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Review

Academic Learning Loss During and After the COVID-19 Pandemic: A Review

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ABSTRACT

The COVID-19 pandemic has hampered the functioning of educational institutions worldwide significantly affecting the students' academic achievement. As a global crisis intervention tool, the closures of academic institutions have increased the prevalence of school/college dropouts and hence exacerbated a pre-existing academic problems and resultant mental health issues among students. However despite several research attempts, their pros and cons still remain insufficiently explored. The present review aims at attempting to advance the current understanding of the post pandemic educational scenario with respect to students learning and guide the future research attempts to explore the global effect and strategies to deal with learning loss and its consequences. In addition, the present article also attempts to review the directions and recommendations endorsed by different agencies across the world.

KEYWORDS: Pandemic, academic achievement, learning loss, mental health

In January 2020, World Health Organization marked the outbreak of coronavirus and what fell upon the world was a public health emergency of international concern. It eventually transcended boundaries and in March 2020 achieved the status of a pandemic. Even though authorities at all levels tried their level best to contain the outbreak, the times of crisis caused far reaching effects in all the areas of life, globally. The adverse consequences of the outbreak like physical and mental ailments, economic difficulties and educational setbacks to name a few, are not time bound rather the ones that are likely to continue into the future. Whether or not COVID pandemic lead to another pandemic of deteriorated physical and mental health and compromised education remains an endearing question for the researchers as well as the general public and the answer continues to remain vexing. The set of population that is due to be the face of future i.e., children of today are the ones who will have to deal with consequences of setback in their education due to the closure of educational institutions. The school going students deserve major attention as the impact

of this disruption in learning is a result of inadequate home schooling resources and self-directed learning, reduced supervision with reduced co-curricular activities that essentially make the educational experience wholesome, resulting in learning loss. The terms 'learning loss' and 'educational loss' albeit used interchangeably are different as education is the process of receiving and providing knowledge in a systematic way for instance in educational institutions like schools, contrarily learning is a lifelong process, which involves a persons' physiological, psychological and social interactions[1] and the intellectual faculties being employed in acquiring new skills and knowledge though experience, social involvement, study or teaching[2] for instance value-based learning and regulating ones actions to suit the futuristic needs and acquire new body of knowledge. With the terminology made definite it is notable that 1.5 billion learners were made to stay out of school in 184 countries[3] and UNICEF monitored a nationwide closure in 153 countries and local closure in 24 countries to affect 98.6% students worldwide. UNESCO estimates about 65% drop out on school-going children[4]. The consequences of school shutdown resulting in a complete disconnect from education for scores of children was tried to be amended by shifting the entire process of learning to electronic modes of communication. The learning that has occurred via the alternative means of electronic media, safe to say, has proven to, be jejune. The shock to education system was more pronounced in underdeveloped and developing countries which had relatively longer periods of school closure and where educational institutions were less equipped for remote instruction[5,6]. The academic years thus elapsed have seen little physical activities in the form of any sports or co-curricular activities. Furthermore, the learning occurred in the prior classes has also seen a decline whereby 'forgetting' has been cited as the major culprit. The downward reversion of abilities such as studying with understanding, solving problems especially of mathematical nature that benefit people not only in school but throughout their lives is witnessing decline and has further caused fear of loss of conceptual and abstract abilities. People endured economic hardships due to stringent lockdowns and households suffering from economic and health related shocks had limited or no ability to compensate for school closure, thereby increasing the educational inequality[7,8]. The findings are worthy of mention that even before the pandemic, 50% of rural fifth graders of our nation were not able to read[9]. Furthermore, natural catastrophes and epidemics have found to negatively impact student learning and later life outcomes thereby making the effects long-lasting[10,11].

Globally, Students with disabilities (SWDs) are at increased risk of dropping out of schools, colleges and not completing their education[6]. The state of affairs is similar in India, where 320 million students have been affected by school closure[12] and 37.6 million children across 16 states continue education through various education initiatives such as online learning and radio programs[12]. However, findings suggest that SWDs have had to face numerous difficulties, first and fore mostly of coping with online learning[13] and trouble with attending classes regularly[14] therefore being at higher drop-out risk. Secondly, as per astudythe fear of lagging behind in learning was found to exist among SWDs who were unable to access distance learning methods[13]. Thirdly, a risk of not returning to school has also been observed, due to which the years of progress stand undone. Fourthly, a vast majority of Indian population live in rural areas or low resource settlements of urban areas where access to online learning opportunities or simply access to digital world is limited[15,16]. Furthermore, this change in methodology of learning increases the rural-urban divide[14] as the challenges in adapting to the new age methods of learning for rural population are numerous in the low resource societies[14,17]. Fifth factor affecting the learning process is unpreparedness of teachers/students for online learning and teaching[15] as well as increased parental responsibility of tutoring their wards[13,15], especially in the uneducated parents where guidance and home-schooling is difficult to achieve[16]. Sixth, factors like infrastructural facilities[18], dearth of trained staff[19], obscure curriculum and pedagogy[16] also remain crucial to the process of academic learning. Additionally, inability to access online education plays a pivotal role in affecting learning and its outcomes in low-resource settings such as in India[20]. Out of the worse affected are the SWDs who face difficulties in understanding digital instructions due to their limited acquaintance with online learning[13]. Learning loss is much more far-reaching as it affects physio-psycho-social development of all children along with SWDs[21] and is coupled with their subjective experiences[22,23].

