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## EFFICACY OF VIRTUAL TECHNOLOGY AS THE WAY FORWARD FOR TEACHING AND LEARNING WITH THE EXPERIENCE OF A GLOBAL PANDEMIC

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### ABSTRACT

*The call for institutions and governments across the world to prioritize investments in technology was never treated that seriously as it is now, with the emergence of the COVID-19 pandemic, purportedly claimed to have emerged in China's Wuhan city. All across the world, institutions are yearning for resources to meet the growing need to support continuity in learning through the new normal of virtual schooling, but the capacity to do so is limited owing to nations' limited preparedness for such a global scale of health calamity.*

*Technology is certainly the way forward to meet the growing needs of people's desire to survive, and equally so for employers whose growing competitiveness are much catered for through highly manpower skills workforce. Hence, institutions and governments alike are now seen to be making efforts in adapting to new and emerging technologies in a bid to make it worthwhile to support economic prosperity and livelihoods.*

*The aim is to show growing need in learning through the new normal of virtual schooling, adapting to emerging technologies.*

**Methodology.** *The analysis of technologies, tools, means like MOODLE, Google-Meet, WebEx Meet, ZOOM.*

**Results.** *Emerging technologies such as Google-Meet, WebEx Meet, ZOOM and already used platforms like MOODLE need to be hailed given their embedded functionalities to capture variety of ways through which disruptive services can be made to continue. Functionalities embedded in the most commonly used platform*

like MOODLE and Google-Meet have integrated functionalities to support both virtual classroom and assessment components as opposed to that of WebEx and ZOOM.

**Conclusion.** Emerging technologies should include a synchronized system of Managed Learning Environment (MLE) that makes it possible for assessment materials to be integrated with constructive feedback from teachers.

**KEYWORDS:** Virtual Technology (VT); Teaching and Learning; Global Pandemic.

## INTRODUCTION

The call for institutions and governments across the world to prioritize investments in technology was never been treated with seriously as it is now, with the emergence of the COVID-19 pandemic, which is purported to have emerged in the city of Wuhan in China.

All across the world, institutions are yearning for resources to meet the growing need to support continuity in learning through the new normal of virtual schooling, but the capability to do so is limited owing to nations' limited preparedness for such a global scale of health and other emerging shocks across the world economy.

Technology is certainly the way forward to meet the growing needs of people's desire to survive, and equally so for employers whose growing competitiveness are much catered for through highly skilled manpower force.

Hence, institutions and governments alike are now seen to be making efforts in adapting to emerging technologies in a bid to make it worthwhile to support economic prosperity and livelihoods.

## METHODOLOGY

The analytical method is used for investigation technologies, tools, means like MOODLE, Google-Meet, WebEx Meet, ZOOM.

## RESULTS AND DISCUSSION

### *Virtual Technology as the New Normal*

Long before the trauma of COVID-19, virtual technology teaching was casually making headway as part of institutional policies to support flexible teaching and learning.

On a more specific note, scholars in contemporary times have been making headway in highlighting the relevance of virtual technologies as means of facilitating high quality teaching and learning in the 21st century (Jackson, 2015; Jackson, 2016a; Jackson, 2020a; Jackson, 2020b; Sabah, 2020).

Despite teachers / instructors minimal use of the integrated features in existing technologies like MOODLE and many more, efforts were deliberately made in instituting Information and Learning Technologies (ILT) policies to embed varied forms of assessment strategies into curriculum contents as a way of improving learners' participation and differentiation in methods of delivery (Burnham, 2021; Jackson, 2015).

The advent of COVID-19 pandemic seems to have made a lasting impact on the global economy, with all sectors equally affected in some way or the other.

With the growing need for instructions to close essential services by world leaders, education too has had a share of the disruption, as the entire system of educational provision globally also adapted

to the new normal of virtual technologies in a bid to make it worthwhile for students to be gainfully engage in some form of learning needed to boost manpower supply in the workplace.

The already existing means of virtual technology platforms like MOODLE and Blackboard were not as popularly utilised, despite their emphasis in supporting flexible means for students' assessment that incorporate deadline tracking and the provision of feedback on assessed tasks.

The virtual system of remote teaching provision embedded in the above mentioned platforms have been insufficiently utilised by teachers / instructors owing to the mandatory requirements for students to be physically present in the learning environment.

With the advent of COVID-19, institutions were left with no choice, but to adapt teaching resources to reflect the new normal means of virtual schooling, which is easily accessible to students in meeting their varied learning styles.

#### *New Technologies and their Adaptability for Teaching and Learning*

The advent and prolongment of a pandemic like COVID-19 has made it more obvious for the introduction of new technologies to be made an integral part of institutional requirements, in a bid to adjust systems to meet the needs of the new normal or virtual work-based activities in the 21st century and beyond.

This means that, even if the reality of pandemics are confined to a region or spread globally, there is a need for the world to be better prepared in adapting to the unforeseen disruption that may arise in the foreseeable future.

