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Teaching and Learning During School Closure: Lessons from Indonesia

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EXECUTIVE SUMMARY

- Almost 69 million Indonesian students face a significant risk of loss in learning during government-mandated school closures to prevent Covid-19 transmission. Some groups of students, mainly high achieving students from highly educated parents, are however better protected, implying that learning inequality is likely to widen under such conditions.
- Only 40% of Indonesians have internet access (which is critical for home-based learning), and this will exacerbate learning inequality, especially outside of Java.
- There is risk of the widening learning gap becoming permanent, and in order to mitigate this, the MoEC needs to implement policies that compel teachers to implement differential teaching.
- A specific mode of differential teaching (i.e. periodic assessment and adapting teaching to the children's learning level) should be implemented, which would require enhancing teachers' ability and motivation, combined with support from parents and local government.

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INTRODUCTION

Close to 69 million students from all levels of education in Indonesia have been affected in 2020 by the school closure ordered by the Ministry of Education and Culture (MoEC) to prevent Covid-19 transmission at schools. Schools have also been asked to cancel any type of examination that requires students to gather. For the first time in at least three decades, national examinations for grades 9 and 12 were cancelled.

Schools are unlikely to reopen in the foreseeable future. In late June 2020, the government enacted a set of extremely health-focused regulations for school reopening.¹ First, the earliest that schools can reopen is July 2020.² Second, a district can only reopen schools if it has zero current COVID-19 cases. As of July 2020, only 6% of students in the country had been able to start face-to-face schooling. In August, MoEC loosened the requirement by allowing schools in areas with positive COVID-19 cases to start in-school sessions. But the safety protocol remains tight. While the strong focus on public safety is reasonable, an unintended consequence could be learning losses that students could suffer due to these school disruptions.

Several studies by different institutions have tried to investigate the impact of school closure on student learning. INOVASI (2020) revealed that during the closures, children from less privileged background spend fewer hours studying and have more limited access to learning facilities. If the school reopening is not supported by any effective remediation programme, students from less privileged backgrounds are less likely to catch up (Kaffenberger, 2020). They will tend to learn less and this condition will accumulate into larger and permanent learning deficits (Azevedo et al., 2020).

In this article, we focus on identifying education service delivery during school closure. We synthesize findings from ten surveys done during the first three months of studying from home, between April to June 2020. We analyze the results to make judgements on how school closure could affect student learning levels in Indonesia, and provide some practical suggestions for policymakers.

BACKGROUND

Prior to the school closure, Indonesia's education quality could already be characterized as low and stagnant. OECD (2019) found that the performance of 15-year old Indonesian students in the Programme for International Student Assessment (PISA) had not progressed much between 2003 and 2018. Therefore, school closure poses a significant risk that the little learning that Indonesian students gain in school may diminish.

Indonesian teachers may also be ill equipped to deliver schooling from home. The World Bank (2016) estimates that only 5% of primary school teachers in Indonesia have sufficient teaching skills to increase their students' learning levels. Nationally, close to 10% of teachers are absent from classrooms (ACDP, 2015), with the rate being much higher in remote areas. Teacher-centered teaching approaches, as opposed to student-centered approaches, dominated, with little meaningful student interaction (World Bank, 2015). Teacher development programmes are generally of low quality and do not result in improved teaching practices (e.g. Fillaili & Liang, 2019).

Finally, studying from home during COVID-19 requires sufficiently good internet connection. Internet availability is relatively high in Java, from 65% in East Java to 89% in Jakarta. But availability varies greatly outside Java, from 30% in Papua to 79% in East Kalimantan. As for internet access, only 40% of Indonesians have that, ranging from 66% in Jakarta to 20% in Papua.

These imply that while schools are closed, children in rural Indonesia with no access to internet connections face a severe limitation in receiving education services. The larger implication is that studying from home is unlikely to be effective in Indonesia. For the rest of this article, we show the actual practice from various surveys.

DATA AND SYNTHESIS METHOD

Our analysis is based on ten surveys conducted between April and June 2020.³ While some of these are very specific about the information collected and targeted specific areas, others provide a broader picture of the conditions, schools, students, teachers, and parents face at the national level. Respondents ranged from students, teachers, and principals from early childhood education to senior secondary level, as well as parents of school-aged children. In geographically-targeted surveys where online access may be more difficult, respondents were reached via phone calls (INOVASI and SMERU), and had the option to respond to the survey through free-of-charge SMS, WhatsApp and Facebook Messaging (UNICEF U-Report, 2020). More information on the surveys is available in the appendix.

