Post COVID-19 education strategies: Envisaging learning in a post COVID-19 pandemic world

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Abstract
In the context of the COVID-19 pandemic, learning has metamorphosed rapidly as never envisaged before. Accordingly, lessons learnt as a result of the pandemic will influence and shape the future of learning and assessment as the pandemic has brought about a unique opportunity to actualise changes in the education sub-sector that had hitherto been proposed but never really implemented until the pandemic struck, catching the vast majority of educational systems unawares. Notably, the COVID-19 pandemic led to worldwide closure of institutions of learning, leaving educators and learners to undertake learning in completely different modes, situations and locations. Consequently, remote learning was offered without much preparation and in some cases, without prior digital experience. This article, thus, explores education during and after the COVID-19 pandemic. The authors attempt to envisage education in a post COVID-19 world in light of the changes made as the pandemic raged. It is, thus, hoped that education and assessment post COVID-19 will be enhanced by the lessons learnt during the pandemic and will remain global, innovative, digital, student centred, personalised and practical.

Keywords: COVID-19, education, impact, pandemic, post-pandemic, post-COVID-19
1. Introduction

Globally, the COVID-19 virus has impacted the education sub-sector, forcing almost all institutions to close indefinitely. About 1.8 billion students were negatively impacted as a result of institutional closures, brought about by the pandemic. Accordingly, 189 countries implemented countrywide cessations and 5 implemented local closures, affecting roughly 9.8% of the global learner population (United Nations Educational Scientific and Cultural Organization, UNESCO, 2020).

In response to institutional closures, UNESCO and several countries recommended the adoption of distance learning and remote educational platforms to keep educational programmes running, in an effort to mitigate the impact of the coronavirus on learning programmes. This undertaking was however marred with various challenges ranging from unprepared teachers to lack of e-learning infrastructure (UNESCO, 2020). Educationists however tried their best to bring the situation under control despite the lack of preparedness, prompting the current analysis which aims at analysing education during and after the pandemic. Accordingly, most of the varied innovations and changes that were implemented as the COVID-19 pandemic raged had previously been fronted by educational systems around the world but never rally gained traction as there was not a real trigger and realisation of their essence until the pandemic occurred. Subsequently, COVID-19 beget a need to rethink education worldwide for the current and subsequent generations (Kamanetz, 2020; Oranga, Nyakundi, Obuba, 2020), necessitating this analysis.

2. Impact and challenges of COVID-19 pandemic on Education

According to UNICEF (2020), the manner in which COVID-19 pandemic impacted education globally was unprecedented in education history, affecting almost all students in the world. The subsequent closure of learning institutions saw a massive, hurried effort at innovation and adaptation by educators and educational systems worldwide.

As a result, many learning institutions began to offer education remotely (Kamanetz, 2020). Institutions of learning began to teach in varied ways including through radio, television and internet. Remote learning became the dominant instruction delivery method for a considerable length of time as the pandemic wreaked havoc. Consequently, educators struggled to respond proactively and fully support the shift in instruction delivery (United Nations, 2020; Alawamleh, 2020).

Hayat et al (2021) report that the main challenges encountered by educational institutions during the pandemic include: infrastructural defects, noncompliance with virtual learning, inadequate interactions between learners and educators and time limitations. Apparently, COVID-19 accentuated social and digital inequality with some students reporting inadequate home-working environment/spaces while some lacked essential items such as desks, even more so those from economically deprived backgrounds. Wider detrimental experiences included decreased concentration, sleeping difficulties and a general decline in the mental wellbeing of learners (Alawamleh, 2020).

Accordingly, students concerns regarding slow internet access and access to online learning platforms were similar to those aired by teachers (Trust et al., 2020). Millions lacked the necessary infrastructure to regularly use e-learning platforms. Furthermore, while many college students believed they were better qualified for distant learning than elementary learners or high scholars, they frequently experienced either a lack of connectivity or an inappropriate level of it in their households (Trust et al., 2020).

Moreover, the effect of online instruction on instructors who were required to quickly react to the emergency strategy despite the lack of the necessary abilities for online teaching was a significant downside (Marinoni et al., 2020). Additionally, due to the health crisis, teachers were under pressure
to have their online courses ready in days or weeks; many turning to trial and error (Alawamleh, 2020).