On that note, emerging technologies such as Google-Meet, WebEx Meet, ZOOM and

already used platforms like MOODLE needs to be hailed given their embedded functionalities to capture variety of ways through which, disruptive services can be made to continue.

Functionalities embedded in the most commonly used platform like MOODLE and Google-Meet comes with integrated functionalities to support both virtual classroom and assessment components as opposed to that of WebEx and ZOOM. Resource sharing is a common feature amongst all the aforementioned virtual technology platforms.

With the growing need for flexible and interactive learning, there is a need for many of the emerging technologies to diversify their systems, through addition of integrative components that makes it more onerous on instructors / teachers to comprehensively integrate differentiation features to support the wider learning community.

#### *Judging the Efficacy of New and Existing Virtual Technologies*

Thoughts about the relevance and compulsory use of virtual technologies for everyday use was never envisaged to dictate the new normal in society, until COVID-19 revealed itself to be a lasting destruct to services in the world economy.

Despite the relevance of technology in facilitating accessible means of teaching and learning, it was almost impossible for the majority of teachers / instructors to consider their usage for developing differentiated learning resources. This can be attributed to the fact that technology usage in teaching was only perceived as a tool for specialists in areas connected with ICT and Computing.

The emergence and pursued efforts attached to the concept of globalization and coupled with the global community's preparedness in curtailing (business and operational) risks to

pandemics, it has become more enduring for institutions and governments alike to ring-fence resources in preparation for the new way of educating the learning community (Jackson, 2020c).

Given the tradition attached with face-to-face teaching and learning, it is certainly going to be a challenge to steer people's attention towards the new normal, which require exorbitant costs to institutions in adapting systems to the emerging mode of delivering courses to learners, whether from within the same country or from a distance in another country.

It also means that resources would now need to be adapted from the confinement of any location for teaching to be effectively delivered via virtual technologies like ZOOM, Google Meet, WebEx Meeting and many more. The efficacy of the highlighted technology platforms can be judged better with the passing of time.

Such assessments will need to take into consideration, the design of set criteria to compare their worth to society, particularly with users' as active participants in virtual classrooms when compared to the traditional means of face-to-face learning.

While the efficacy of interactivity is viewed as a very important aspect of virtual technology in addressing current and future concerns around disruption caused by pandemics to the world economy, particularly in the area of teaching and learning, the most important factor at hand is cost borne by institutions in adapting to the new normal.

Economic strength of nations across the globe seems to be at variance and hence, there will certainly be disparity in the output of people in coping with the trend of things, particularly in meeting the cost of emerging technologies to address competitive demand for highly skilled manpower.

This also brings to the fore, the economics of costs effectiveness to be borne by nations in championing investments to meet human ingenuity that addresses what Schumpeter supposedly referred to as '*creative destruction*' (Jackson, 2020d; Dalton and Logan, 2021).

Such ingenuity as addressed by Jackson (2020e) needs to be steered in a way that makes it possible for learning to be integrated through the development of new technologies for those in a formal learning environment (such as schools and universities) and as well as those in the work-based environment.

## CONCLUSION

Going forward in a more competitive way, the efficacy of new technologies is highly likely to be judged on their integrated functionalities that make it more advantageous for both instructors and learners to make a difference in their application to things in the real world.

On that note, and as currently utilised in technology platforms like MOODLE, Google-Meet and Blackboard, institutions will be more inclined to make judicious use of resources by soliciting emerging technologies that integrate virtual classroom (teaching) with variety of assessment features.

Such features should include a synchronized system of *Managed Learning Environment* (MLE) that makes it possible for teaching and assessment materials to be integrated with constructive feedback from teachers / assessors, which also incorporate grades for reporting learners' progression to the next stage of their career pathway (Jackson, 2016a; Jackson, 2016b).

## CONFLICT OF INTERESTS

The authors declare that there are no conflicts of interest regarding the publication of this paper.