Schools are facing a tumultuous period of transition, affecting a variety of stakeholders within the educational landscape. In analyzing the survey data, therefore, we create a typology to categorize the information into four overarching themes: (1) Student-teacher interaction, (2) teacher ability or willingness to modify the curriculum, (3) support for teachers and school principals, and (4) familial/parental support for students.

We group similar survey questions based on their relevance to learning and teaching, and the frequency of reported cases and created cross-comparisons and analyses based on the four themes they represented. Several surveys also included portions of qualitative interviews, which we have incorporated in the findings section of this paper.

There are several limitations to the survey synthesis: (i) the majority of surveys were collected through online mechanisms, leading to relatively low response rates and some surveys' reliance on convenience sampling; (ii) as most of the surveys relied heavily on online and social media platforms, their results may be biased to those with access to internet-connected devices; (iii) the difference in objectives, sample size and target locations had to be taken into account in our synthesis; and (iv) the lack of access to the raw data necessitated exclusive reliance on published numbers.

RESULTS: TEACHING AND LEARNING DURING SCHOOL CLOSURE

We discuss four aspects of teaching and learning during school closure.

(i) Student-teacher interaction

The surveys identify four types of student-teacher interaction during school closures. First, and most ideally, direct interaction among teachers and students through mobile phone, internet applications, or house visits. For mobile phone applications, the most popular method used is through WhatsApp. Second, teachers send messages to students through parents. Third, teachers only provide tasks or homework to students, without directly interacting or providing feedback to the students. Fourth, teachers do not engage with the students at all. In this last type, students usually end up learning independently, through radio or television programmes. In some cases, students may not be studying at all.

Through qualitatively extrapolating and comparing the survey results at the national level, we estimate that 60%-70% of teachers interact directly with students or through the parents. About 10% of teachers have the third type of interaction. The rest belong in the fourth type.

We find that young teachers, teachers in urban areas, and teachers whose students come from middle-upper income families mostly adopt the first two types of interaction. Due to a lack of infrastructure, teachers in less developed or remote areas tend to implement the third and fourth types of interaction. When we disaggregate by school type, we see that high-quality private schools set school-wide interaction policies that all teachers follow. On the other hand, public schools allow teachers to decide the best way to interact with students.

(ii) Teachers' ability and/or willingness to adapt the curriculum

The second aspect we examine is teacher ability and willingness to adapt the curriculum during school closure. A curriculum that is too dense or progresses too quickly risks permanently leaving students behind. During school closure, communication and teaching become much harder, and teachers, students, and parents may face additional psychological and economic pressures. Therefore, the practice of teaching to the level of the students becomes even more critical.

From the surveys, we identify three types of teachers. First, teachers who are able and willing to adapt curriculum based on student learning level. The second type consists of teachers who continue to closely follow textbooks and curriculum expectations while ignoring students' current learning levels. The final group of teachers deliver unstructured teaching during school closures. Overall, the ten surveys show that teachers are almost equally divided into the first and second groups. As expected, only motivated and adequately capable teachers could adapt the curriculum. The surveys we synthesize show that only half of the teachers are able to do this. As for the third group, only a maximum of 5% of teachers belong in it. It should be noted, however, that Indonesia has about three million teachers. So, 5% of teachers is equivalent to 150,000 teachers. If each teacher serves 30 students, then around 4.5 million students could potentially suffer from this state of affairs.

(iii) Support received by teachers from schools, local government, and non-governmental organizations

The third aspect is on the support that teachers receive from schools, local government, or NGOs.⁴ When schools started to close, MoEC removed some restrictions, enabling more flexible use of education funds for schools. For example, school operational (BOS) funds

could now be used to purchase cleaning supplies, internet data credits, and subscriptions to online learning platforms, where previously there was no such mandate to do so.

With regards to local government and school support that teachers receive, we categorize the support into three categories: (i) teachers receiving both operational support and academic support. Instances of the former include allowance to purchase internet data credits. The latter includes training and new guidebooks, among others; (ii) teachers only receiving operational support, and; (iii) teachers who have not received any (additional) support since the closure of schools. From the surveys, we found that as many as 90% of teachers have received some kind of operational support.⁵ However, only a maximum of 20% of teachers received academic support, with about 10-20% reportedly not receiving any.

We find that teachers who receive both operational and academic support mainly teach in districts where the local apparatus has high capability and interest in education. The presence of non-governmental organizations also has a positive influence, especially with regards to academic support.

(iv) Family and parental support for student learning

The final aspect that we examine is parents' support for education. With children studying from home, parents face increased pressure to be more involved and to guide their children in learning. There is a shift in education service delivery from being almost exclusively done by teachers to requiring parental involvement.

