

Covid-19 Pandemic on Takoradi Technical University In The 2020 Perspective: A Narrative Approach

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Abstract:

The crisis of coronavirus disease 2019 (Covid-19) pandemic and its unparalleled disruption on tertiary education in Ghana have far-reaching implications. As the world has witnessed the grappling pandemic within the year 2020, many tertiary institutions are challenged to make educational reform systems thrive and make effective academic progress on how to handle the phase of covid-19 related issues on teaching and learning. However, the prevalence of the covid-19 pandemic has caused major reforms in tertiary education specifically Takoradi Technical University where these reforms carry enormous implications of lasting effects on the educational systems of the institution. The study looks at the Covid-19 pandemic on tertiary education in Ghana and its implications on the educational systems of Takoradi Technical University (TTU) in the 2020 perspective. Using the narrative method, the discussion revealed that the crisis of Covid-19 has exposed many inadequacies and inequities in the TTU educational system and the needed environment to focus on teaching and learning, research, funding and internship programmes. The study suggests the use of mitigation strategy to sustain the educational systems and strong reforms that use teaching and learning approaches for TTU in the coming years.

Key Word: *Covid-19 pandemic, Ghana, implications, tertiary education, Takoradi Technical University*

Date of Submission: 10-08-2021

Date of Acceptance: 25-08-2021

I. Introduction

The grappling of the coronavirus disease 2019 (Covid-19) pandemic on the world has become an unprecedented challenge to every individual regardless of gender, nationality, ethnicity, educational, political, religious and socio-economic background. Also, the crisis of this pandemic and its unparalleled disruption on tertiary education in Ghana have far-reaching implications. As the world has witnessed the grappling pandemic within the year 2020, many tertiary institutions are challenged to make educational reform systems thrive and make effective academic progress on how to handle the phase of covid-19 related issues on teaching and learning for technical universities (TU's). However, the prevalence of the Covid-19 pandemic has caused major reforms in the tertiary education institutions specifically Takoradi Technical University where these reforms carry enormous implications of lasting effects on the educational system of teaching and learning in the institution.

Covid-19 as a pandemic is an illness caused by a novel coronavirus now called severe acute respiratory syndrome coronavirus 2. It was reported initially by World Health Organisation (WHO) on December 31, 2019, and declared by WHO as a global health emergency on January 30, 2020, and also, eventually declared by WHO as a global pandemic on March 11, 2020 (Harapan et al., 2020). Arnhold et al. (2020) discuss that since the prevalence of the Covid-19 pandemic at the global front, Africa and also in Ghana, the nationwide lockdown has affected tertiary education. Tertiary education institutions have resulted in the online provision of teaching and learning to ensure continuity of academic success.

As cited by United Nations (UN) (2020 a., p.3), "the Covid-19 pandemic has created the largest disruption of education systems in history, affecting nearly 1.6 billion learners in more than 190 countries and all continents. Closures of schools and other learning spaces have impacted 94 per cent of the world's student population, up to 99 per cent in low and lower-middle-income countries". In a general sense, Arnhold et al. (2020, p.2) add that "it seems that this transition is comparatively easy for those countries that had invested in the educational sector and approached digitization in a strategic way pre-crisis (for example, Denmark, Estonia, Finland, France, Germany)".

Reacting to these challenges, Arnhold et al. (2020) believe that countries that had not to prioritize digitization as a strategic approach had seen decreasing investment in higher education and also faced significant difficulties. In the narrower sense, this goes beyond digitization and also applies to issues like student

financing, quality assurance, and the status of academic staff (Arnhold et al., 2020; Al-Samarrai, Gangwar & Gala, 2020).

In view of Ghana Health Service's (2020), Covid-19 active cases report as shown in figures 1 and 2 ascended to Ghana's nationwide lockdown. This has stemmed many organisations both government and private or individuals to reconsider and improve their activities in the light of Covid-19. Due to the Covid-19 pandemic, Tertiary institutions are much focusing on proper infrastructures such as good internet connectivity for online teaching and learning. However, countries and institutions are not only considering making short-term adjustments in terms of accessibility, infrastructure and equipment but also, putting up the right conclusions for the medium to long term (Arnhold et al., 2020; Anderson, 2008; TTU, 2016).

