Educational Landscape Transformations Amidst COVID19 Pandemic

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ABSTRACT

This paper reviews the current literature on COVID-19 pandemic crisis at the onset of the crisis. The paper opens with the global conditions and transformations in education sector amidst the crisis. The review of the literature beginning the early months of 2020 have been summarized wherein four themes emerged from the readings, namely: educational sector's preparedness, awareness and adaptation, emerging challenges in the academe and the ways forward. Moreover, this paper concludes with reflections on the steps forward for the education sector focusing on the inclusive framework and guiding principles in decision making during and after COVID 19. This provides directions for the crafting of a recommended general framework that the academe can follow during a nationwide or worldwide crisis.

Keywords

COVID 19 pandemic, challenges, adaptation and awareness Article Received: 10 August 2020, Revised: 25 October 2020, Accepted: 18 November 2020

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Introduction

The Novel Corona Virus that began in China in the later part of 2019 stunned the entire world as it has affected millions of people world-wide in a short span of time. The flu-like influenza has become an emerging frontier that created challenges which most of the countries around the world were caught unprepared as it started to spread at a magnitude that is impossible to halt. This emergence necessitates field of research to consider novel approaches for investigating such phenomena as this health issue shows no sign of stopping for the next years to come. Even if it ends, the world has to be prepared for another phenomenon such as COVID or other worse diseases so that its effect will not be as devastating both to life and the economy.

The COVID 19 phenomenon has affected almost all nations, rich and poor. This has caused major disruptions in all fronts especially in the field of education. As a matter of fact, it has shaken the most stable economy of the world at its core as it affected millions of people regardless of economic, educational, and political status. One of the greatest threats in this lifetime is in global education, a gigantic educational crisis. As of March 28, 2020, the COVID-19 pandemic is causing more than 1.6 billion children and youth to be out of school in 161 countries This is close to 80% of the world's enrolled students. The world is already experiencing a global learning crisis, as many students were in school, but were not learning the fundamental skills needed for life. The World Bank's "Learning Poverty" indicator – the percentage of children who cannot read and understand at age 10 – stood at 53% of children in low- and middle-income countries – before the outbreak started (Saavedra, March 2020). This pandemic has the potential to worsen these outcomes even more if the education sectors and other organizations will not act fast.

Research and Development is a prime mover of solving educational issues. It develops solutions to achieve a goal related to education or learning, such as improving student engagement or mastery of a set of skills. Research projects of this type draw on existing theory and evidence to design and iteratively develop interventions or strategies, including testing individual components to provide feedback in the development process. These projects may include pilot tests of fully developed interventions to determine whether they achieve their intended outcomes under various conditions. Results from these studies could lead to additional work to better understand the foundational theory (National Science Foundation, 2013).

Hence, with the pandemic crisis the world is experiencing now, research and development must come up with solutions and interventions to help cushion the impact of this crisis to education in local, national and global perspectives resulting to unexpected transformations in the educational landscapes. Along these lines, this paper summarizes the investigations and articles on education sectors' transformations, responses and initiatives conducted in this new field of interest over the past few months of 2020. This paper serves to inform readers of the changes in education setups from investigations, studies and observations conducted in the different areas of education in the nations' pursuit of innovations and interventions to bolster the impact of this phenomenon across all boundaries. It also explores the patterns, trends and opportunities emerging in the education sector amid this pandemic. Moreover, this paper concludes with reflections on the implications of the studies conducted on pandemic and provides suggestions for future research in this new field of inquiry.

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Methodology

This study utilized the review of literature and studies on the transformations in education using integrative review. Integrative review is a form of research that reviews, critiques, and synthesizes representative literature on a topic in an integrated way such that new frameworks and perspectives on the topic are generated. The body of literature includes all studies that address related or identical hypotheses or research problems. A welldone integrative review meets the same standards as primary research in regard to clarity, rigor and replication. This is the most common form of review in the social sciences. The purpose is to place research in an integrative context to show familiarity with the transformations in the educational setups and to identify the likely directions for future research.

