Application of EdTech in Tanzania: Effectiveness of Radio and Television in Teaching and Learning amid COVID-19 Pandemic

Sadiki M Feruzi*1,2 and Yang Li²

Abstract— On March 2020 school and university going students experienced termination of classes. The statement declared by the Tanzania prime minister honourable Kassim Majaliwa required all primary and secondary schools to postpone learning for a month and one day later universities were also asked to suspend studies and other activities. It was necessary to do so because of the novel coronavirus disease 2019 named by World Health Organisation as COVID-19 a pandemic that had spread and hit more than 150 countries. This paper intended to attain two major objectives, one was to explore the effectiveness of radio and television in handling teaching and learning process as an alternative adopted to ensure that students continue to be engaged in learning. Second, to examine the capabilities of the country through the Ministry of Education, Science and Technology to continue teaching and learning during the time of classroom disruption. The authors made a case study where radio and television platforms were adopted for teaching and learning. The results show that the transition from classroom teaching and learning to teaching and learning through radio and television stations platform was not effective. Similarly, the study shows that the government has demonstrated incompetence in running and monitoring the programme mostly in terms of programme preparation and implementation. However, this experience has built a solid foundation for the future cases, when the country, facilitators, students and parents will be more arranged than now.

Keywords—EdTech, Teaching and Learning, COVID 19, Radio and Television.

I. INTRODUCTION

EdTech is a short form for education technology which refers to an integration of information technology (IT) in education to create more learning experience. It is an industry that includes devices such as computers, tablets, website and other internet based services and other technologies aiming to improve teaching and learning at home, classroom or elsewhere (Peterson, 2016). Similarly, EdTech is defined as the study and ethical practice of handling learning to improve performance by creating, using and managing technological process and resources appropriately (Molenda & Januszewski, 2008). It evolved from the early application of teaching and learning tools and have quickly expanded in recent years to integrate such devices as mobile technologies, social networking, flipped class rooms cloud computing and many more

(Huang et al., 2019). The emergence of EdTech in the past decade has generally changed learning behaviour while making education close to every individual.

The severe acute respiratory syndrome corona virus 2 (SARS-CoV-2) or COVID 19 as termed by WHO is rapidly spreading from its origin in Wuhan, a city in Hubei province in the peoples' republic of China to the rest of the world (Wang et al., 2020). The first COVID-19 death case was reported on 11th January 2020 and in short period of time an increasing number of cases were reported in other provinces of the country. In a rapid succession Thailand, Japan and South Korea reported infection cases from the people returning from Wuhan China (Singhal, 2020). Recently, the number of new cases in China has been decreasing whereas there has been a recorded exponential increase in other countries such as Italy, Spain, South

¹Department of Education, Muslim University of Morogoro, Tanzania

²School of Education Science, Harbin Normal University, China

Korea, Turkey, Iran, Spain, United States of America, Germany and France. It is reported that 20% of those infected were in acute condition, 25% have recovered and 3310 (3010 in China and 297 in other countries have died) (Singhal, 2020). By 21st April 2020 the total infected accounted 1,683,877 of which 660,713 (26.24%) have recovered and 173,445 (6.89%) have died. Tanzania recorded the first confirmed imported case on 16th March, 2020 in Arusha. Until 23th April, 2020 the confirmed cases of infected raised up to 254 of which 233 are active, 10 have died and 11 recovered. Most of these confirmed cases are in Dar es salaam, Zanzibar and Arusha (Wolrdometer, 2020).

Tanzania has responded to UNESCO's call for all countries to ensure continuity in learning process during this crisis of COVID-19 pandemic. According to UNESCO the crisis has affected more than 90% of the world's learners due to closure of schools, colleges and universities (Singhal, 2020). It is reported that the total number of learners in Tanzania affected due to termination of studies following the outbreak of COVI-19 pandemic is 13,861,603(UNESCO, 2020).