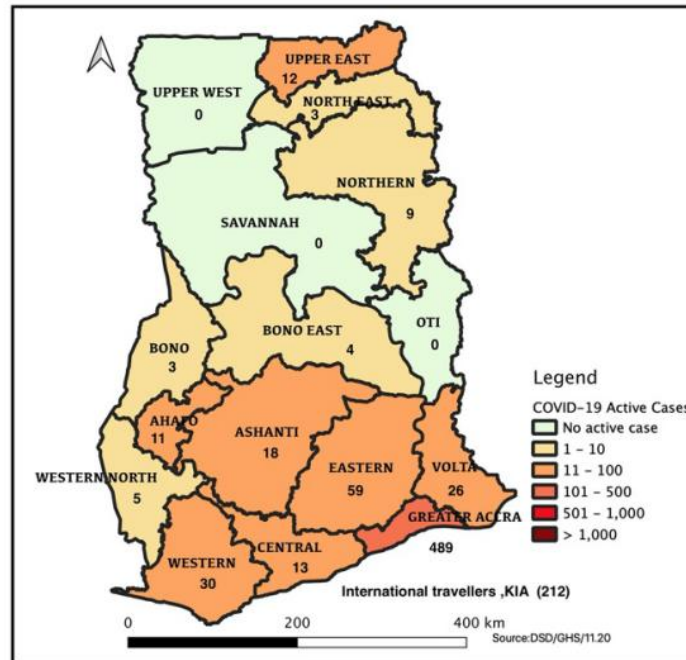


Figure 1: Regional distribution of Covid-19 active cases in Ghana, March – December 2020 (Source: Ghana Health Service, 2020)

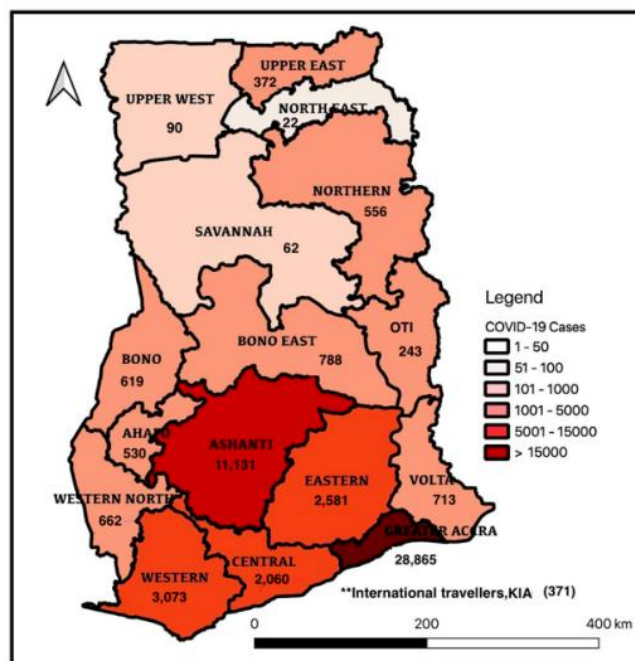


Figure 2: Regional distribution of cumulative Covid-19 active cases in Ghana, March – December 2020 (Source: Ghana Health Service, 2020)

As established by Arnhold et al. (2020), Anderson (2008) and TTU (2016), the short, medium and long-term adjustments with proper accessibility, infrastructure and equipment for online teaching and learning do not only apply to the modalities for teaching and learning in Takoradi Technical University (TTU), but also a stronger emphasis on other areas such as research, funding, internship programmes with continuity of educational operations, support and welfare, including preparing for any possible future crises (Smith & Brame, 2020; Arnhold et al., 2020; International Institute for Educational Planning (IIEP) - UNESCO, 2020). The impact of the pandemic and government lockdown restrictions on the education system was very obvious that the government and education institutions suspended face-to-face learning activities in March 2020 (Sulley, 2020; Schleicher, 2020; Gurchiek, 2020; UN, 2020 b.). Amidst the broad challenges Covid-19 poses, it might retrospectively be considered as an opportunity to strategically improve educational systems specifically tertiary education and prepare it for the challenges to come.