Results and Discussion

This Sifting through the literature, the transformations in the educational setting yielded a certain pattern of focus areas which include the preparedness of affected institutions; the level of awareness and the consequential adaptation; the challenges that emerged, and the propositions for the ways forward

Preparedness

By February 2020, COVID-19 was declared as a global health emergency. This announcement of the World Health Organization (WHO) sparked an upsurge of concern all over the world especially in China where it all started. While the rest of the world have started to shut down its borders, China itself had put Wuhan, the epicenter, in a lockdown. The pandemic has caught many countries off guard and have not entirely equipped themselves for defense against the virus. As of February, countries and education sectors have focused on preparation.

Azzi-Huck & Shmis (2020) say that many countries are implementing various forms of mechanisms including: enhancing preparedness while keeping schools open, selective closing of schools, national closing of schools (the most used option globally) and using remote learning and education resources to mitigate loss of learning.

Daniel (2020) underscored the significant roles played by the governments in the preparation process. This made it a great challenge for institutions to play their part in the preparation of ensuring the students have adequate resources to study at home, tying up loose ends pertaining to the grading and reports and staff preparation and training that would mechanize the educators.

Since this great but unplanned modification may put teaching quality at risk, Sahlberg and Tuominen (2020) presented their 10 Step Action Plan on how to provide quality education for all during crises. This includes the following steps: Finding Leaders for the Process, creating a communication plan, starting with a common vision, engaging people, looking for solutions, testing some, selecting the ones to scale, creating an agile co-development plan, securing funding & resources and being humble.

According to UNESCO, an estimated number of 1.3 billion students all around the world have been greatly affected by the novel coronavirus. With varying to very little success, educational institutions have been trying to adjust to distance learning. No one could exactly tell when things will go back to normal, this is the fact that the students have been left to grapple with. It is fair to say that no one in the education sector has foreseen the event wherein there will be a need to reorganize education at a scale as in the time of Corona. Nevertheless, countries were left with no

choice but to gear up for what has come. Teachers who were automatically placed in the frontline struggled to design classes that will transform dependent student learners to independent and self-directed, independent student learners.

Sankar (2020) stressed that E-learning or digital learning which was only used as a supplementary learning course before has been applauded as a vital device to tide over students' apprehensions during the contagion. Yet, E-learning facilities in countries belonging to the developing ones like India are simply not robust enough to guarantee efficient education for all. This is the case for the many teachers whose trials are on finding ways and means to send learning material or revision packets online, convert all teaching material to digital formats, making worksheets, take classes on platforms like Zoom and Google Classroom, checking WhatsApp images of home works, and report all of this information to both parents and principals.

Although most countries have turned to online learning at the onset of the pandemic, other countries have made use of other media in ensuring education for many if not for all. Aladin (2020) cited countries like China that has kicked off an all-day TV broadcasting of video lessons in different subjects. These video lessons and subjects are all approved by the state. This initiative was to make certain that most students if not all will receive the necessary education. This will also help schools that don't have the means to deliver education online. In Kenya, wherein many households still have no access even to television, KBC or Kenya Broadcasting Corporation utilizes KBC Radio in preparing classes to help those students who are living in rural areas. KBC being a state-owned corporation covers all of Kenya because it has a broader scope than other media stations. Radio learning is not new to Kenya because it has been used even before the advent of internet. This has been easy for the learners to get used to because their parents learned through radio as well. In a similar fashion, organizations and FM radios in Pakistan launched a distance learning initiative called "Broad Class - Listen to Learn" Parahi Caro-Na, to ensure the continuity of learning for children in their respective homes even during the pandemic. Moreover, in Finland, the public broadcasting network help students and teachers by daily replacing three news articles into

education materials which are also intended for mobile and desktop use. Lastly, India's Dost Education employs curriculum and platforms that make use of local language accessible through cellphones and tablets to encourage average earning families to enhance their children's development and educational success.

