School Closures, Equality of Opportunity: Some Recommendations

**Said BOUZNAD^{1*},
Aomar IBOURK²**

¹ Faculty of Law, Economics and Social Sciences, GRES (Economic and Social Research Group), Cadi Ayyad University in Marrakech, Morocco;

bouznadsaid2@gmail.com

Corresponding author

² Faculty of Law, Economics and Social Sciences, Department of Economics, GRES (Economic and Social Research Group), Cadi Ayyad University in Marrakech, Morocco.

aomaribourk@gmail.com

Abstract: To mitigate the educational disruption, during the coronavirus pandemic, countries work to facilitate the continuity of learning by using mobile technologies for teaching and learning. Despite the development of mobile communication technology and Although distance education has been developed for several years, it is still widely regarded as falling to assure educational equality. Remote learning during this pandemic crisis is challenging. Policy makers, school principals, teachers, students and parents are all juggling unusual responsibilities. This paper reviews the school closures literature, highlights the equality of opportunity challenge and gives some guidance to effectively implement a productive learning programme.

Keywords: *Pandemic crisis; School closures; Distance education; Educational inequality.*

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1. Introduction

To contain the coronavirus, governments all around the world have closed educational establishments (schools, colleges, universities etc...). According to the UNESCO (2020) monitoring, more than 1.5 billion children and youth (87.1 % of the world's student population) are affected by school closures in 165 countries. However, disrupting schooling, may affect students' attainment by, mainly, reducing the amount of time spent on learning.

In response to these unusual closures, and face to the obligation of making education broadly available, governments have implemented a large-scale distance learning programmes. However, despite the importance of distance education, especially in this pandemic crisis, it may amplify the achievement's gap among students. Then, we should take in consideration that the access chances are heterogenous among students. In other words, in this pandemic crisis, do unscheduled school closings, due to Coronavirus, affect student performance? Do remote learning lead to better achievement, especially for the most vulnerable?

First, we present a brief literature review of school closures. Second, we highlight the equity challenge of distance education. Third we present some recommendations to implement remote learning. The final section concludes.

2. School closures effects: some lessons from the literature

To minimize the risk of contamination during a pandemic, governments opt to close schools. Consequently, students learning will be disrupted and they may have lower rates of educational attainment. For example, (Almond, 2006) predicted the 1918 influenza lasting impacts. Their results suggest that utero panels demonstrated decreased academic outcome during the disease, elevated levels of physical injury, lower earning and higher government subsidies compared to the counterfactual impacts. Sadique et al. (2008a) estimated the United Kingdom school closing effects during disease. They pointed out that it may intensify the strain on hospitals by personal absenteeism and, in an expensive perspective, generate weekly significant expenses. In an update version, the analysis published in (Sadique et al., 2008b), showed that avoiding an all US institutions (schools and nursey schools) closure lasting 30 days could save approximately 1/4 of the US Gross Domestic Product.

Extended school closure could decrease human capital, as it's more probable that older pupils, less educated and unskilled, choose to join the labor market. Meyers and Thomasson (2017) used an empirical strategy based on experimentation to investigate the long-term impact of a limited school closure. Their results suggest that the polio pandemic of 1916 had different effects on pupil attainment depending on their age. Furthermore, after 24 years, aged children and who were residing in an affected area achieve less results compared to their slightly older peers. Marcotte and Hemelt (2008) examined the academic impacts of Maryland unscheduled school closures, due to snow. They found that the proficiency rate of 3rd grade students depends on the fact that school was opened or closed. Combining their estimates with others patterns of unscheduled closings, they found that when schools kept open, more than 50% of schools that struggle to produce sufficient annual progress, may reach “the third grade math and reading” requirements.

In the attempt to refine research on the school closures topic, we used the Scopus databases. We limited the research to the following key words: “school closure” AND “effect”. From the 134 publications screened, we report the ten most cited in (table 1) and, from the recent studies, we summarize 6 papers (table 2).

Table.1 - The Ten most cited publications on “school closure effects”

Publications	Journal Title	Citation
(Cauchemez et al., 2008)	Nature	344
(Heymann et al., 2009)	Pediatric Infectious Disease Journal	93
(Earn et al., 2012)	Annals of Internal Medicine	93
(Milne et al., 2008)	PLoS ONE	90
(Lee et al., 2010)	Journal of Public Health Management	100
(Sadique et al., 2008b)	BMC Public Health	59
(Gemmetto et al., 2014)	BMC Infectious Diseases	67
(Engberg et al., 2012)	Journal of Urban Economics	54
(Johnson et al., 2008)	Emerging Infectious Diseases	53
(Effler et al., 2010)	Emerging Infectious Diseases	41

Source: the authors based on Scopus data bases

Table. 2 - Recent publications on “school closure effects”

Publications	Country	Findings
(Larsen, 2020)	Milwaukee (USA)	School closures exacerbate student graduation and attendance.
(Brooks et al., 2020)	US, Australia, Argentina, Japan, Russia, Taiwan, UK	School closures affect children attitudes and behaviours.
(Bifulco & Schwegman, 2020)	NYC(USA)	Students with high prior achievement benefit from school closures. On the contrary, students with low prior achievement are negatively affected by school closures.
(Tieken & Auldridge-Reveles, 2019)	USA	School closures lead to spatial disparities.
(Steinberg & MacDonald, 2019)	Philadelphia (USA)	School closures increase school absence rate and affect student behavioural outcome.
(Grau et al., 2018)	Chile	School closures may affect dropout and grade retention.

