COVID-19 Pandemic and its Implications on Education Systems in Tanzania

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Abstract: **COVID-19 pandemic** *has become the greatest health challenge the world has faced since the Second World War. COVID-19 pandemic has affected the world economy as well as social sector (health and education). This study examines how COVID-19 pandemic has affected the Education system in Tanzania. Particularly, it examines the impact of the pandemic on the aspects of schools governance, mode of delivery, and the curriculum. This study sees that despite the challenges of the COVID-19 pandemic, learning should continue. In this study* **governments** *and other* **non-state actors are advised to offer a substantial intervention in the aim of retaining a resilient education system for the post pandemic period. The study suggests strategies such as trying any possible low technology solutions, maintaining motivation to teachers and makes them a focus to the response, focusing on the most vulnerable, and helping parents to manage the home learning environment. Moreover, the study suggests that schools should envision applying learning strategies which seem to be more effective during school closure, invest in technology and track progress.*

Keywords: COVID-19, education systems, education institutions, Corona virus, post pandemic, Tanzania

1. Background of COVID-19 globally, in Africa and in Tanzania

COVID-19 disease for the first time was reported from Wuhan State, Hubei Province in China, whereby in December 2019 some people in the state were reported to have been affected. Since then, the COVID-19 disease spread at a rapid rate in other states in China and in other countries. As today (August, 2020) the updated data shows 21,836,828 Covid cases around the world, which includes 773,196 deaths and 14,568,432 recovered (WHO; Worldometer; European Centre for Disease Prevention and control. August, 2020). In Africa there are 1,123,142 confirmed cases with 25, 678 deaths and 838,452 recoveries (WHO; Worldometer; Africa Centre for Disease Control and Prevention).

Tanzania is an East African country with a total population of 59,568,773 (United Nations, 2020). In Tanzania, on 16th march 2020, the first person was announced to have been affected by COVID-19. On 17th march 2020 the government announced a national wide closure of all colleges and schools for unknown period. This containment and mitigation measure was necessary despite of its indirect impact which will also be far reaching.

In Tanzania, the last detailed COVID cases report was published on 29th April 2020, the report show 480 cases and 21 deaths; since then, the government has not released any data. This delay has been reported by the Minister of Health Community development, gender, Elderly and Children to have been caused by the ongoing renovation work in the national laboratory. On 18th May 2020, there was a report of 509 COVID cases with 183 recovered and 21 deaths (WHO 2020; Worldometer).

Within education sector, the main response to this unprecedented crisis has been closures of colleges and schools. The UNESCO (2020) indicates that more than 190 countries implemented national wide closures of education institutions. This measure has affected about 1.6 billion children and youth, which is 82.5 percent of learners around the world United Nations, 2020). In Tanzania, more than 14,580,315 children and youth who are enrolled in schools and colleges were affected. Out of this number, 10,111,671 are in Primary schools; 1,991,021 are in lower secondary Schools; 155,445 in High Schools and 173,712 in various tertiary institutions (The national bureau of statistics, 2018). This number does not include several children who are currently enrolled in pre-primary and nursery schools. It has come to a concern of the Tanzania government, private education institutions and individuals that in spite of the occurrence of the pandemic, education of our children should carry on. This study examines how COVID-19 pandemic has affected the Education system in Tanzania. Specifically, it examines how schools governance, mode of delivery, and the curriculum are affected by COVID-19 pandemic. The study suggests measures to be taken to retain a resilient education system for the post pandemic period.

In order to enrich this paper, one to one, open ended interviews were conducted through phone calls and Whats-App charts with twelve parents who have children bounded at home due to COVID-19 pandemic. The parents were asked to explain mode of delivery during period of school closure, and to give their opinion on the academic progress of their children. Besides, parents were asked to offer recommendations on how the schools can maintain a fair delivery during occurrence of the pandemic and after reopening. By using phone calls, five education experts and six school teachers explained their perspectives on how COVID-19 has affected learning and how various education stake holders can intersect with the government to ensure learning continues.

Besides, data were collected from various COVID news and reports which are communicated through the media. I further read continuous reports on newsletters, websites and blogs which write about impact of COVID-19 on education. These sources supplemented the primary data.

Content analysis method was used to analyse data collected through newspaper, blogs, text messages and newsletter updates. Content analysis is a relevant method of interpreting meanings from the content of text, it is used to analyse written, visual and verbal communication messages (Hsieh & Shannon, 2005; Cole 1988). Through systematic classification the data was coded, themes were identified, meanings and relationships of words and concepts were analysed and inferences about the messages within the texts were drawn. Essentially, the content analysis helped in providing thick descriptions of series of events throughout occurrence of COVID-19.

Moreover, as it is explained by Zhang & Wildemuth (2009), content analysis can support the development of new theories and models, I found the process of elucidating themes really useful in developing a model for building a resilient education system in post Covid period.

