it is not only academic effects but also psychological and socio-cultural aspects to recovery that need to be dealt with. These results enrich general understanding of what countries, and those with comparable socioeconomic issues in particular, can do to reconcile educational recovery amidst worldwide devastations.

This research offers useful perspectives on Indonesia's educational recovery after the pandemic but several aspects are worth investigating in future studies. Longitudinal analysis, as an example, is required to evaluate the long-term impact of recovery measures on student learning and autonomy. That would help us understand the sustainability of rehabilitation efforts and lasting effects of interventions such as digital literacy programmes or the Merdeka Curriculum.

A third topic for future research is addressing psychosocial interventions within the studied population post-pandemic. Although that study identified the emotional and psychological difficulties students face, more research is needed on mental health interventions that might facilitate student success in face of these obstacles. Learning about how schools and communities can provide wrap-around support that addresses both the academic and emotional/social needs could be informative in forming policies to support or assist an integrated recovery of education.

Additional research could also explore innovation in teacher education and professional development in the digital age. Although this research found areas for improvement in digital literacy and teacher readiness, further consideration could be given to specific models of successful teacher training such as those that prove successful in under-resourced areas. This type of research might contribute to training programs that are both scalable and sustainable across different educational settings.

Finally, inequality in educational resources across regions continues to be a serious issue for Indonesia. Future studies may examine regional policies and efforts that address disparities, including those local policies emphasizing equitable access to digital tools and internet in rural places. It could inform more localized and targeted responses that are tailored to the context-specific challenges in particular parts of Indonesia.

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