Status:	Country wide
Affected learner:	13,861,603
Females:	6,925,442
Males:	6,936,161

School type	Females	Males	Total
Pre-Primary	702,786	720,082	1,422,868
Primary	5,065,100	5,046,571	5,766,653
Secondary	1,056,495	1,091,968	2,148,466
Tertiary	65,588 11	3,010	178,598

Source: Educational Disruption and Response (UNESCO report)

The learning process was officially suspended on 17th March 2020 just one day after the first infected person was confirmed in Arusha. One of the vigorous steps taken by the government to reduce the spread of infections was to close all educational institutions for a month. Closure of educational institution has been extended to further notice due to rising number of infections. Generally, the situation has affected education system in the country and equally affected pupils' psychology regarding academic issues. Education system in Tanzania hugely is based on conventional classroom education where students are required to go to school from Monday to Friday. Following

this situation, the government through the Ministry of Education, Science and Technology planned to facilitate learning via unconventional mode a responsibility carried by Tanzania Institute of Education (TIE). In response to disrupted classes due to COVID-19 pandemic many countries have turned their school system to online learning via a learning management system (LMS) or virtual teaching platforms. It is important to note that during this period of time according to the situation conventional teaching and learning is nearly impossible due to weak health systems, therefore opting for online education is inevitable (Desai et al., 2008). This method of learning has been and is continuing to take various features depending on the capacity of the country and technological development to apply information technology (IT) in education. In Tanzania for example teaching is offered through radio stations and televisions while in other countries online portal, google meet, zoom, WeChat, QQ, Ding Talk and several other platforms are used. To ensure that learning on line takes place the most important things are the internet connection, computers, radios, smartphones or televisions are available to students.

In this study, the author will discuss the effectiveness of unconventional learning in Tanzania schools during this critical crisis of COVID-19 taking primary school pupils and secondary school students in Morogoro municipal as samples. Results of the first week of unconventional learning implementation will be discussed as a study case.

II. LITERATURE REVIEW

Number of people in the community believe that a quality education is attained by attending physical classes at school and complete number of days stipulated in the formal curriculum. The alternative learning such as home schooling, distance learning or correspondence education are regarded as inferior. For example, there was a time in the past not very distant past in Tanzania where people believed distant learning such as education provided by Open University of Tanzania was inferior but in a recent period the University is enrolling a big number of students than many universities in the country. Essentially, emergence of technology in education has changed the way we perceive education and has finally changed approach to education as well as teaching and learning. The new learning media is currently attracting more learners because it provides learners with cost efficient and its flexible option(Berman, 2008). Materials are now made available at a click of a button using either computers or mobile devices like smart phones or tablets. Technology

[Vol-7, Issue-8, Aug- 2020] ISSN: 2349-6495(P) | 2456-1908(O)

has generally made education accessible at any time and place be it at home, office, school or park.

2.1. Learning via Radio and TV

Education via radio and television refers to medium using formal delivery of certain course materials (Cauchemez et al., 2014). Radio and TV are typically used as means to supplement learning materials and often allows interactions through telephone. National and community radios and televisions have for a long period of time used as tools for disseminating education. The recent emergence of education technology has improved the way of learning through radios and television.

Immediate or later after the outbreak of the COVID-19 pandemic many countries especially in the West shifted from conventional teaching and learning to online mode. This transition was made to provide education opportunities for students while schools are temporary suspended. In developed countries radio and television programs were set to assist students in remote areas who cannot access other learning platforms due to poor internet connection. On the other hand, it was necessary for the Ministry of Education in many developing countries Tanzania in particular to embrace radio and television because of low level of technology and economy to quickly transfer to online learning.

2.2. Experience from China

It is well known that China is one among countries with outstanding experiences of education disruptions leading to schools' closure. The SARS epidemic which occurred in 2003 created a significant negative impacts on education causing millions of students loosing studies due to temporary closure of schools (Zeng et al., 2005). The 2008 winter influenza season hit Hong Kong an administrative region of China leading to closure of schools. In 2009 following the outbreak of H1N1 Flue which affected several people around the planet education was disrupted causing China to close all schools (Cowling et al., 2008). The recent closure of schools due to Coronavirus 2019 (COVID-19) pandemic has taken long period of time to resume studies compared to other education disruption ever occurred in China.

While the government struggles to curb the spread of Coronavirus in the country and ensuring school going students continue to learn despite schools closure the Chinese Ministry of Education initiated the disrupted classes/undisrupted learning aiming at providing flexible online learning. The online learning to accommodate over 270 million students all over the country from their home (Huang et al., 2020). The approach of flexible learning can be carried out at different levels for example using teaching and learning management, institutional management and operational management (Casey & Wilson, 2005). On 17th February, 2020 the government of the Peoples Republic of China through the ministry of education opened its online learning platform. It is reported that on the first day the platform had more than 8 million clicks involving millions of users from 31 regions of China (Huang et al., 2020).