Villafuerte (2020) in her article in the Observatory of Educational Innovation stated that the novel coronavirus has instantaneously reformed the way education is carried out. Recently the school and the home are no longer perceived as different venues, given the increasing number of students who are now considering homeschooling. For coming from impoverished some students families, school means being able to have meals that will sustain them throughout the day. Thus, bringing the school into their homes means hunger. Not to mention the little to none technology or connectivity required for online learning. Sadly, only few schools can offer an ample "computer-based academic experience", which means students are well equipped with electronic devices, teachers are knowledgeable in the functional elements and design of online lessons and a well-versed culture based on hightech learning. According to the World Economic Forum, only about 60% of the world's population has means to the World Wide Web. As more and more students in the other vulnerable parts of the world continue to fall behind in this race for digital education, the digital divide becomes more prominent.

According to Dougherty (2020) as cited by Villafuerte (2020), the biggest modification that virtual learning requires is flexibility and the acknowledgement that the controlled construction of schools is not replicable online. Countries need prepare for problems that will affect to disadvantaged people unequally. An example, are the working parents who depend on schools or to parents who are non-native speakers and are having difficulties in figuring out how to go about homeschooling for their kids, or to teachers and learners who are in different time zones These are the problems that are replicated worldwide and pose a great challenge to what they call as an education for all and that can have a life-altering consequences for vulnerable students. These changes indicate inequalities that continue to

occur in our educational system, even in the most advantaged communities.

The World Economic Forum states that Covid-19 is a reminder that educators must equipped students with skills that they need in times of crises our students, such as making informed decisions, creative problem-solving, and adaptability. Above all, educators must teach the learners how to be resilient and must make certain that skills continue to be paramount.

As the virus spread, the immediate response of many countries was to announce school closures. Although many experts have said that children are less susceptible to the virus, parents and families fear that they could be carriers of the disease. Some countries only had localized school closure like in India as an interim measure. Mitigating educational deprivation have been the major concern of schools that have shut down. These schools have resorted to using distant learning. The closing of schools highlights the necessity of more resourcefulness and initiative from teachers, students and parents in adapting existing platforms. Unfortunately, not all countries can afford to close down schools and so they chose keep schools open but still enforced and supported preventive actions and protocols.

Many governments have started to prepare for the spread of Covid-19 even if it has not reached their country yet. While the outbreak was still in China, proactive countries have prepared by closing their borders from travelers coming from the mainland. This move, was found to be effective since countries who have done this have a smaller number of Covid-19 cases than those who did not take this measure. Most countries have taken similar steps in battling and preparing for the pandemic. But the difference in the logistics between first world countries and third countries greatly show. Indeed, the time of Covid-19 has tested the sinew of each countries' government.

Awareness and Adaptation

Based on the integrative review conducted, *awareness and adaptation of the presence of COVID 19* emerged. Awareness and adaptation comes in four subthemes, based on the four main actors in the realm of education namely: learners, educators, leaders and the institution as a whole. After the spread of COVID 19 virus, the four players in various educational institutions and learning communities raised its consciousness on adaptive measures for schools to continue and exist amidst pandemic.

Students Awareness and Adaptation

Students as the raison deter of academic institutions and are becoming aware of the presence of the COVID 19 Virus and learn to adapt to the circumstance. Baloran (2020) found the students were aware of the COVID-19 pandemic and possessed sufficient knowledge about this global concern even though there were still gaps in various points. They understood how the virus is spread, its symptoms, and the precautionary measures needed to be done by both individuals and the general community. They also professed the need to conduct mass testing and maintain enhanced community quarantine in every local community. Considering World Health Organization's recommendation, students abide by the idea toward the COVID-19 vaccine, although a considerable percentage of some students showed distrust. In the context of education, students were reluctant toward the implementation of online-blended learning approach due to technological and financial constraints. During this COVID-19 pandemic, students were responsive and satisfied with the government's initiatives to limit the spread of infection.

