

Life scientists versus new realities of post COVID-19 era.

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Abstract

COVID 19 is a global crisis, that disorganized almost every aspect of life in 2020 and left an impact on our future lives. Science based researchers are the most sufferers as the researches undertaken are either laboratory oriented or analytical aspects which require laboratory experiments which requires laboratory experiments but the pandemic slowed most academic activities down. Life unpredicted crisis most times are what forces human adaptation to changes, the change in this era reintroduced Problem based learning (e-learning and blended learning); a long-proposed means of learning which at the long run became a resort of learning during the pandemic; as studies with people were limited and almost impossible, so conducting online lectures became the uttermost alternative to learning. Face-to face learning is replaced with e-learning, though it also came with its own challenges whereby not all countries can manage for online teachings due to no access to internet as most students reside in rural areas with no electricity. What will the world of sciences and academia look like after COVID 19 pandemic? This article reflects on the need to acknowledge the NEW REALITY as an answer to the transition we already found ourselves in 2020. The obvious impact around the globes brought about several challenges in the scientific institutes; at the same time, it poses as what will trigger space for transformation. Scientific world such as universities and research laboratories are seen with rapid transformation already as researchers and young scientists are left with no choice than to reduce the experimental based studies and rather engage more on online scientific meetings and a renewed recognition of the value of distance learning.

Keyword: Post COVID-19 era, New reality, E-learning, Scientific transformation and Lessons learnt

Introduction

Academic activities and scientific researches in this face of COVID 19 pandemic has been the ongoing insights of our time and have come to stay afterwards. The unpredicted pandemic robbed us of our unrecoverable time, though it presents us with other opportunities that we never anticipated. There have been records on losses in most researchers ongoing experiments where by

years of effort at work got destroyed due to contaminations and freezer's malfunction during the lockdown. (Korbel & Stegle, 2020).

This phase started with lockdown where students and instructors underwent a steep adjustment curve, adapting to the new norms that is imposed to our lives by the pandemic which thus includes more opening to online meeting, as academic system

strategized an active participation of online interactions. (Yousefi, Abdollahzadeh, & Moossavi, 2020). The post COVID19 era will be facing uncertainties with the new reality especially the fact that expectation of the new normal are much higher, and therefore requires attitudes supported by Problem-based learning (PBL). (Buheji & Buheji, 2020). As proposed by previous studies that learning is likely going to take place in various

locations and context rather than the formal educational institutes patterns that we are already accustomed with. (O'Brien, Hamburg, & Southern, 2019). Research showed that PBL will enable an effective and transparent communication with the scientific community in decision-making processes, dealing on what we know, what we do not know, and where there is uncertainty. (Norman, 2008).

As we resume from months of total interruption and lockdown and into the new reality, it's clearly seen that the world of science and academia has entered a new pattern of scientific communication, collaboration and trainings which indicates that many scientists are already engaging themselves in a local and international cooperation, idea exchange, and electronic learning. (Korbel & Stegle, 2020). (Moszkowicz, Duboc, Dubertret, Roux, & Bretagnol, 2020) highlighted that evolving into post COVID 19 era equipped the world of medical education with more modern educational tools of teaching techniques complementary to the conventional face to face education.

The transformation in the scientific world will bring about the advancement of telehealth, adaptive research protocols, and clinical trials with more flexible approaches (Rose, 2020). According to (Davison, 2020), disruptions are more-or-less smooth tenor of our live that force us to deal with new set of challenges and circumstances but may be glimmer of hope to a better world at the individual and institutional levels; so as on-going COVID 19 pandemic disruption.

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The new realities of post COVID -19 era.

New reality is just an act of admitting changed circumstance at a particular point in time either positively or negatively. Generally speaking, human acceptance to something new is often with a likelihood of being triggered by a process or condition that is simply without control. COVID 19 era brought about a drastic change to human race.

This short study considered two approaches that could be helpful to young researchers as the science world transits and journey into this new reality:

1. Blended learning as a new reality of post COVID 19 era

As the pandemic had forced us into innovative and demand we embrace some other learning patterns that seem not considered effective before now; blended learning is one of those existing approaches that presents itself during this period with a positive effect to both scientific world and entire academia. Blended learning also known as hybrid learning emphasizes on a digital teaching approach where students engage in a face-faces and online learning, with more opportunities of student's ability of having control over their time and place. According to (Liu et al., 2016), blended learning is promising and worth applying in health profession which assist researchers and educators effectively during the course of their study . The use of this technology makes it possible for in-class online learning that students can do at home provided they have access to necessary technology. One out of the advantages that come with the technique of Blended learning is that it can encourage and offer students who are introverts or shy the opportunity to share their ideas and learn from others using discussion forums where conversation that started inside the classroom is made to continue even when the class ends. More advantages of Blended leaning is: It improves students attitude and satisfaction(Woltering, Herrler, Spitzer, & Spreckelsen, 2009) and makes learning convenient and flexible (Dziuban, Patsy, & Joel, 2004). It integrates the strengths of face to-face and online learning to create an engaging and meaningful learning experience. (Garrison & Vaughan, 2008). It have a consistent

positive effect in the comparison with no intervention and to be more effective than nonblended instruction for knowledge acquisition in professions. (Liu et al., 2016)