Notably, as learning institutions shut, regulations and examinations that governed the institutions were lifted forthwith or minimally applied as education responded to the circumstances that prevailed. Hayat et al. (2021) report that the main opportunity from the corona virus pandemic to education was adoption of e-learning

However, Zhao and Watterstone (2021) contend that the changes and innovations that occurred at the onset of COVID-19 were not necessarily the changes that the educational sector needed in a post-COVID-19 world as the changes were more of a knee-jerk reaction to the pandemic than a new responsive type of education. Accordingly, there was not an opportunity to re-think education but rather a hastened educational response to the COVID-19 pandemic. Thus, according to Zhao and Watterstone (2021), not everything that was done may have been done right as there was no opportunity to re-imagine education. Consequently, the changes may be unsustainable and insubstantial as the pandemic gets under control.

Similarly, Bashir et al. (2021) argue that educationally, there does not exist knowledge or skills that guarantee a permanent response to the needs of a constantly changing educational landscape, hence necessitating constant research and re-thinking educationally and even more so as the pandemic gets under control and the post-COVID world approaches.

3. Envisaging Post-COVID-19 learning
Kamanetz (2020) argues that the COVID-19 and post-COVID-19 period might be the once in a generation chance to bring about real change in education because virtually all learning institutions globally were negatively impacted by the pandemic, hence providing the chance for educators and learners the world over to rethink and develop a more responsive education as opposed to the inflexible, out-dated models that institutions of learning are likely to cling to. This, thus, calls for re-drawing education as the world transitions from the COVID-19 pandemic.

3.1. Post COVID-19 Curriculum
A number of scholars (Darby, 2020; Zhao, 2020; Tucker, 2020) contend that the new post-COVID-19 curriculum needs to help students develop new competencies for the new age and enable them thrive in the smart machines age and help them embrace globalisation. Accordingly, the new education must instil entrepreneurial and creative skills.

On the other hand, Kallio and Halverson (2020) contend that the new post-COVID curriculum should focus more on developing and strengthening students’ capabilities rather than the traditional focus on fixed ‘template’ knowledge and content. Additionally, it should cater for the learners’ emotional and social wellbeing. Moreover, the curriculum should provide an education experience that is globally and environmentally connected.

Similarly, Barber et al. (2010) and Wagner and Dintersmith (2016) envisage a new curriculum in education that assists learners to acquire new skills necessary for the modern world and produce students that are creative, enterprising and globally competent in order for them to succeed in the era of smart technologies and a globalized world.

Additionally, the curriculum should be flexible enough to allow students to follow their strengths and passions thereby enabling them to come up with individual learning pathways without being overly tied and subjected to the pre-determined curriculum. Thus, the general curriculum should be a minimal framework of requisite knowledge and skills enough to enable learners develop
fundamental competences while also learning and acquiring the most common expectations and norms (Wagner & Dintersmith, 2016).

Moreover, students should be able to customize the new curriculum to enable personalized learning (Zhao, 2018; Zhao & Tavangar, 2016). Notably, personalization occurs when students create their own distinctive learning paths as they pursue their passions and strengths, ultimately calling for a flexible curriculum that allows students to select the subjects they are interested in, as well as the freedom to design their own learning pathways without being unduly confined by a predetermined curriculum. Thus, the national curriculum for all students should consist of just a minimum set of essential information and abilities.

Moreover, instead of insisting that every student acquire the same material, learning institutions may start by letting learners negotiate a portion of their curriculum, implying that students should be given some degree of freedom to determine what, how and when they want to study and how they want to be evaluated (Zhao, 2018). As a result, students would not feel disadvantaged and restricted as a result of home background and the local contexts into which they were born, their upbringing and local institutions of learning will have less of an impact on their ultimate educational pathways and achievement. Furthermore, co-developing the curriculum by allowing the learners to propose learning content gives learners the chance to exercising self-determination. In the end, this enables them discover the effects of their activities and aids in the development of lifelong learning habits and abilities as well as help them take ownership of their education (Wehmeyer and Zhao, 2020).

To this end, curriculums in the future should have the capacity to accommodate and contextualize justifiable changes whenever deemed necessary. As a matter of fact, it would be crucial for educators to recognize that curricula should constantly change to reflect and accommodate new phenomenon, thus implying that curriculum frameworks worldwide, at the national level, should allow for constant context and time-related modifications. Notably, schools and institutions should be accorded the flexibility to contextualize and alter the curriculum as they deem necessary. However, these modifications must be justifiable.