To ensure that the online learning takes place successful several initiatives were taken including preparation of learning resources, teaching and learning methods, services to teachers and learners and cooperation between government, schools and enterprise. For example the Handan city of Hebei province through Handan Education Bureau supported the program by helping teachers to improve their online skills and providing resources to both students and facilitators (Huang et al., 2020). It is obvious that the online learning program requires intensive preparation and funding as well. Both teachers and students need training, resources, time and encouragement. Considering complicity of implementing a such program in a heterogeneous population of about 1.43 billion communication between the ministry, parents, students and other stakeholders should not be loose rather be kept intact.

The Chinese government through the Ministry of Education coordinated 22 online platforms which offered 24,000 online courses that were made available for students to access free of charge(Huang et al., 2020). Several educational platforms were initiated and used by students from their home. These technological based platforms differed from one area or province to another. The following table adopted from the handbook on facilitating flexible learning during educational disruption shows these technological platforms used in China during COVID-19:

No	School	Platform	Communication tool	Apps		
1	Wuhan Yucai Experimental Primary school	Wuhaneduyun	WeChat, QQ, Ding Talk	Tencent Class		
2	Wuhan Wuchang District Sandao Street Primary School	Wuhaneduyun	WeChat, QQ, Ding Talk	Tencent Class		
3	Wen Zhou Experimental Middle School	UMU	Ding Talk			
4	Baiyangdian High School at Xiang'an District	Xinkaoyun	Ding Talk			
5	Xiaoxita High School at Yichang Wuyi District	Zhixue	Ding Talk			
6	RDFZ Sanya School		WeChat, QQ, Ding Talk			
7	Beijing No. 8 High School		Tencent Meeting	Yuanfudao		
8	BaGu Primary School in Sichuan Liangshan	Xuexi	WeChat, QQ, Ding Talk			
9	The Asian-Pacific Experimental School of Beijing Normal University	Seewoo Cloud Platform	WeChat, QQ, Ding Talk			

Table 1. Technological Platforms used in China during the COVID-19

Source: Handbook on facilitating flexible learning during education disruption, 2020

The learning tools were chosen based on the nature of the subject, usability, flexibility, accessibility and conveniences. Live streaming classes were also used to promote teaching and learning interactions. To facilitate live streaming classes several technological tools were used. Some of these tools are; Rain-classroom, Tencent ketang, Chaoxing learning App, CCtalk, Welink, ZOOM, FEISHU, icourse, edX, Coursera and Udacity. Similarly, social media platforms like WeChat, WhatsApp, Facebook and Skype were also used for learning (Huang et al., 2020).

China with a population estimated to be 1.43 billion where about 44.2% of the total population living in rural area faced similar problem of education disruption resulting from outbreak of COVID-19 pandemic. Having realised a challenge of internet access in some of the rural areas, the government requested China Education Television to broadcast subjects and similar resources via TV channels so as to fulfil the needs of studying from their homes. It is stated that four channels of China Education TV broadcasted about 75 subjects to primary and middle school classes across the country (Huang et al., 2020).

2.3. How Tanzania encompasses Radio and TV in Teaching and learning

The education system of the country is basically traditional oriented from primary school education to tertiary education while some universities have both traditional and

online learning curriculum though the later mode has not been used seriously. While many of parents, teachers, students and other people in the community are still frown upon the proposition of online learning when school, colleges and universities are closed, the government has taken a rigorous effort to make sure learning continues at home through online system, in the hope of not losing out too much. Tanzania like other countries all over the world particularly Africa has encompassed radio and TV in a provision of education during this period of crisis. Other countries resorted to radio and TV program as alternative to learning include Kenya, Uganda, Ethiopia, Egypt, Senegal, South Sudan, South Africa and Cape Verde just to mention few. In many countries radio and television were in use even before COVID-19 pandemic but today their use are more extensive and wider. For example the department of basic education in South Africa has been providing educational television program for some years past(Burns, 2019). These countries have put a lot of efforts on the use of radio and TV to support students who do not have access to other form of online resources like digital resources and convenient due to its cost efficiency. Thomas (2001) argues that in many parts of the world, medias such as radio and television are still the only way through which instructors can reach a mass audience, instantaneously at low cost (Thomas, 2001).