Moreover, the International Institute for Higher Education in Latin America and the Caribbean (IESALC, April 2020) of UNESCO have revealed that students experienced personal adjustments in daily life and are experiencing financial costs and burdens. Students have had to rearrange their daily lives to adjust to a situation of confinement. Most of the students who were displaced far from their families, but within the same country, have returned home. However, in the case of students abroad, the situation remains highly variable, with tens of thousands stranded in destination countries waiting for on-site activities to resume or because they are unable to return to their countries due to closure of airports and borders. Inevitably, the loss of social contact and socialization routines that are part of the daily experience of a higher education student will take its toll. The isolation that is inevitably associated with confinement will have

effects in terms of socio-emotional balance that will leave their mark, particularly on those students with pre-existing problems of this nature. The more vulnerable students participating in qualifying and remedial programs will be more hardly hit by isolation. A survey conducted during the last week of March among higher education students in the United States shows, for example, that 75% have said that they have experienced anxiety and depression as a result of the crisis.

This holds true not only in the United States but also in other countries around the globe where prolonged closures tend to have disproportionately negative impact on the most vulnerable students (Kaliope Azzi-Huck & Tigran Shmis, 2020). Mental health issues tend to rise due to COVID 19 Pandemic. However, students are found to be resilient individuals who learned to adapt in the difficult circumstances such as the Pandemic Crisis. They are more adept to technological tools and resources but there are variances in accessing these resources in different countries.

Students and, in many cases, their families will have to continue to bear the costs associated with their higher education. Except in the very few countries where there are no fees, students must continue to face the associated costs, particularly when, in order to pursue their higher education, they have had to seek temporary residence, whether individual or shared, in a place other than their domicile, at a cost they must continue to bear, even if they decide to return to their family home.

Generally, researchers found that the students had to make an effort to adapt to what for many of them are new formulas for teaching and learning where they have been fortunate to find a continuity offer. The choice for continuity solutions that demand connectivity is spreading globally when the reality is one of low connectivity in households in low- and middleincome countries.

Educators' Awareness and Adaptation

The roles of teachers have continuously changed in times of this pandemic crisis. They become aware of the severity of the COVID 19 pandemic which they experienced stricter guidelines for: 1) personal and workplace hygiene protocols; 2) Social distancing; 3) Lockdowns; 4) Border and quarantine measures, and closures 5) international travel restrictions. They have to embrace the emerging educational trends and alternative instructional adopting delivery systems. They are becoming aware on the platforms e-learning available and are continuously learning to use these platforms to address the issues on social distancing and school closures amidst the COVID 19 pandemic. Teachers are adapting to helpful technological solutions that could be used to support remote learning prioritizing those resources and solutions that are free due to the state of its urgency (World Bank's EdTEch Tem).

Berberick & Berberick (2020) shared that educators have realized that delivery can no longer be constrained to a given time and place. The internet enables teachers to present content 24/7 around the globe. Information availability and restriction is another matter entirely but teachers are aware of the reality of their country's limitations and provisions. Internet is a source of facts and content and a tool where teachers can teach and deliver lessons.

Teachers are joining webinars and virtual training to keep themselves abreast with the demands of the education sectors in times of Pandemic. Teachers are adapting to the utilization of elearning platforms during and even beyond the pandemic: Digital Learning (e.g., Moodle (Elearning: blended learning, distance education, flipped classroom, Google Classroom, Google hangouts, etc); Remote Learning; Distance Education (khan Academy, Minecraft Education, National Geographic Education, etc); Blended Learning and Educational Television.

Leaders and Academic Institutions Awareness and Adaptation

School leaders and academic institutions being aware of the risks of COVID 19 decided for school closures which seemed to present logical solution to enforcing social distancing within communities. The outbreak of the virus and lockdowns at the national level was used as a best test for the education technology interventions for distance learning. Education interventions during crisis can support prevention and recovery of public health while mitigating the impact on students and learning (Kaliope Azzi-Huck & Tigran Shmis March 18, 2020)

Educational leaders and academic institutions come up with Guidance, checklist and key messages and actions are provided for the following: school administrators, teachers and staff; parents/caregivers, and community members and students and children (UNICEF, WHO and IFRC, March 2020). This material provides guidance for COVID 19Prevention and Control in Schools.