2. E-learning as a new reality and a focus at post COVID 19 eras.

Originally, e-learning means obtaining a degree delivered completely online but the era of COVID 19 brought an additional conception about e-learning approach in academia especially in the scientific enterprise. E-learning as a distance learning forced everyone in academia to learn something new within this period of the pandemic and will continue to introduce so many benefits to learning. Most scientific sites and platforms which were only accessible by instructor are being made available to both instructors and students thereby reducing and making workload of an instructor less cumbersome. Research had it that e-learning actually facilitates and eases stress and also provided students and researchers an avenue to carry out their studies conveniently. (Arkorful & Abaidoo, 2015) The need for e-learning education in the scientific world which always seems a second choice became alarming to assist the current realities of the post COVID 19 era have also proven to be an efficient training and teaching method. (García Vazquez et al., 2020). With the provision of the right technology, there is evidence that learning online is of more advantage in this era in number of ways; Students are likely to retain more material when learning online compared to only in the classroom. This is due to the students being able to learn faster online; e-learning requires less time to learn than in a traditional classroom setting because students can learn at their own pace, going back and re-reading, skipping, or accelerating through concepts as they choose.

The limitations of the new realities of post COVID -19 era.

However, these new realities of learning during post COVID 19 era is faced with challenges that needs to overcome. Students without reliable internet access or the technology struggle to participate in the digital/current means of learning; this gap is seen across developing countries. For example, whilst 80% of students in US UK, Austria etc have a personal computer to use for their schoolwork, only 30% - 40% in Nigeria. In the developed countries like US, there is a significant gap between those from privileged and disadvantage background: whilst virtually all 15-years olds from a privileged background said they had a computer to work on, nearly 25% of those from disadvantaged backgrounds did not. While some schools and governments have been providing digital equipment to students in need. (Wang, Cheng, Yue, & McAleer, 2020)

Another notable challenge encountered is the adjustment of academic calendar; COVID 19 crisis was so sudden that the new realities of implementing alternative learning was a quick decision into the academic world. The sudden shift to alternative didn't give academia adequate time to adjust. (Burgess & Sievertsen, 2020) .

Lastly, unavailability of instructors with the necessary knowledge of digital forms of learning could be very challenging in the new realities of the post COVID 19 era. Because very often, most institutes may have instructors with the basic understanding of technology and sometimes they don't even have the resources and tools to conduct online classes.

Although these approaches possibly come with limitations like access to internet, technology, efficiency of time, costs and also qualified instructors but right now with this phase of post COVID 19 era , these effective alternatives only need further implementation of strategies that will set out the best out of learning.

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Lessons worth learning during post COVID 19 era.

After both the positive and negative impact of COVID 19, law enforcement agencies at all levels should strategize and collaborate with distinguished institutions and beyond health sectors to implement alternative measures against future pandemics.

One of the positive impacts of the COVID 19 to the scientific world is that a new scientific premise was created within this period in which researchers could extensively attend international conferences and meeting with like-mind colleagues using online platforms. This could give more opportunity to early-career scientists to engage themselves in checking out for the already existing ideas similar to their research field, compare the hypothesis and be able to stimulate their own ideas within a specified period of time without the norms of

reconducting laboratory experiments. The need for both inter and intra collaboration during this COVID 19 era brought about the adaptation of Problem based learning (PBL) which allows institutes and individuals with different partnership to conduct their research efficiently without the need for physical participation. Introduction of E-learning platforms such as Social network sites (SNSs) and its implementation for learning and research purposes with capability of delivering potential in the academic self-efficacy, self-directed learning readiness (Durak, 2019) is one of the best lesson of the post COVID 19 era .

A call for changes in the academic sector which has been proposed long time ago with little or no effective response thereafter have its effectiveness during this pandemic which forced unimaginable changes, and with every reason to stay afterwards. Higher institutes are gradually bracing up the new decade, responding to creativity, restructuring and reorganizing the academic system of teaching.

Law makers in academia and scientific enterprise should find it important in creating platforms of innovation that will enable the implementation of new options, an alternative available for learning. This makes research enterprise and academic sector more sustainable in the face of any related outbreak. Focus should be on facilitating a flexible means that accommodates sustainability in the long-term plans of how best to manage learning in the next - generation scientists. And most importantly the needs for urgent training of academic instructors should be considered which will give educators in the society the opportunity of upgrading their knowledge of digitalize pattern of teaching.



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Conclusion

Despite all odds what is needed is getting the best out of the worst situation with all positivism, we only need to overcome the present learning challenges, reduce the negative effects of this pandemic and rather promote a faster pace of learning. Scientific institutes should maximize the new norms of post COVID 19 where one can attend seminars wherever you are sitting in the world. It will entail that more responsibilities are expected of learners as online learning is basically more of self-study. Provision should be made globally on how better to advance in innovations and active upgrading improvised instructors that can excellently deal with the cultivation of young researchers in preparedness for any public-health emergencies.

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