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## REFERENCES

- Burnham, T. (2021). *Exploring Blended Curriculum to Enhance Student Learning in an Adult High School*. [PhD. Thesis, Walden University]. ScholarWorks.Waldenu.edu. <https://scholarworks.waldenu.edu/dissertations/9849/>
- Dalton, J., & Logan, A. (2021). *The Man Who Discovered Capitalism: A Documentary on Schumpeter for Use in the Classroom*. MPRA Paper No. 105664. <https://mpra.ub.uni-muenchen.de/105664/>
- Jackson, E.A. (2020a). Use of Whatsapp for flexible learning: Its effectiveness in supporting teaching and learning in Sierra Leone's Higher Education Institutions. *International Journal of Advanced Corporate Learning*, 13(1), 35-45. <https://doi.org/10.3991/ijac.v13i1.11381>.
- Jackson, E.A. (2020b). Innovative educational technologies for early-years curriculum delivery: A theoretical roadmap for economies in Sub-Saharan Africa (SSA). *Economic Insights – Trends and Challenges*, 9(2), 11-21.
- Jackson, E.A. (2020c). Emerging innovative thoughts on globalization amidst the contagion of COVID-19. In Leal Filho W., Azul A., Brandli L., Özuyar P., Ozuyar, P.G. (Eds.), *Industry, Innovation and Infrastructure: Encyclopedia of Sustainable Development Goal* (pp. 1-12). Springer, Cham. [https://doi.org/10.1007/978-3-319-71059-4\\_131-1](https://doi.org/10.1007/978-3-319-71059-4_131-1).
- Jackson, E.A. (2020d). Fostering Sustainable Innovation Through Creative Destruction Theory. In Leal Filho W., Azul A.M., Brandli L., Lange Salvia A., Wall T. (Eds.), *Industry, Innovation and Infrastructure. Encyclopedia of the UN Sustainable Development Goals* (pp. n.d.). Springer, Cham. [https://doi.org/10.1007/978-3-319-71059-4\\_119-1](https://doi.org/10.1007/978-3-319-71059-4_119-1)
- Jackson, E.A. (2020e). Economics of Technology Innovation for Sustainable Growth: With Reference to Sub-Saharan Africa (SSA). In Leal Filho W., Azul A.M., Brandli L., Lange Salvia A., Wall T. (Eds.), *Industry, Innovation and Infrastructure. Encyclopedia of the UN Sustainable Development Goals*. Springer, Cham. [https://doi.org/10.1007/978-3-319-71059-4\\_128-1](https://doi.org/10.1007/978-3-319-71059-4_128-1).
- Jackson, E.A. (2016a). Proposal for Virtual ICT use in Sierra Leone Education System: A Case of MOODLE. *Journal of Applied Thought*, 5(1), 79-94.
- Jackson, E.A. (2016b). Integration of learning technology in Sierra Leone's higher education system: Implications and challenges. *Information Technologist (The)*, 13(1), 39-50.

- Jackson, E.A. (2015). Impact of MOODLE platform on the pedagogy of students and staff: Cross-curricular comparison. *Journal of Information and Communication Technologies*, 22(1), 177-193. <https://doi.org/10.1007/s10639-015-9438-9>.
- Sabah, N.M. (2020). Motivation factors and barriers to the continuous use of blended learning approach using Moodle: Students' perception and individual differences. *Behaviour and Information Technology*, 39(8), 875-898. <https://doi.org/10.1080/014492X.2019.1623323>.

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#### АНОТАЦІЯ / ABSTRACT [in Ukrainian]:

### ЕФЕКТИВНІСТЬ ВІРТУАЛЬНИХ ТЕХНОЛОГІЙ ЯК ШЛЯХ ДО ВИКЛАДАННЯ ТА НАВЧАННЯ ЗАВДЯКИ ДОСВІДУ ГЛОБАЛЬНОЇ ПАНДЕМІЇ

*Заклик до установ та урядів у всьому світі визначити пріоритет інвестицій у технології ніколи не сприймався так серйозно, як зараз, з появою пандемії COVID-19, яка, як передбачається, виникла в місті Ухань, в Китаї. У всьому світі установи прагнуть набути ресурси для задоволення зростаючої потреби підтримки безперервності навчання завдяки новим зразкам віртуального навчання, але можливості зробити це обмежені через низьку готовність країн до такого глобального масштабного лиха. Технології, безсумнівно, є шляхом вперед для задоволення зростаючих потреб людей у бажанні вижити, і так само для роботодавців, чия зростаюча конкурентоспроможність забезпечується завдяки висококваліфікованій робочій силі. Отже, зараз, як вважається, установи та уряди докладають зусиль для адаптації до нових технологій, намагаючись зробити так, щоб це було корисним для підтримки економічного процвітання та життєвого існування.*

**Мета роботи** полягає в тому, щоб показати зростаючу потребу в навчанні за допомогою нового зразку віртуального навчання, пристосовуючись до нових технологій.

**Методологія.** Аналіз технологій, інструментів, засобів, таких як MOODLE, Google-Meet, We-bEx Meet, ZOOM.

**Результати.** Такі нові технології, як Google-Meet, WebEx Meet, ZOOM та вже давно існуючі платформи, такі як MOODLE, повинні вітатися з огляду на їх вбудовані функціональні можливості, щоб охопити різноманітні шляхи, за допомогою яких можна продовжувати опрацювання новітніх послуг. Функціональні можливості, вбудовані в найбільш часто вживані платформи, такі як MOODLE та Google-Meet, мають інтегровані функціональні можливості для підтримки як віртуального класу, так і компонентів оцінювання, на відміну від WebEx та ZOOM.

**Висновок.** Нові технології повинні включати синхронізовану систему керованого навчального середовища (КНС), яка дозволяє інтегрувати матеріали для оцінювання з конструктивними відгуками педагогів.

**КЛЮЧОВІ СЛОВА:** віртуальна технологія (BT); викладання та навчання; глобальна пандемія

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