Consequently, learning institutions should start easing up on the strict curriculum requirement by adapting based on their own discretion while also negotiating some parts of it with the students as already discussed, instead of subjecting all learners to the same content. Consequently, learning institutions should begin treating learners as partners of learning and change, ultimately giving rise to students that function as full members of the larger school system.

It is also commonly accepted that in order to succeed in a future globalized world, a new set of talents amongst learners and educators should take precedence over the currently valued skills and knowledge (Wagner & Dintersmith, 2016). Hence, new curricula that encompass modern talents including creativity, curiosity, critical thinking, entrepreneurship, teamwork, communication, growth of mind-set, global competence, and other skills with various titles are currently on the increase (Duckworth & Yeager, 2015; Zhao et al., 2019).

3.2. Post COVID-19 Pedagogical strategies

Darby (2020) opines that post-COVID-19 education re-thinking should craft a pathway for lifelong learning and opportunity through the provision of comprehensive access and exposure to varied learning domains to enable students to make informed choices while also developing unique talents. Zhao and Wehmeyer (2020) contend that universities in the post-COVID-19 world, would have to embrace hybrid course delivery strategies in an effort to ensure that science students receive hands-on laboratory experiences and face-to-face contact to remain motivated and to benefit from university
infrastructure, facilities and support, while also allowing them flexibility brought about by remote learning.

Gulbahar and Madran (2009) explicate that blended learning, hybrid learning or mixed learning, combines instruction and learning methodologies and more especially, traditional classroom settings with online learning. Accordingly, other names for this type of instruction are mediation learning, web support and web enhancement education.

Similarly, Tucker (2020) indicates that the mixed or hybrid delivery approach would be a more effective post-COVID–19 strategy as institutions of learning reopen after the pandemic. Accordingly, it would not be prudent to undo the achievement gained during the COVID-19 pandemic. However, student demographics and digital equity should be put into consideration when planning this mode of learning (Wehmeyer and Zhao, 2020).

Furthermore, going forward, teachers should incorporate classroom differentiation during instruction and at the same time have learners play a more significant role in defining their learning activities and learning environments as learners have different strengths, passions and weaknesses (Tomlinson, 2014). This should be geared toward incorporation of personalized learning (Kallick & Zmuda, 2017; Kallio & Halverson, 2020). Essentially implying that teachers should strive to make learning interesting through enhanced learner-involvement and empowerment and help learners understand and chart their learning pathways.

Similarly, the role of the teacher in the post-COVID-19 would be that of organizer, counsellor, motivator and manager of learning activities and not instructor or the sole commanders of content. Notably, when students are enabled and empowered to own their learning and have full access to learning resources the role of the teacher gets modified automatically, calling for changes in teacher education as well. In line with this, teacher education should focus on training teachers to be educators who care more about their students and serve more as consultants and resource curators instead of teaching machines (Kallio & Halverson, 2020).

Additionally, student-centered approaches that are also inquiry-based and authentic should be adopted as this would help students to develop abilities to handle varied situations as opposed to memorization of known solutions. While it is still important to assist students in acquiring fundamental practical skills, educators should also focus on the human development of its students as members of local, national, and international society. Education must be viewed as a means of achieving lifelong learning, fulfilment, welfare, enjoyment, opportunities and the ability to make a positive contribution to humanity. Therefore, in order to empower students to make informed decisions and cultivate their passions and distinctive abilities, institutions of learning must offer thorough access and in-depth exposure to all areas across all years.

Accordingly, there are several reasons why students should play a bigger part in their own education. First, students come from a variety of backgrounds with a range of skills and interests that might not correspond well with the material that they are all expected to master in the classroom. Subsequently, students should be empowered and encouraged to take a more active role in defining their learning and learning environments in conjunction with their teacher even as the teachers promote classroom differentiation (Tomlinson, 2014; Zhao, 2018). Ultimately, student-empowerment would enable students to make decisions concerning their own learning trajectory.

Subsequently, institutions of learning should be designed to include and benefit students and give students the freedom to actively participate in some aspects of how the schools are run. The right of students to self-determination implies that they have the freedom to choose the circumstances in which they learn (Zhao, 2020; Mugo, Oranga & Singal, 2012) resulting in students being co-owners
of their own learning. As a result, students may have their own individualized learning plans and participate completely in the entire school community.