Moreover, Huang, R.H. Liu, D.J. et. Al. (March 2020) created a handbook on Facilitating Flexible Learning During Educational Disruption: The Chinese Experience in Maintaining Undisrupted Learning in COVID 19 Outbreak. This material was based on practical experience where different collaborations between several sectors: government, telecommunication, enterprise, etc. provide effective and inclusive education in case of emergencies such as COVID 19. The Chinese experience in education have applied online learning to provide flexible education; ensured reliable network infrastructure; utilized friendly learning tools; adopted suitable digital learning resources; facilitated effective online teaching and learning; provided supports and services for students teachers and and empowered collaboration between government, enterprises and schools.

Other organizations like OECD, The World Bank, HundrED and Global Education Initiative of Harvard University worked together to come up with annotated resources for online learning as means to support the continuation of teaching and learning during the COVID 19 Pandemic. The team set criteria to assess these resources and then went through them one by one and came up with taxonomic classification of curriculum and professional development, competencies and codes these resources. The resources were grouped into three broad sections: -Curriculum Resources; -Professional Development Resources; and Tools. The annotated resources contain the abstract; language; grades; subjects; cost; global skills-cognitive, interpersonal, and intrapersonal. The taxonomic coding and organization of online resources for learning is a good guide for selecting resources in making lesson plans, syllabi and course work.

Challenges Emerging in the Academe

The onset of the COVID crisis was so sudden; it practically caught the global academic community off guard. The decision to impose school closure across countries in the middle of the term happened just as quickly. Literature indicated that as the pandemic spread across the continents, the school system was inundated by immense and unprecedented challenges which required the authorities to exercise creative problem-solving skills for radical solutions. As expected, Mulenga and Marban (2020) mentioned the most obvious affecting problems the education sector: inadequate supply of electricity (apparently referring to remote places), the internet cost and the unreliable internet connections. Tuquero (2020) and Sahu (2020) cited the inability of the teachers to immediately migrate to digital teaching mode due to their limited exposure to technology. Almarzooq Z, Lopes M, Kochar A (2020) implied that it is critical for teachers to have the 'willingness' to infuse the use of technology in their classes. The traditional inperson class meetings are so ingrained in the system that shifting to online instruction proved to be a major hurdle for teachers who are technophobic.

Daniel (2020) pointed out the teachers' challenge to use asynchronous instruction to allow students' access to education at their own pace in their most convenient time. Kaplan and Haenlein (2020) alluded that conducting online instruction requires teachers not only to be telegenic but also to be charismatic and competent. They further implied that competition will become stiffer since teachers can be outsourced as a consequence of internationalization. Should this happen, only the so-called 'star teachers will thrive and only the most committed will stay in one particular institution.

Students, who are supposed to have the aptitude for technology being millennial, still encountered problems with the online networking platforms as mentioned by Mulenga and Marban (2020). Daniel (2020) raised the concern for students who are preparing for national examinations. Sahu (2020) had similar apprehension about students in courses requiring performance-based assessment noting that examinations need to also transform during the pandemic to fit the online instruction mode. Bailey, et al (2020) cited the schools' challenge to remain inclusive in its digitized delivery system by considering the unique needs of all students- those coming from low-income population, as well as the differently abled learners. Kaplan and Haenlein (2020) mentioned the need of sustaining the students' commitment to get engaged in distance education since this requires a high level of motivation and selfdiscipline.