Out of the ten surveys we synthesize, only two surveys interviewed parents. Therefore, we have the least amount of information in this aspect. We find that the level of support that parents provide depends significantly on the family's economic conditions and the parents' education level. Children from higher socio-economic status families with highly educated parents appear to be in the best position to adapt to studying from home. Highly educated parents are found to be most able to guide their children in learning from home and to accommodate the technological, logistical, and psychosocial needs of adapting to learning from a distance. While the surveys do not contain sufficient information to allow for qualitative extrapolations, national statistics show that in 2019, the average adult education attainment remained relatively low at only 8.75 years.⁶ World Bank Education Statistics shows that only 38% of Indonesian adults completed 12 years of education. Therefore, most students have lower-educated parents.

HOW WILL SCHOOL CLOSURE AFFECT LEARNING LEVELS?

While all students face a significant risk of learning losses, the surveys we synthesize show that some groups of students face a relatively higher risk than others.

Table 1 shows our summary of the relative risks of permanent learning loss that students face, depending on teacher ability and willingness to adapt the teaching, and the type of interaction that they have with teachers during school closures. We argue that the only students who face relatively lower or medium risks of permanent learning loss are those whose teachers could teach at the students' learning level and maintain scheduled learning

interactions with the students during the learning from home period. These teachers are mainly teaching in schools where higher socioeconomic status children are enrolled in. These children also have higher-educated parents. We also expect that support from such parents lower the risk of permanent learning loss.

Table 1. Relative Risk of Permanent Learning Loss

Teaching Method Teacher-student Interaction	Target set based on students' needs/ progress	Target set based on the curriculum	Teachers have no target or structure in teaching
Teachers interact directly with students	Lower Risk	Higher risk for low-achieving students	
Teachers only interact with parents	Medium risk for students with less involved parents	Higher risk for low-achieving students with less-involved parents	Higher risk for students with less-involved parents
Teachers only distribute assignments without giving any feedbacks		Higher risk	Higher risk
Teachers give very minimum (or no) stimulus to students			Higher risk

The risk of unrecoverable loss could come to be higher for students who are forced to follow the curriculum targets. We estimate that around half of the teachers still give their students assignments and materials as scheduled and instructed in the teacher handbook. The teachers' lack of capability in planning and adjusting the lessons would result in students being forced to move forward in the curriculum ladder without attaining sufficient pre-requisite skills. Hence, these students will be increasingly left behind as the curriculum progresses. Without explicit guidance and intervention, we expect this practice to be carried over after the schools reopen. We predict that not only will these students suffer from permanent learning loss, but the loss will also be greater for low achieving students with lower educated parents.

Based on these facts, the school closure and reopening could result in widening learning inequalities. In the long-term, these inequalities would translate into widening socioeconomic inequalities.

CONCLUSION AND POLICY RECOMMENDATION

In this article, we synthesize the findings of ten surveys to analyze education service delivery during school closure in Indonesia. We find that all students at all learning levels face a significant risk of learning losses during school closure. Students with higher educated parents are better protected from learning losses, implying that learning inequality is likely to widen during school closure. We also assess how permanent these learning losses could become.

We have two policy recommendations. First, the MoEC should quickly organize a way to measure student learning levels to gauge the severity of learning losses. The measurement should be done remotely for health reasons. It should allow students to take the test at home. It should also be done periodically, say every two months. In the first instance, the government should only aim for national representation. Once conditions improve such that students can start going back to school at least on some days, a measurement that allows district-level or school-level disaggregation should be developed.

Second, to avoid permanent learning loss for the majority of students, the MoEC needs to implement policies that compel teachers to implement differential teaching. The practice consists of two components: (i) periodic assessments should be conducted on student learning levels; (ii) the assessment results should be used to determine appropriate lesson plans based on the students' current learning levels.⁷

The specific mode of differential teaching (i.e. periodic assessment and adapting teaching to the students' learning levels) that could be implemented depends on the teachers' ability and motivation, combined with support from parents and local government. The MoEC should communicate these different modes widely, as well as persuade and support teachers to try them. Given stark differences in teachers' ability and motivation during this difficult phase, MoEC should start by asking teachers to try the mode that they are comfortable with. At this stage, the aim is to get teachers to start trying differential teaching. Additional training should only take place when the COVID-19 pandemic has abated.