Source: the authors based on Scopus data bases

School closures and student absence are not similar. However, they affect the educational outcome equivalently. A variety of researches have related pupils absence to lower academic performance. for example: Liu et al., (2020) investigated this topic using a causal effect method. They found that absences: (1) are associated with lower achievement; (2) have a harmful effect on attainment and graduation. In addition, being absent in the beginning, in the middle or in the end of the school year is a crucial educational outcome predictor, as both the frequency and the missing school effect vary across the school year.

To mitigate the immediate impact of school closures and to facilitate the continuity of education for all, governments have implemented a large-scale remote learning.

3. Distance education: yes, but what about “no learner is left behind”?

In developed countries distance education, like face-to-face education, has already become a vital subsystem of the whole educational system. One of the most important reasons for the governments to establish distance education institutions is to promote the development of human resources and bring significant private and social benefits. Furthermore, one of the advantages of distance education has been its ability to make education resources available and, by the way, open opportunities for populations who would not otherwise pursue education. On other hand, during this pandemic crisis, distance education appears to provide competition for educational institutions and encourage traditional education institutions to raise quality and productivity.

Throughout this health crisis, teachers are doing their best by intensifying the supports and diversifying the methods in order to enhance the students' achievements. However, a large fraction of students, mainly students from more vulnerable and disadvantaged communities, does not benefit from these efforts. Some empirical finding, related to distance education in China, show that with the expansion of the scale of distance education, educational equality in the less developed areas tends to have deteriorated (Li et al., 2014). According to the UNESCO (2020), This closure amplifies the educational inequalities that already exist. Students with low socioeconomic status deal with two constraints: (1) it is very likely that their parents became unemployed; (2) they have fewer digital resources. Students with favorable socio-economic backgrounds are least affected. With high parental occupation and education, they are well guided and "digitally equipped". Additionally, Li et al. (2015) found that the earnings premium associated with distance education in urban areas is significantly higher than that observed in rural areas.

4. Recommendations

To mitigate the pandemic effects, schools must adopt a structured educational program with more attention to both health and academic students' needs.

✓ The spread of COVID-19 may increase students' feelings of stress and anxiety. Safety, nutrition, social-emotional and mental health (particularly of special population) must be the first preoccupation of the educational community.

✓ While this extended closure affects the most vulnerable students, e-learning activities should be served equally. At this time, with school closures now extended, schools should maintain connections between school staff, parents and students (letter, social media posts...).

✓ Teachers are invited to reinforce learnings already taught, before teaching new skills and lessons, and provide additional opportunities, beneficial especially, to students with learning disabilities.

✓ Given the separation between the teachers and learners and among the learners during the distance education process, interaction has been a challenge for learners. Schools have an obligation to motivate students and engage them in effective learning opportunities.

✓ In addition to the students' needs, schools should assess their capacity and resources and collaborate with local stakeholders.

✓ The student situation varies depending on individual and family needs, access to technology and internet...To increase the equality of opportunity, schools need to address access barriers that disrupt the participation of all students.

✓ Remote learning can include for example: large-group video or audio conference calls, applications, ventures, understanding records, “web-based learning stages”, and different assets to adequately motivate pupils.

✓ Instructors, after any assigned work, need to give a feedback. They can suggest some alternatives of online activities to provide additional daily time for enrichment and physical activities.

5. Conclusions

During this health crisis, guaranteeing the right to education for all is a challenge for education stakeholders. At longer term, students’ outcomes may be impacted. The magnitude of these effects depends on students’ profiles. Vulnerable students are dealing with educational (limited access to resources) and socioeconomic (parent becoming unemployed) inequalities. Although student–instructor interactions and student–student discussions are more difficult to effectively implement in distance education context, teachers try to embrace the challenges of helping students learn at home. Now, with the increasing popularity of hand-held devices, such as smartphones and tablets, and the improved network infrastructure in many developed countries, more or less anyone can study at anytime and anywhere. Moreover, more studies are needed to ensure that distance education can improve educational equality and we need to pay more attention to how social capital can be acquired under conditions of separation of teachers and students and among the students.

Unfortunately, this paper has some limitations. First, it lacks empirical evidence. Second, it seems that the literature review needs to be combined with a meta-analysis of the school closure field. Further researches may overcome these drawbacks.

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