Other issues during the pandemic were also noted in the literature. Tuquero (2020) cited the curriculum's inability to respond to the educational, economic and employment crises that ensued after the imposition of social distancing measures, travel restrictions and border closures. She is convinced that environmental and health literacy should have been a part of Higher Education offerings since these concerns affect everyone. Nicola Maria, Alsafi, Z., Sohrabi, C., Kerwan, A., Al-jabir, A., Losifidis, C. Agha, M. and Agha, R. (2020) claimed that COVID 19 highlighted the so-called disparity between high and low income groups in the society since it determined who can have access to the required technology and who cannot. Kaplan and Haelein (2020)expressed the uncertainty of all participants actually graduating successfully in online-driven courses.

Ways Forward for the Education Sector

In the context of the challenges previously cited, it becomes imperative to explore what lies ahead as suggested by COVID 19 researchers.

Several international organizations such as UNESCO (2020) and OECD (2020) have institutionalized a framework in Education amidst the COVID 19 pandemic crisis. The crisis entails that government agencies worldwide have to work hand in hand so that the very goal of access and equity to quality education in all levels will not be compromised in the new normal in education. The context by which this crisis is addressed in the educational front is clearly different among countries however, they can begin by working with the framework that is rather inclusive. Most literature would direct the governing agencies in the educational sector to remote teaching-learning alternatives in address to worldwide initiatives of social distancing. Along this vein, UNESCO (2020) recommended a rather inclusive guiding principles in present and future decision-making.

It is recommended by UNESCO (2020) that all political decisions which will govern directly or indirectly the education sector have to be within the framework of equal opportunities and nondiscrimination. Hence, it is the government's primary responsibility to ensure that the exercise of these rights will be considered in all the regulatory, financing and incentive frameworks of the country. It is also important that countries will promote and support inclusive, relevant, adequate, and quality programs and initiatives.

Moreover, it is further recommended that the ultimate goal of leaving no student behind by the United Nations Sustainable Development Goals shall be taken into consideration. The existing scenario during the pre-COVID crisis has already put many students at the disadvantage that created some form of inequalities. The inequalities have all the more deepened because those students with an existing socio-economic need may be put to a greater difficulty especially continuing their training using remote modalities.

Governments worldwide have to also revisit current regulatory framework and policies to check that the structural measures designed to address the pressing need during the crisis will see education as a continuum. Meaning, the measures shall ensure that those in the lower levels will have no difficulties reaching the higher education and even beyond.

While many countries are preparing for the new normal in education, the education sector should not overlook the preparation of the resumption of provisions. the face-to-face classes. The processes, and mechanisms designed to resume teaching activities in the traditional modalities have to be laid down properly. And while preparing for the teachers and other school personnel, it is also at this time that schools have to review and revisit the existing face-to-face mechanisms of the schools taking into account the extent to which the teaching and learning processes implemented during the intensive use of

technology may have entailed. Within this term, the education sector should not forget the security protocols during resumption of face-to-face classes having in mind that COVID may not only be the only pandemic in this lifetime.

The Post-COVID pedagogy

At this point, it is difficult to tell with finality the kind of educational landscape the world will have after the pandemic. One thing is for sure, the eLearning will emerge at the fore considering that this is the only alternative to minimize face-toface interactions in schools. However, what counts the most during this crisis is access and availability of effective online platforms for learning (OECD, 2020) because in a study conducted by PISA on students' access to the digital world, 9% of 15-year-old students do not even have a quiet place to study in their homes, and in Indonesia, the Philippines and Thailand. This is not a random group, but it tends to be students from the most disadvantaged backgrounds. Even in PISA top-performer Korea one in five students from the quarter of socioeconomically most disadvantaged schools don't have a place to study at home (OECD, 2020).

Recommended Learning Framework in the New Normal

While it is hard to conclude that a specific framework will work best during a pandemic, from the information gathered and stated above, a new learning framework may be introduced to the higher education in the new normal. The Philippines can adopt a Competency-Based Learning Framework, where Competency-Based Learning (CBL) is at its core. The CBL learning is a system of instruction, assessment, grading, and academic reporting that are based on students demonstrating that they have learned the knowledge and skills they are expected to learn as they progress through their education. This CBL framework is completely different from the competency standards introduced in the K to 12 curriculum. It is an approach to education that focuses on the student's demonstration of desired learning outcomes as central to the learning process (retrieved from: https://www.teachthought.com/learning/what-iscompetency-based-learning/). In a competencybased curriculum, exit profiles specify the classes of situations that learners must be able to handle

competently by the end of their education. Depending on the type of education, these classes of situations are identified either on the basis of real-life or work-related situations or on the internal logic of the discipline in question (retrieved from http://www.ibe.unesco.org/en/topics/competency-

based-approaches).