Data collected through interviews with parents, teachers and education specialists were analysed through thematic analysis of Braun and Clarke (2006). Thematic analysis is the process of identifying, analysing and reporting key aspects or patterns found within the collected data (Bryman, 2008; Braun and Clarke, 2006). Thematic analysis is potential in allowing themes to come out of the data, and understand the meaning deriving from its context. The method is more appropriate for analysing personal data about individuals' experience. Thus it has potential for analysing interview accounts of parents about their experience with on line studying conducted by many schools during the occurrence of COVID-19 pandemic. The method is also relevant in analysing perspectives of teachers and education specialist about relevance and efficiency of online studying, how COVID has affected learning, and what can be done after re openings, to ensure schools continue to offer quality education to all.

2. Response of the Tanzanian government and private education institutions over the problem

Many countries have quickly developed alternative learning solutions to give education to students' home. In Tanzania, to ensure an effective delivery of education during closure, the government and private school owners were obliged to opt low tech approaches that are user friendly, accessible and cost effective.

On closure day and even a few days later, schools supplied parents with reading materials, assignments and solutions, famously known home packages for their children. These materials were just guidelines of what the students were required to cover if they were resuming. Instead, they were given reading materials with parents asked to provide assistance to their children to achieve what they ought to.

2.1 Modes of delivery used during school closures and how effective were they?

Parents shared the following strategies which were used to assist the desperate children:

'Making print materials available and share them among students and among parents, for their children'. These home packages were shared among students of various schools.

'Broadcast radio'
A number of people even those living in villages have an access to the radio so, education has been passed through the use of radio dramas, lessons, tutoring and other educational broadcasts.

'Use of mobile phones'
Given high rate of mobile phones ownership, it is considered as another important educational tool that provided a continued school during the pandemic. Parents as well as teachers shared the following ways which were used by their children to gain educational instruction through mobile phones:

- *"Through different e-learning programmes and apps, schools have been sending learning materials, curriculum contents and instructions for various subjects"* (shared by a parent)
- *'Social media'* has been widely used by different schools, parents and students. For example, teachers have been organizing Twitter and zoom discussions, push out information, share video etc. Schools organized What's App groups for each class and share digital contents, resources and offer assessment quizzes.
- *'Tutoring'*: These are phone based tutoring and SMS support. Text messages are also widely used by students to enhance their learning and help to build a proactive behaviour on them.
- *'Online learning'*: Young children from affluent families own smart phones or home PCs with the reliable internet connections. *"Through computers and smart phones children can access programs like Digital learning management systems such as CenturyTech, Edmodo, SeeSaw or Ekstep"* (shared by a parent).*'Children can also use mobile phones built in systems'* like Cell-Ed, Eneza Education, Funzi, Ubongo. They can also use the collaboration platforms that support live-video communication such as Hangouts Meet, Teams, Skype, We Chat Work, Whats App, Zoom and many others.

Online learning makes the most sense because this indicates the most closely simulates the interactive, real-time and multimodal experience we want from school. Additionally, during school closure education was also passed through Television programmes. The Minister of Education, science and technology Prof. Ndalichako during parliamentary meeting of May 2020 mentioned TV programmes as among the widely used and best and most direct way to continue providing education especially during COVID closure. Most households in town have access to televisions. So, *"during closure, instructional programmes were also offered by TV stations such as ITV and DTV"* (shared by a parent).

Most of the above strategies were commonly used by many schools, but all of these are effective to students from well-off households, and those who dwell in town. This means that majority of students from pre-primary to secondary level such as the poor and those live in villages where there is no reliable electricity no reliable internet or any form of digital means, the strategies didn't work. This situation is

associated with the challenge of inequality gaps, leaving behind a huge number of poor students who lack frequent access of digital means.

Furthermore, the strategies were not very much effective particularly on syllabus coverage. Depending only on online means, learning becomes a bit slow because most of the learners, who have access to digital devices, can get the devices only in some hours of their day time. Young learners do their schoolwork when their parents are at home after office hours or when they can get adults to supervise their work. However, the strategies helped to keep students busy and to retain the learning process while waiting for the pandemic to cease.