International Association of Universities (IAU) and Erasmus Student Network (ESN) (2020) point to the fact that dealing with the Covid-19 pandemic and education, it is an impossibility of having face to face classes and this has led to the need to adopt new teaching methodologies. Therefore, digitization plays an important role in the tertiary education of teaching and learning despite the difficulties in its adaptation to a completely different methodology. However, digitization is yet to be seen on how the quality of learning is being affected by the shift from face-to-face to online teaching, especially under the Covid-19 situation that has changed the entire 2020 academic year (IAU & ESN, 2020). The study, therefore, looks at the Covid-19 pandemic on tertiary education in Ghana and its implication on the educational reform systems of Takoradi Technical University (TTU) in the 2020 perspective.

II. Methods

The study used the narrative method under qualitative research inquiry. This research method was more holistic and involved in a document review of data from various sources to gain a deeper understanding of Covid-19 disruption on tertiary education in Ghana that has exposed many significant challenges facing teaching and learning, research, funding, and internship programmes, including demand for improved utilities and national infrastructure to support continued distance and blended learning models in TU's through observations (Nassaji, 2015; Koh & Owen, 2000). These methods guided the study into the implications of covid-19 on educational reforms at Takoradi Technical University in the 2020 perspective. The study adopted Fisher's narrative rationality theory as cited by Deslandes (2004) for philosophical positioning on communication which attempts to explain narrative in form and functions, where individuals do not generally need training or expertise to decide if the story holds together or believe it to be true. Evaluating the coherence of narrative, helps the collective sense that is competent rhetorical critics (Brown, 2016). This theory aided in discussing the Covid-19 pandemic and its endemic problems such as academic, social, financial and physical implications on the educational system of Takoradi Technical University through the narrative and descriptive analysis.

III. Results and Discussion

Understanding Covid-19 and its academic, social, financial and physical implications on TTU's educational system;

Teaching and Learning

Takoradi Technical University (TTU) has always been committed to providing higher education in the engineering, science and technology-based disciplines, technical and vocational programmes, applied arts and related disciplines. TTU has developed its technical capacity by giving students and trainees the requisite training and exposure in teaching and learning as the core objective of the institution. Since the emergent of the Covid-19 pandemic, the activities of teaching and learning have been mostly affected by the pandemic. The pandemic has created the largest disruption on especially physical classroom and laboratory work as a result of the total closure of the tertiary educational institutions in Ghana and across the globe (UN, 2020 a.). In Ghana, most educational systems were forced to close down and continue the academic work virtually. A situation in TTU where most students were not adequately prepared. They attributed their fears to poor network coverage in the country and other unknown factors. In a survey report conducted by the American association of collegiate registrars and admission officers, 58% of 262 college and university respondents are considering or have decided to remain fully online for the autumn 2020 semester and 62% are considering decreased or have decreased the number of in-person courses for autumn 2020 (Dennis, 2020). Covid-19 may accelerate the end of the traditional semester-based system for registration, progression and graduation. The pandemic has introduced various dynamics to life on the campuses of TTU. Teaching and learning in a new normal where the old ways of doing things would need a drastic revolution.

However, the lockdown in response to Covid-19 has interrupted the conventional academic year with the nationwide closure of tertiary institutions together with other organizations in Ghana and worldwide which lasted at least 4 months. In the case of TTU, it was indicated that the educational system has made concerted efforts to maintain teaching and learning continuity during the Covid-19 period as students had to rely more on their own resources to continue learning remotely through the internet, television and university's radio station. Lecturers also had to adapt to new pedagogical concepts and modes of delivery of teaching, for which they may have to adjust. In particular cases, students back at home, who do not have access to digital learning platforms or resources will lack the resilience and engagement to learn on their own. In such cases, students who experience this problem are at risk of falling behind.