Then from these competencies, a set of clear learning outcomes and rating system will be laid down for the students. The ultimate goal of CBL is to ensure that students acquiring the knowledge and skills that are deemed essential to success in school, career, and adult life. If students fail to meet expected learning standards, they will ideally receive additional instruction, practice time, and academic support to help them meet the expected standards. The students will be assessed ideally not with a rating but rather a qualitative description of their performance.

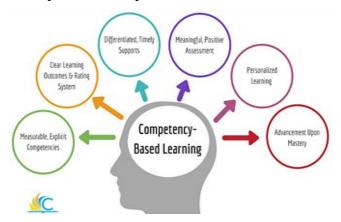


Figure 1 is an adapted schema from Cleveland Metropolitan School District of what competencybased Learning could be in the new normal. Schools in the Philippines especially in the tertiary level can adopt to this system where the entry point of the students could be the measurable and explicit/observable competencies of either a work or real-life-based competency to begin with.

A student can be given a "passed" or "did not passed" to begin with or a rather meaningful description as "meets the standard" or "did not meet the standards" with other description of their performance in between. Schools can device their own assessment system. Moreover, the final output or performance of the students will be assessed not just by the teacher but experts from the field of which the competencies were anchored. For instance, a student who enrolled in a work-based course such as "mechanical engineering" for instance, may be assessed by a practitioner in this field or a company who hires mechanical engineers. This way, a more objective result may be revealed.

Schools may also adopt specifically learning pathways which can be as viable educational options for students either through "multiple pathways" or "personalized pathways". Learning pathways are premised on the idea that education of students does not have to be delivered exclusively by teachers or confined to traditional classrooms rather it can occur at different times and in different places. Students can learn in their community, in a workplace, or they can learn under the guidance and tutelage of business professional, scientists, or community leaders in addition to teachers. It is also based on the premised that learning accomplishments should be recognized, rewarded, or valued consistently and equally regardless whether the students learn in a school, outside a school, or online. If one student learns a concept through reading and researching, for example, while another student learns the same concept through a volunteer work or internship, schools can assign the same "value"in the forms of grade, credit, or academic recognition- to both pathways.

Students advancement to the next level will be dependent upon mastery of the competency set at the beginning of the course. These students do not necessarily have to finish at the same time because their advancement will depend on their pace of completion and mastery of the expected observable skills.

The debate about how this learning framework may effectively work is on-going. However, many countries like the Philippines who are struggling in terms of the education system in the new normal due to the COVID 19 crises may consider trying out this alternative. It has to be noted that COVID 19 may not the only crises that the world will face in the next years to come. Hence, education reformists have to think of sustainable alternative education framework which will be effective both in the normal and new normal education landscape.

Conclusion

There are transformations in the educational landscape due to the occurrence of the COVID-19

Pandemic Crisis. As such the active players in the educational sector have opened its views on flexible teaching and learning delivery modes. The gaps between resources of first world and developing countries are evident. Institutionalizations of programs and systems that call for inclusiveness, accessibility and equity are imperative in the time of crisis.