2.2 What was the progress?

'On 21st May 2020 President Magufuli announced the reopening of all higher learning institutions from 1ˢᵗ June 2020'. He also announced the resume of high schools, form six candidates only, whose national exams were postponed due to school closures. This reopening follows the full recovery and 'significant reduction' of the patients infected by Corona virus in hospitals across the country. Lower secondary, Primary and nursery schools remained closed. On 15th June 2020, the Prime Minister told the Parliament *'there were only 66 active COVID-19 cases in the country'*. When he was addressing the parliament on the final day on 16ᵗʰ June 2020, President Magufuli ordered all the schools (nursery, primary and secondary) to *'re-open on 29ᵗʰ June2020'*. He also ordered a *'resume of all social and economic activities' (*Tanzania Broad Casting-1,16ᵗʰ*June, 2020*) which were restricted as a measure against the spread of Corona virus. The president made it clear that the pandemic in the country has not come to an end, he urged Tanzanians to *'keep all the safety guidelines issued to prevent the spread of the virus'*. Next day after this announcement, on 17ᵗʰ June 2020, the Minister for Education, Science and Technology Professor Joyce Ndalichako released directives for schools operations after re opening. The Minister insisted on *'keeping all the safety guidelines issued to prevent the spread of the Corona virus'* (The United Republic of Tanzania, 2020).

3. How Education system is affected

Teachers and education experts have shared their perspectives on how COVID-19 pandemic has affected learning and education system in Tanzania.

a) *'Effect on term length and daily time table'*
Normally, there have been two terms in the year. The first term commences in January to May, with one or two weeks break on March. The second term normally starts on July to November, with one or two weeks break on September.
This time around after reopening from COVID closure, the Minister for Education announced a term programme for all schools. She said schools will operate for five months and two weeks (5.5 months) *'from end of June to mid-December, with a break of just one week in the end of August' (*The United Republic of Tanzania, 2020) Moreover, two more hours were added on the normal daily time table. The Minister said this programme should be abided in order to

compensate the hours that were lost, and to enable teachers complete the syllabi.

b) *'Programmes to accelerate learning'*
In order to identify the learning gaps and make the lag behind children who during closure did not have an access to technologies and online learning achieve the same as their peer who had an access. After re-opening, some schools have introduced remedial programmes and learning opportunities to enable all children catch up rapidly.

c) *'Schools governance'*
To cope with COVID it requires really good and strong leadership at all levels from the Ministry to schools to ensure a return of an effective school environment. It also needs a firm coordinated leadership of practical issues from the level of policy to implementation in schools. This has impacted to a team work spirits in schools to ensure good preparations to attack COVID are been put in place. "*All teachers and staff are working together to ensure there are temperature checks, regular hand wash and a medical standby''* (shared by a teacher). Besides, more requirements such as hand sanitizing agents and health insurance were asked from parents. Wearing masks has become part of school uniform.

d) *'The Curriculum'*
Some aspects about Corona virus and COVID-19 are indirectly learned and hence they form the main part of a hidden curriculum. Hidden curriculum means all things that are learned other than the contents publicized in the formal curriculum. Students are given awareness about Corona virus and COVID-19. They are taught the precaution measures against Corona virus such as washing hands, rubbing sanitizers and putting on face masks. In tests and examinations students are asked questions related to COVID-19 pandemic the related challenges. All these produce changes in student values, perceptions, behaviours and consciousness. Hence, the precautions and other health programmes in general form the main part of a hidden curriculum.
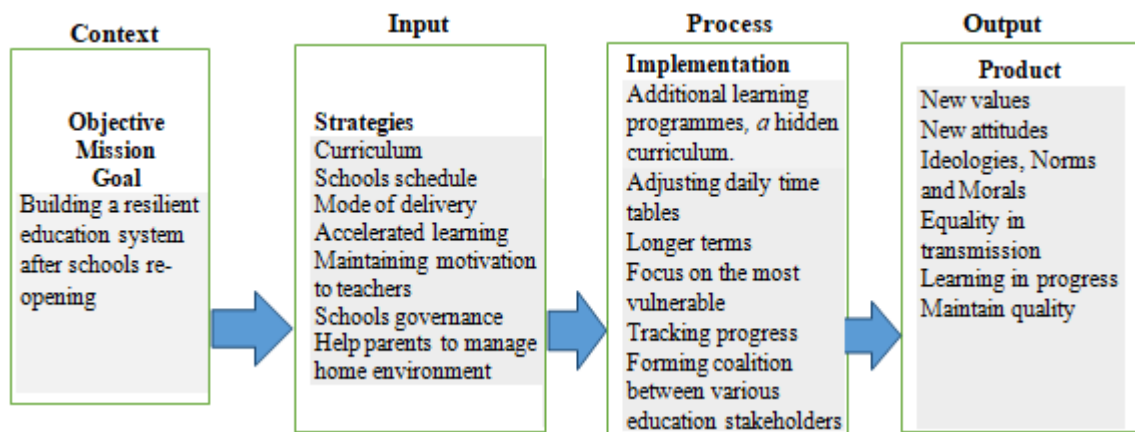
Formation of a "*coalitions in governance of education and schools between Ministries, (such as The Ministry for Education, Science and Technology, Ministry of Health, Community Development, Gender, Elderly and Children and Ministry of Regional Administration and Local Government, which is under the President's Office (PO-RALG), business sectors, Non-Governmental Organizations, and Voluntary Agencies*" (shared by an Education officer in Dar es Salaam through TBC-1[An Education Officer in Dar es Salaam, Alhaji Maulid was interviewed on TV (TBC-1) about how the COVID -19 has affected education in Tanzania and how the Regional Government has prepared to address the challenges after schools re-opening. The interview took place on 29ᵗʰ June 2020 at 20:15 hrs PM]). Coalition governance is fundamental for building strong and systematic responses to education delivery at all levels and to maintain resilient education systems in the future.