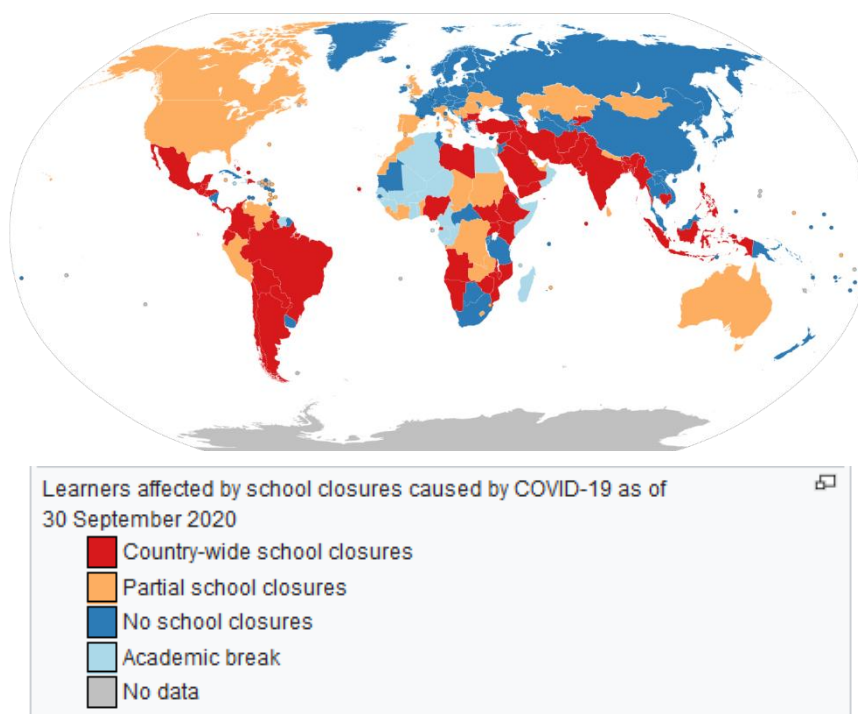


Figure 3: School closures caused by Covid-19 (coronavirus) as of September 7th, 2020 (Source: Wikimedia Commons, 2020)

Research

Higher education research is to generate knowledge, advance the frontier of knowledge and disseminate knowledge to solve societal problems. Postgraduate studies and other related programmes are mostly research- oriented across all universities. The pandemic has had mixed effects in the area of research. It has resulted in unprecedented research worldwide mainly on the pandemic. As a result of Covid-19 data, this may have opened great research opportunities, especially in the sciences and health. Notwithstanding, the pandemic has also resulted in the suspension of ongoing academic, industrial and government research and postgraduate work in major research laboratories in TTU. As a result of inadequate Covid-19 test centres in Ghana and for that matter TTU's campuses, most research funds would be redirected to finding a vaccine for Covid-19 and associated research work. Postgraduate studies rely mostly on research funding opportunities and these are likely to be affected. There is likely to be restricted access to research Labs due to social distancing and other protocols and this could potentially obstruct postgraduate research development.

Funding

Covid-19 pandemic has exposed the weaknesses of many current higher education systems in Ghana specifically its business models. Public universities have traditionally relied on government's funding to conduct their businesses. Due to this pandemic, government support for technical universities is likely to decline, which affects support for the tertiary education system. However, the current crisis may affect the government's budgets in funding more programmes and existing or newly educational infrastructures in TTU which quickly as public revenue will decline sharply (IIEP-UNESCO, 2020). Not only would government support dwindle, but all sources of TTU's income are also likely to be affected in the short to long term. There would be shortfalls in tuition fees (especially international students), there would be decreased in research

grants, scholarships and other sources especially for postgraduate studies because the pandemic has affected all businesses including that of funding partners. This confirms Al-Samarrai, Gangwar and Gala's (2020) stance on the impact of the Covid-19 pandemic on education financing affects the accessibility and availability of funding for education. Again, while the long-term impact of the crisis is uncertain, the pandemic may affect Ghana's spending on public education as funds are diverted into the health sector and the economy (Schleicher, 2020).

Internship Programme

Students' internships play a critical role in TTU's educational system and this gives students the opportunity to showcase their skills to the industry as well as learn on the job. Covid-19 has greatly affected internship programmes which had resulted in the cancellation of an internship programmes for students, given limited vacancies for students' internships due to Covid-19 social distancing protocols and closure of companies which has drastically reduced internship opportunities for both undergraduates and postgraduate students.