[Vol-7, Issue-8, Aug- 2020] ISSN: 2349-6495(P) | 2456-1908(O)

To curb this situation the Tanzania Institute of Education (TIE) on 17th April 2020 inaugurated online learning via radio and television to save pupils at primary school and secondary school students. The program started on 27th April, 2020 through the State television channel and other channels such as Azam TV, Channel Ten, Zanzibar Broadcasting Cooperation (ZBC), Global TV and Gel TV. Beside the TV channels there ware 34 radio stations including the state radio station, Clouds FM and other community radio stations across the country that accepted to broadcast the ongoing educational programme.

The Institute of Education (TIE) prepared alternative lessons to be broadcasted for learners starting from preprimary school to secondary school. These lessons were not designed for the purpose of completing curriculum but rather for revision during this crisis.

III. METHODS

3.1. Research design

This study adopted case study design method to examine effectiveness of education technology in teaching and learning. To understand well some multifaceted events in any social group a well-structured case study applies (Yin, 2003). The case study method in research is very significant mostly in issues related to education (Gülseçen & Kubat, 2006). The study focused on the first week of the programme implementation subject to teaching and learning through radio and television. Essentially, the study used a single case study to explore contemporary life experience in a specified context with restricted number of incidents as argued by (Zainal, 2007).

3.2. Data collection

In collecting data the study adopted self-administered questionnaire disseminated online. The questionnaire was administered in May, 2020 after the first week of the programme implementation so as to examine participation of students and parents. In this study a randomized sample of 86 parents/guardians were involved in the survey. The data collected were used in determining parents' understanding and involvement in the programme and measuring effectiveness of the radio and television in Similarly, the data collected through learning. administered questionnaire were used to explore capability of the government in providing an online learning. In this study, questions about awareness on radio and television programme, awareness of learning time table and date of learning commencement were considered as indicating factors to attain both objectives.

IV. FINDINGS AND DISCUSSION

The data were collected during the first week of the programme implementation. To help students and parents prepare for the upcoming programme, one week before the commencement of the programme, the lessons time tables were shared to community. The widely spread lesson time tables were shared by the Ministry of Education, Science and Technology in collaboration with the specific media such as the State TV channel (TBC), the State Radio Station (TBC) and Azam TV channel as shown on appendices.

The findings of this study show that teaching and learning through Radio and Television programme in Tanzania aligns with the UNESCO call for all countries to ensure that learning continues regardless school closure due to COVID-19. However, its effectiveness to attain the purpose is less compared to traditional classes.

4.1. Awareness, Preparation and Readiness

The study through self-administered questionnaire found that many parents, students and teachers as well were not aware about online learning programme initiated by the government up to when this study reached them. Since they were not aware particularly parents and students it is obvious that no preparation for learning was made. The total number of 87 respondents (parents/guardians) who were asked if they were aware of this programme following the statement made by the general secretary Ministry of Education, Science and Technology said they were not aware (84.4%), only 11.6% were aware of the programme. A cross examination from this finding shows that many students did not catch up lesson in the first week of commencement as they were not aware. Probably it is this study that inculcated them awareness, thus made them prepare for the next sessions.

It is surprising to see that majority of teachers who in this study considered as parents/guardians were not aware (65.1%), other respondents were business men (20.9%) and others (14%). It was expected that parents' teachers would be the first cadre to be aware than any other. Furthermore, these parents/guardians were not aware of when the programme started. When they were asked about specific date declared by the Ministry of Education, Science and Technology as a commencement of the programme majority of them said they did not know (58.8%), respondents mentioned wrong date (29.4%), only few parents/guardians were aware of the specific date (11.8%). Similarly, majority of parents had not seen the programme timetable (59%) compared to those who had programme timetable (41%). This implies that the responsible organs such as the Ministry of Education, Science and

Technology, Tanzania Institute of Education, Regional and District Educational units did not propagate well the programme to the community. This result suggests that many parents did not engage their children to take part in the online learning programme at the first week of the programme implementation.