Students do not necessarily require professors to consistently and directly teach them as they can benefit from internet resources and professionals. The job of the teacher will thus, change when students get empowered to take charge of their own learning and have access to resources. Consequently, teachers will no longer be required to act as the students’ only source of instruction (Zhao, 2018). Hence, the teacher will become a learning coordinator, learning resource curator, student counsellor, motivator, and project manager. Consequently, because the teacher’s primary duty no longer only entails providing teaching, teacher education must also evolve forthwith and put more emphasis on preparing teachers who care more about each student individually and act as advisers and resource curators (Zhao, 2018).

Consequently, pedagogical strategies should shift focus to student-initiated investigations than demanding that students memorize known solutions to known issues, instead students should be helped to develop skills to deal with the unknown and uncertain.

3.3. Post COVID-19 Learning Spaces and Time
It was not until COVID-19 struck that online teaching became the norm. Prior to COVID-19, the classroom had been the typical place for learning, and the learning time was typically confined to classes. Thus, the massive online shift enabled teachers and learners to experience remote teaching, subsequently giving them the opportunity to explore and re-think teaching during and beyond the pandemic period. Apparently, even though many learning institutions re-opened, it did not become essential to remove the online component of learning. Notably, COVID-19 made the adoption of educational technology a lot easier since many instructors had no choice but to move online.

Even while there are valid reasons for academic institutions to revert to what was formerly considered “normal,” normalcy may be difficult to attain due to the virus’ unpredictability and may not even be desired in the long run. Notably, moving teaching online ultimately changed one of the most important unwritten school rules that require all students to be in one location for education to take place.

Alawamlah (2020) indicates that upholding remote learning to a given extent after COVID-19 would ensure that learners benefit from experts around the world as learning changes from the classroom to the world. This also implies that learners do not necessarily have to be in institutions of learning. Moreover, their learning time also vastly expands beyond the typical school time. Further, students’ learning-time does not have to be synchronous with one another or with the teacher as lessons can be recorded and accessed later on at each student’s convenience and tests taken later within the stipulated time frame.

Zhao (2020) contends that there are several methods through which institutions of learning can provide remote learning, this include the default model of having all students attend lessons on digital screens at the same time as they do in actual classrooms, except that the students are not in the same place as their peers and the teacher. Accordingly, this strategy is likely the most popular approach adopted by many academic institutions (Darby, 2020; Dorn et al., 2020). That notwithstanding, new and more successful models are being researched and put into practice. As a matter of fact, online learning models that are more successful blend synchronous and asynchronous sessions to enable more preferable learning styles.

Furthermore, based on the COVID-19 experiences, a combination of online and in-person learning options may be the best paradigm for instruction delivery. In line with this, Tucker (2020)
maintains that well-designed mixed mode delivery of online and face-to-face education should be more beneficial currently and for future post-COVID-19 learning situations (Tucker, 2020). Accordingly, in recent years, the concept of blended learning or “flipped classrooms” has been advocated for as one of the most effective teaching techniques. Moreover, since instruction shifted online due to COVID-19, persuading learners and teachers to remain there should not be difficult (Means et al., 2013). Accordingly, when learning is blended or hybrid, learners are liberated from having to attend classes physically at specific times and are not required to be in the same physical space in order to learn. This consequently, gives learners more autonomy over their own learning and also expands their learning time beyond school time with their learning place being global (Kallick & Zmuda, 2017).

4. Conclusion
Conclusively, even though many learning institutions moved towards e-learning to minimise on missed lessons occasioned by lockdowns ranging from regional to countrywide, these abrupt, unplanned for changes in teaching and learning approaches will have a lasting impact on learning globally as the pandemic beget an opportunity in the world for educators to collectively change in response to the needs of the learners. It is evident that remote learning coupled with student differentiation, student empowerment and learner centred approaches are going to be the hall mark of learning in the post-COVID-19 world. As a result, academic institutions could undertake remote learning in varied ways, but the most effective model is a well-balanced combination of face to face and virtual learning. Consequently, in the post-COVID-19 world, being disconnected physically during lessons could result in being even more broadly connected virtually. Subsequently, educators have a responsibility to take advantage of the crisis-driven opportunity to make changes in practically every element of education, including what, how, where, who, and when. In other words, education should undergo changes in all areas including pedagogy, assessment, setting and time.
References


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