On the other hand, TTU as inclined with hands-on programmes reflects the future of higher technical education. However, travel restrictions and social-distancing protocols as at the early stages of Covid-19 to its pivotal stages had caused organisations to rethink their approach to apprenticeships and internships (Gurchiek, 2020). TTU with educational reforms as the technical university is to increase access to tertiary education for the training of middle and higher-level manpower (TTU, 2016). The pandemic has given a format change to the internship programme of TTU especially the industrial attachment programme which offers skills and hands-on training to students and also training programmes to lecturers. This situation has shortchanged the academic progress drastically. The internship as taking residency international or locally is essential to external mission of TTU's International Programmes and External Linkages Office (IPELO) which facilitates national and international collaborations and develops partnerships with both local and foreign private and public institutions and organisations (TTU, 2016). It is undeniable fact that TTU won an Erasmus staff/student mobility project with universities in Germany and Hungary in 2019. Accordingly, four (4) students travelled to Germany and Hungary for the Erasmus exchange programmes in February 2020. Two of the students who went to Germany have completed the programmes and returned to Ghana. The Lecturers are yet to embark on the project due to the COVID 19 outbreak. Another new Erasmus mobility project for the 2021/2022 academic year has also been won with Germany. This project will enable more students and staff in the energy sector to travel to Germany for an exchange programme. Preparations are still ongoing to make the project a success (TTU, 2020)

In this regard, internship programmes as a prioritisation project of IPELO-TTU is a relevant discipline that relates supervised work experience that has intentional learning outcomes and goals for students. TTU's students benefit greatly by engaging in a well-coordinated and meaningful internship that is carefully planned and monitored by the IPELO coordinator in collaboration with internal/external partners. However, Covid-19 has physically caused a cessation in academic programmes of TTU, especially internships.

IV. Conclusion

Covid-19 pandemic on tertiary education in Ghana and its implications on Takoradi Technical University (TTU) in the 2020 perspective has brought academic, social, financial and physical distress on the TTU educational system. Due to additional pressures on the tertiary education in Ghana, TTU as higher education in the engineering, science and technology-based disciplines, technical and vocational programmes, applied arts and related disciplines have received educational challenges from the Covid-19 pandemic. The grappling pandemic has caused implications that need to be prevented in terms of academic, social, financial and physical with determination and protection from the Covid-19 pandemic. Covid-19 has had a great impact on all spheres of life. Education on Covid-19 has been part of the solution to the longer-term recovery from the grappling pandemic. It is an established fact that there is a need to reshape teaching and learning, research, funding and internship programmes of tertiary education of TTU in Ghana. The study, therefore, suggests the use of mitigation strategy to sustain the educational systems and mitigate the effects of the pandemic with strong reforms that use teaching and learning approaches for TTU in the coming years. It is also recommended that;

1. There is a need to create a new vision statement for the educational systems of TTU. A vision statement is a statement of intent; as to why should applicant choose TTU, what does TTU offer better than other technical universities, what will TTU look like after Covid-19 recedes, what is the vision for its future students, how is the vision different from what it is today, the overall goal is to get ahead of events and reacting skillfully and strategically to the crisis.
2. It has become necessary to create a year-long academic calendar combining the best of in-person and online learning strategies. The institution has to reduce the total number of courses offered on campus and increase the total number of taught courses online by designing separate courses for residential and online students, allowing flexibility to course selection, modifying the tutorial model of instruction allowing students to take common online lecture sessions as remote learning is all about reconfiguring the relationship between educators and students.

3. It has become urgently necessary to heavily invest in Information and Computer Technology (ICT) infrastructure for online learning. This is increasingly becoming the future of tertiary education in Ghana. A good ICT base will facilitate the use of virtual space. Carrying out comprehensive ICT audit, review the TTU's policy and upgrade ICT infrastructure to accommodate Covid-19 shortfalls.
4. There is also the need to create year-long recruitment programmes for both domestic and international students by changing the university's policy and procedures on recruitment and admission to reflect the realities of the post-pandemic world, and create partial virtual recruitment and admission system.
5. There should be new business models and financial options for TTU's educational systems with the introduction of significant cost-cutting measures to remain in business.
6. TTU as a technical university has no option but to replace competition with collaboration. The survival of tertiary education depends largely on collaboration and shared use of resources. Collaborate with other universities worldwide, joint research, student exchange programmes, and offer dual degrees to create innovative solutions to manage the unexpected and retain internship programmes.
7. The key consideration in all this, however, is to go virtual, this may include; providing a consistent global internship experience virtually while keeping the interns safe and working in virtual teams; coaching and mentoring the interns virtually; providing network opportunities among the interns; evaluating future opportunities and putting in place quality assurance measures to ensure quality outcomes.

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John Frank Eshun. "Covid-19 Pandemic on Takoradi Technical University In The 2020 Perspective: A Narrative Approach." *IOSR Journal of Humanities and Social Science (IOSR-JHSS)*, 26(08), 2021, pp. 38-44.