4.2. Infrastructure

To examine effectiveness of the programme the study explored general infrastructure employed to facilitate learning. Radios and Televisions as the media used was examined as part of the infrastructure. The study shows that majority of parents have television sets (44%) followed by those who own both television and radio (41.7%), those who own radio (3.610.7%) and those who don't own neither television nor radio (10.7%). It is however important to note that customary practice among Tanzanians shows that many people who own both radio and television sets, most of the time connect radio to television set to utilise radio speakers for a desired sound. It is seldom to find people listening to radio when it is connected to television set. The learning programme time table shows that pre-primary and primary school pupils learn through TBC radio station and they are the majority (65%) compared to secondary school students (35%) yet most of the parents have television sets than radio. This implies that big number of pupils are not following the lesson. Furthermore, there is an issue of power beside having television sets and radio. Tanzania is one of African countries having unstable power supply, frequent power cut and many households particularly rural areas are not connected to power supply. This means one may have radio and television sets but due to power problem cannot use them.

4.3. Supervision

The programme requires close supervision of parents or guardians especially primary school pupils. Parents have to assist learners in various ways including setting radio station or Tv channels broadcasting appropriate lesson, making sure that learners are seriously following the lesson, reminding learners general preparation, helping learners to solve some problematic areas noted from the lesson and correcting activities done by learners after the lesson.

With respect to learner's supervision, the study shows that parents who were aware of their children following up the lesson on TV and Radio were many (48.8%), parents who were not aware (39%) while parents who were not sure (12.2%). This result may superficially indicate that parents were supervising their children but in fact less of them did not supervise their children because the data show that

majority of parents had no lesson time table (59%). Similarly, responses of parents on the question required them to mention specific radio station or Tv channel their children listen or watch for the lesson indicated that majority of parents did not know (38.5%), parents who mentioned Azam TV (32.1%), TBC television (20.5%), Channel ten (7.7 %) and TBC radio (1.3 %). It was expected that many parents would mention radio station because most of the lessons for pre-primary and primary school pupils ware broadcasted by TBC radio station.

4.4. Subject content

Referring to the timetables shared by the Ministry of Education, Science and Technology in collaboration with mass media such as TBC radio and television, Azam TV and Channel Ten it can be realised that the programme was not set to cover curriculum but a revision of what was already taught at school. There are few subjects and specific topics shown to go through during this education disruption. The finding shows imbalance of subjects allocation in the timetable and seems not to consider levels of learners particularly among primary school pupils. For example, TBC radio station learning timetable indicates that the programme takes 160 minutes a day but there is a single lesson covering 80 minutes to 140minutes (Refer figure 1). Figure 1 shows that on 3rd March, 2020 the lesson titled listening to story covered the total 140 minutes. Besides, this lesson involved all classes from standard I to standard VII. This is obviously that the subject matter may not fulfil the interest of all students, either the lower classes or upper classes were bored by the lesson. In fact, merging the lower class pupils like standard I and II with upper class pupils is likely undermining them academically as there is no way the lesson can be harmonized.

V. CONCLUSION

Teaching and learning through radio and television is not a new programme in Tanzania, it has been there for some years but with less community attention. This study examined effectiveness of the programme during the first week of its implementation following schools closure. The present study shows that in the first week of the programme implementation majority of parents and students were not aware of online learning and how it was organised as a result their participation was very low. The data indicate that students who have benefited from this programme in the first week of implementation are; few (52.4%), very few (35.3%), many (8.1%) and half of all students (4.2%). With respect to the data the programme was not effective. As a new experience in our context the

government has shown rigorous efforts to ensure that the programme go on regardless of several setbacks such as, low awareness of the community, limitation of technology, low media coverage with little time allotted to scheduled lessons, and poverty among the community that constrains some parents from purchasing radio or television sets.

VI. RECOMMENDATIONS

Based on the above conclusions, it is important for the government to review its education systems and begin long-term planning and build online education systems so that we are ready for the future education disruption. Furthermore, the online education have to be developed and set parallel to the existing traditional form of learning as an essential component of education system and students start training education technology. Lastly but not the least, the department of technology should introduce national Learning Management System (LMS) and virtual learning platforms to complement the current practice of learning through radio and television.

VII. IMPLICATIONS FOR FURTHER STUDIES

This study has shown the potential effect of EdTech as adopted by Tanzania during the health crisis resulted from COVID-19 pandemic. The findings of this study have opened a new line of similar studies. It is expected that other researchers will consider investigating effectiveness of radio and television in teaching and learning during the whole period of schools closure. Similarly, the results of study can further be authenticated by contemplating a broader study through qualitative and quantitative data so as to give a deeper understanding of effectiveness of radio and television in learning. It would also be of interest for researchers to examine application of education technology in Tanzania as one of the current issues in education in the developing countries.