A fresh study conducted by Azim Premji University (2021)[24], on five different Indian states showed that 92% children in language and another 82% in mathematics lost fundamental abilities as compared to the previous year. In a nation like ours with existing low levels of learning, such new losses can prove to be devastating and would take relatively longer to recover. The loss seen was not only of curricular learning that they would acquire in their regular working days but of the potentials lost due to lack of practice. The same study also noted a sharp deterioration in the ability to read with understanding, write unerringly, and perform basic addition/multiplication. The circumstances were such that a child of first grade without proper orientation of second grade was set to be promoted to third grade in 2021. Recorded evidence of benefits of online learning is scarce so far. Furthermore home resources and parental background remain to be a less understood dimension where less educated parents with enough home resources supported their children's education[25], also it is notable that such parents did not how to handle digital tools themselves.

Way Forward

It is of utmost importance that we understand the magnitude and permanency of these negative effects and figure out ways to facilitate recovery now that schools have resumed functioning. If prompt actions are not taken to ensure educational healing where children can catch up on the loss,

children may continue to falter into the future; essential note that faltering would be more in the disadvantaged groups, therefore leading to a widened gap in the existing inequalities. However, substantial evidence to date on the extent of COVID-19 learning losses remains limited.

It is notable that United Nations Children's Fund (UNICEF), United Nations Educational Scientific and Cultural Organization (UNESCO), the United States Agency for International Development (USAID), the Bill & Melinda Gates Foundation, the United Kingdom's Foreign, Commonwealth and Development Office (FCDO) and the World Bank have brought forth the RAPID Framework for Learning Recovery and Acceleration[26]. The framework contains policy actions from which countries can choose, incorporate and refashion a suitable recovery programme. The contraction 'RAPID' made up of five key action policies, namely – Reach every child and keep them in school, Assess learning levels regularly, Prioritize teaching the fundamentals, Increase the efficiency of instruction, including through catch-up learning and Develop psychosocial health and well-being, emphasize the need for serious urgency to lessen the effects of education disruption. The alone existence of policies is only half work done the other lies in the implementation and for the same are required financial and human resources. The acceleration of the process can only be brought forth by adequate utilization of the resources with equity perspective. Although each country has pre-allocated its resources, the current times deserve a little extra for the educational infrastructure in order for it to become efficacious and resilient.

The initial action of reaching every child and keeping them in school is easier said than done because some countries have not been able to get information on how many students have returned to schools and warrant Education Management Information Systems (EMIS). Furthermore, re-enrolment challenges will reach a new level once children lagging behind in education start dropping-out. Therefore, preventive actions already need to be in place so that children can remain in school. The schools can initiate campaigns targeted towards at risk students to increase their attendance and re-enrollment. Economic barriers need to be overcame and a strategy to do is to follow in the footsteps of Lebanon where $23 million in cash support is being reserved for the youth aged 13-18 from poor families with a school drop-out risk. Another Assessment plays a crucial role as remedial education programme and strengthening the process in order to tap into areas of both high and low competencies, not only for foundational educational abilities but in life and labor market as well. The situation warrants assessment of not only the cognitive skills but also of the non-cognitive domains or social-emotional skills like attention and self-regulation as the latter is associated with overall performance as well. The greatest benefit of assessment is insight, into what has been learnt and what remains. Additionally, it would help us tap into the lacunas of educators as well and build a framework for appropriate curricular adjustments. Prioritizing the teaching fundamentals is core to the entire learning process. The curriculum needs to be such that all the basic needs and skills required are made available, be it numeric ability, language development or communication skills. Adjusting the curriculum with balanced time allocation without being over ambitious or speeding ahead of students that they cannot cope up should be the job that has to be taken seriously [27]. This also brings into attention the teachers who have to be sensitized to the individual learning needs of the children and are the ones to ensure that the curriculum is adhered to. Way forward to mitigate the learning loss is through teachers, who evidence suggests are relatively more efficacious with support such as that of teacher training, teacher's guides, lesson plans are useful in learning[28]. Furthermore, it is imperative to reduce the burden of formal learning by breaking down the syllabi to be covered and pruning the same if need be. The imparting of this learning also needs to be tailored to the needs of the receiving age group where younger ones require teacher/parent child interaction more than adolescents do and the latter can bear the burden of independent learning and newer modalities of teaching especially in their later years of adolescence[29]. It is essential that the method of learning involve children's different sensory modalities where physical access to laboratories and libraries instills in them a practical knowledge and sense of autonomy. The co-curricular activities are even more necessary in the present times as the education system is coming back to its fully-functioning state after a long break and special attention be paid to linguistic skills, general knowledge, awareness about the environment, promotion of hobbies, and sports among various other things .

In addition to the aforementioned, development of psychosocial health and well-being is an essential component as it is notable that school is place to spend time with friends, get emotional support and for some provides an escape from violent home environment and for some others a feeding opportunity.

CONCLUSION

Every missed learning opportunity by a child will have a cumulative adverse impact not only on the academic front but also into their everyday adult life, especially when the learning levels are already below the expected range in our nation. New losses incurred will have far reaching repercussions that will likely take longer to recover. To avoid such an adversity from coming into fruition it is imperative that we employ strategies to ensure compensation for the overall learning loss now that things are back to their functioning state. The extent and nature of learning loss should be studied and understood in order to make informed decisions by the policy makers and school authorities on a national level. The individual needs of our future generations need to be taken into account and all those involved in their process of learning be sensitized about the current plight and individual needs to have a better future.

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