References

- [1] Almarzooq, Z. et. al. (2020). Virtual learning During the COVID_19 Pandemic: A Disruptive Technology in Graduate Medical Educationfrom:https://www.onlinejacc.org/content/75/ 20/2635
- [2] Aparna Ramanujam, A. (2020). Education in Times of COVID: How Corporation Schools in Chennai Are Bridging the E-Learning Gap From:https://thebastion.co.in/covid-19/education-in-times-of-covid-howcorporation-schools-in-chennai-arebridging-the-e-learning-gap/
- Azzi-Huck, K. & Tigran, S. [3] (2020).Managing the impact of COVID-19 on education systems around the world: How countries are preparing, coping. and planning for recovery From:https://blogs.worldbank.org/education /managing-impact-covid-19-educationsystems-around-world-how-countries-arepreparing
- [4] Boissay, F. & Rungcharoenkitku, P. (2020). Macroeconomic Effect of Covid-19: an Early Review – from:https://www.bis.org/publ/bisbull07.pdf
- [5] Daniel, S.J. Education and the COVID-19 pandemic. Prospects (2020). from:https://observatory.tec.mx/edunews/education-in-times-of-a-pandemiccovid19
- [6] Ensuring Quality Education for All at Scale. (2020). (Blog Post) From: https://hundred.org/en/innovations/broadcast ing-nationwide
- [7] Fisher, G. (2020). Elsevier COVID-19 Response Special Collection: from;https://www.journals.elsevier.com/busi ness-horizons/editors-choice/covid-19response-special-collection

- Huang, R.H. Liu, D.J. et. al. (2020) [8] Handbook on Facilitating Flexible Learning During Educational Disruption: The Chinese Experience in Maintaining Undisrupted Learning in COVID 19 Outbreak. Smart Learning Institute of Beijing Normal University Smart Learning Institute of Beijing Normal University IESALC (2020). COVID-19 and Higher Education: Today Tomorrow and from: http://www.iesalc.unesco.org/en/wpcontent/uploads/2020/04/COVID-19-EN-090420-2.pdf
- Kilic, K. & Marin, D. (2020). How COVID -19 is Transforming the Word Economy: from: https://voxeu.org/article/how-covid-19-transforming-world-economy
- [10] Murphy, M. (2020). COVID-19 and Emergency eLearning: Consequence of the securitization of higher education for the post-pandemic pedagogy: from https://www.tandfonline.com/doi/full/10.10 80/13523260.2020.1761749
- [11] Nicola, M. et. al. (2020). The Socio-Economic Implications of the Coronavirus Pandemic (COVID-19): A review – from https://www.ncbi.nlm.nih.gov/pmc/articles/ PMC7162753/
- [12] O'mara, M. (2020). Students Call for More Empathy in Education during COVID-19 From:https://hundred.org/en/articles/student s-call-for-more-empathy-in-educationduring-covid-19
- [13] Roll, I. & Wylie, R. (2020). Evolution and Revolution in Artificial Intelligence in Education-from: https://link.springer.com/article/10.1007/s40 593-016-0110-3
- [14] Sahlberg, P. & Tuominen, s. (2020). How to Provide Quality Education for All During Crises: 10 Concrete Steps From: https://hundred.org/en/articles/how-toprovide-quality-education-for-all-duringcrises-10-concrete-steps
- [15] Sankar, A. (2020). Ensuring Quality Education for All at Scale. Broadcasting Nationwide From:https://thebastion.co.in/politicsand/education-in-times-of-covid-howstudents-teachers-and-parents-are-dealingwith-the-pandemic/

- [16] World Bank. 2020. The Economy in the Time of Covid-19. LAC Semiannual Report; April 2020. Washington, DC: World Bank. © World Bank. From:https://openknowledge.worldbank.org /handle/10986/33555
- [17] United Nations (2020). Policy Brief: The Impact of COVID-19 on childrenfrom:https://unsdg.un.org/sites/default/files/ 202004/160420_Covid_Children_Policy_Br ief.pdf
- [18] Villafuerte, P. (2020). Education in Times of a Pandemic. Observatory of Educational Innovation. From: https://observatory.tec.mx/edunews/education-in-times-of-a-pandemiccovid19
- [19] Zhong, R. (2020). The Coronavirus Exposes Education's Digital Divide from:https://www.nytimes.com/2020/03/17/ technology/china-schools coronavirus.html