4. What could be done to retain a resilient education system for the post pandemic period?

Ministries of education, policy makers and private education providers are facing challenges of making hard resolutions when they are responding to COVID-19 pandemic. As states move from normal schedule to crisis management decisions, the key questions will centre on how to maintain learning and limit the secondary impacts, how to ensure an existence of a strong education system despite the disruption, and what can be done to reduce the impacts on the most vulnerable?. These questions are relevant now when the world is working hard to respond with the situation, the resolutions may also play an important role in building a resilient education system in the future.

This study comes out with a CIPO model as relevant in ensuring education systems recover after the pandemic. CIPO Model is an open system framework for schools effectiveness. CIPO framework has been founded by Jaap Scheerens in 1990 to explain how efficient schools are supposed to operate. The framework distinguishes four components that define education as a production system in which inputs are transferred into outputs through a process which is influenced by a context. CIPO model is adapted and modified by the researcher in order to suggest an effective model for retaining a resilient education system for the post pandemic period.

CIPO model for building a resilient education system after schools re opening.
Adopted from Scheerens, J. (1990) and modified by the researcher.

The CIPO model conveys recommendations of this study on what can states do to retain a resilient education system for the post pandemic period.

- **Try any possible low technology solutions**
  The use of technology and innovations will assist in making sure learning continues for many children who are currently out of school. For many children digital device cannot be of a big help, it instead increases inequality gap between the high and low income nations and families. In Tanzania and other low income countries TV and radio broadcasting can be cheaper and effective than the use of mobile phones (through Whats App, online applications and normal text messages). Distribution of materials like study guides and text books could also be an important strategy. The ministry and private school owners are advised to consider all the options available including creative combination of high and low technology strategies.

- **Maintain motivation to teachers and make them a focus to the response**
  With the current focus on students, parents, the problem and the way to address it may be easy to forget the teachers. Government and school owners should continue to pay teachers taking to account the important work they undertake before, during, and after the pandemic. So, maintaining teachers' motivation is essential in supporting

them during and after the crisis. Schools should continuously provide teachers with remote professional development opportunities to support school re opening and recovery programmes. Such training includes a focus on necessary health and safety precautions for teachers, workers, redesigning accelerated curricula and new approaches to technology.

- **Focus on the most vulnerable**
  A concern on how vulnerable children will cope is critical. In many prolonged conflict or crisis setting, the majority of children and young people may be classified as vulnerable (GOV.UK, 2020). Questions like what will be the impact on girls who are out of school and those who are extremely occupied in house hold chores?; What is the impact on boys from poor families?; how children with disabilities are affected and how they can be helped? Are critical in ensuring education is provided fairly and equitably. There must be a dedicated focus on protecting the most vulnerable and targeting additional resources to support them.

- **Help parents manage the home learning environment**
  Assisting and supervision of learning burden of managing learning is currently falling largely on parents. For many parents this is undesirable because it increases pressure on them due to too many responsibilities they have. Some families do not have a literate person who can assist learning; neither the father nor the mother has gone to school. So, it will be crucial to find ways to reduce the burden on parents for example, providing learners with information about educational content in various websites, on television, or radios and giving them a guide and advice on home learning.

- Schools should envision applying learning strategies which seem to be more effective during school closure. After schools re-opening, there is a need to enhance the approaches that has proven to work during crisis. In fact the crisis period is an opportunity to harness the newly implemented approaches and technologies to support the most vulnerable learners. In some schools, dropout rates will unfortunately be high, so, maintaining cross sectoral approaches to provide structured re-entry pathways into schools will also be necessary. Thus, planning could help to both identify ways to mitigate the re-entry challenge and image a better, more resilient system beyond crisis.

- **Tracking progress**
  Since learning was not monitored during school closures, it is essential after reopening to track progress in the key areas like early grade literacy and numeracy and key subjects at secondary like mathematics, science and social studies to know who are behind and in which area so that intervention can be adapted accordingly.

- **Investing in technology**
  In the future states are required to heavily invest on digital infrastructure in order to furnace successful education digital service platforms to enable every student to use digital means to acquire education. In this way, inequality gaps could be reduced. A fair blend of PPP for digitization will assist in reducing the cost of the investment. UNESCO (2020) suggests a blend of traditional classroom and digital learning since certain practical subjects need a face to face tuition.

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