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Appendix: List of Surveys

No .	Organisation	Reach & Number of Respondents	Date	Method	Region/Scope of location
1.	KPAI	Teacher Survey – 602 respondents 422 respondents (70.1%) in cities; 180 respondents (29.9%) in rural areas	16 – 20 April	Online survey	422 respondents (70.1%) in cities; 180 respondents (29.9%) in rural areas Particularly: Kota Lhoksumawe, Kota Tj. Pinang, Kota Medan, Kota Binjai, Kota Batam, Kab Bengkalis, Bengkulu, Jambi, Pandeglang Banten, DKI Jakarta, Pati, Lumajang, Semarang, Purbalingga, Kendal, Bima, Lombok, Mataram, Garut, Tasikmalaya, Indramayu, Karawang, Bogor, Tangerang, Bekasi, Depok, Bandung, Pacitan, Kab Maros, Padang.
2.	KPAI	K-12 Student Survey – 246 main respondents; 1,700 respondents as comparison group	13-27 April	Online survey; using multistage random sampling	20 Provinces, 54 Districts/Municipalities
3.	MoEC-Primary Level	Grade 1-6 students – 14,668 respondents	3 – 8 April	Online survey	Nationwide
4.	MoEC-PAUD	42,357 respondents (PAUD teachers)	4-10 April	Online survey	Nationwide, but majority of respondents come from Yogyakarta, Jakarta, Jawa Timur, Jawa Barat, and Jawa Tengah
5.	MoEC (School Teacher & Principal Rapid Survey)	1,067 Teachers and 988 Principals	13-20 April	Online and Phone survey	Nationwide, divided by remote and Non-remote areas
6.	INOVASI	Study From Home Survey – Teacher perspective; 221 teacher respondents (191 analyzed)	13-14 April	Online and Phone survey	4 Provinces (East Java, North Kalimantan, East Nusa Tenggara, West Nusa Tenggara), 19 districts/municipalities
7.	INOVASI	Study From Home Survey – Parents perspective; 311 parents' respondents (294 analyzed)	1-5 April	Online and Phone survey	4 Provinces (East Java, North Kalimantan, East Nusa Tenggara, West Nusa Tenggara), 18 districts/municipalities
8.	UNICEF, U-REPORT	Young People (up to 24+) – 4,016 respondents	5-8 June	FB Messenger, WA Message, SMS (free of charge)	Nationwide; all 34 Provinces, Java Bali (46%), Sumatera (16%), Sulawesi and Eastern Indonesia (14%), Kalimantan (5%), Others (19%)

9.	INSPIRASI	School Leaders – 827 school leaders	8-14 April	Online survey; using convenience methods of sampling	Unknown
10.	SMERU	Young teachers – 491 teachers	15 April – 10 May	Online survey of 4,000 participants in 2017 teacher professional education program; follow-up with in-depth phone survey	Nationwide – data cover all major islands, but most respondents are based in Java, Sumatera, and South Sulawesi

¹ *Keputusan Bersama Menteri Pendidikan dan Kebudayaan, Menteri Agama, Menteri Kesehatan, dan Menteri Dalam Negeri tentang Panduan Penyelenggaraan Pembelajaran 2020/2021 di Masa Pandemi COVID-19* [Joint Decision by the Minister of Education and Culture, Minister of Religious Affairs, Minister of Health, and Ministry of Home Affairs on Guidance to Learning 2020/2021 during COVID-19 Pandemic].

² Initially, only secondary schools may reopen. Primary schools and early childhood centres may reopen starting in October and December at the earliest respectively. At this stage, there is no plan for tertiary education institutions to reopen.

³ Nationwide surveys conducted by the Ministry of Education and Culture (MoEC), the Commission of Child Protection (KPAI), as well as those by INOVASI (an Australian Government-funded education project), The SMERU Research Institute, INSPIRASI (an NGO that focuses on school principals), and UNICEF.

⁴ Before discussing these kinds of support, we should mention the support provided by MoEC. The MoEC removed constraints on the use of school operational assistance funds (*Bantuan Operasional Sekolah/BOS*). Before schools were closed, up to half of BOS funds could be used to pay for contract teachers who were already registered with MoEC.

⁵ This was a calculation from teachers reporting that they received both academic and operational support (10-20%), and those that had only received operational support (60-20%) without much clarity on how much guidance was received to effectively utilize such support. However, this is based on a calculation of surveys reaching $\pm 45,000$ teachers, which may not be wholly reflective of the conditions that teachers face in more rural areas of the country.

⁶ <https://www.bps.go.id/dynamictable/2018/06/29/1508/rata-rata-lama-sekolah-penduduk-umur-15-tahun-menurut-provinsi-2015---2019.html>

⁷ Please see Beatty et al. (2020). *Recovering Learning Losses as Schools Reopen in Indonesia: Guidance for Policymakers*. Jakarta: The SMERU Research Institute.

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