REFERENCES

[1] Berman, S. D. (2008). The Return of Educational Radio? The International Review of Research in Open and Distributed Learning, 9(2).

- [2] Burns, M. et al. (2019). ICTs in Secondary Education in Sub-Saharan Africa: Policies, Practices, Trends and Recommendations.
- [3] Casey, J., & Wilson, P. (2005). A practical guide to providing flexible learning in further and higher education. Quality Assurance Agency for Higher Education Scotland, Glasgow.
- [4] Cauchemez, S., Van Kerkhove, M. D., Archer, B. N., Cetron, M., Cowling, B. J., Grove, P., Hunt, D., Kojouharova, M., Kon, P., & Ungchusak, K. (2014). School closures during the 2009 influenza pandemic: national and local experiences. *BMC Infectious Diseases*, 14(1), 207.
- [5] Desai, M. S., Hart, J., & Richards, T. C. (2008). E-learning: Paradigm shift in education. *Education*, *129*(2).
- [6] Gülseçen, S., & Kubat, A. (2006). Teaching ICT to teacher candidates using PBL: A qualitative and quantitative evaluation. *Journal of Educational Technology & Society*, 9(2), 96–106.
- [7] Huang, R. H., Liu, D. J., Tlili, A., Yang, J. F., & Wang, H. H. (2020). Handbook on Facilitating Flexible Learning During Educational Disruption: The Chinese Experience in Maintaining Undisrupted Learning in COVID-19 Outbreak. Beijing: Smart Learning Institute of Beijing Normal University.
- [8] Huang, R., Spector, J. M., & Yang, J. (2019). Design methodology. In *Educational Technology* (pp. 189–228). Springer.
- [9] Molenda, M., & Januszewski, A. (2008). Educational technology: A definition with commentary. Association for Educational Communications and Technology (AECT).
- [10] Peterson, D. (2016). Edtech and student privacy: California law as a model. *Berkeley Technology Law Journal*, 31(2), 961–996.
- [11] Singhal, T. (2020). A review of coronavirus disease-2019 (COVID-19). *The Indian Journal of Pediatrics*, 1–6.
- [12] Thomas, J. (2001). *Using community radio for non-formal education*. Commonwealth of Learning, Vancouver.
- [13] UNESCO. (2020). UNESCO Report, 'COVID-19 Educational Disruption and Response.'
- [14] Wang, C., Horby, P. W., Hayden, F. G., & Gao, G. F. (2020). A novel coronavirus outbreak of global health concern. *The Lancet*, *395*(10223), 470–473.
- [15] Wolrdometer. (2020). *Tanzania corona Virus Cases Report*. https://www.worldometers.info/coronavirus/country/tanzania/
- [16] Yin, R. K. (2003). Case study research design and methods third edition. *Applied Social Research Methods Series*, 5.
- [17] Zainal, Z. (2007). Case study as a research method. *Jurnal Kemanusiaan*, 5(1).

APPENDICES



Fig.1: Tanzania Broad Casting Cooperation (TBC) Radio station Time table for Pre-primary, Primary and Secondary schools



Fig.2: Azam Television

Time table for primary Schools (Standard IV&VII) and Secondary schools (Form II&IV)



WIZARA YA ELIMU SAYANSI NA TEKNOLOJIA PAMOJA NA OFISI YA RAIS TAMISEMI KUPITIA BARAZA LA MITIHANI LA TANZANIA (NECTA)

RATIBA YA VIPINDI VYA MARUDIO YA MASOMO KWA MAANDALIZI YA MTIHANI WA TAIFA WA KIDATO CHA SITA KUPITIA TELEVISHENI YA TAIFA TBC

TAR/MDA	4:00 – 5:00 Asubuhi	5:01 – 6:00 Asubuhi	6:01 - 7:00 Mchana	7:01 – 8:00 Mchana
27-04-2020	PHYSICS: VIBRATIONS AND WAVES	KISWAHILI: MATUMIZI YA SARUFI	ECONOMICS: THEORY OF FIRM	GEOGRAPHY: SIMPLE SURVEY AND MAP MAKING
28-04-2020	ADVANCED MATHS: PROBABILITY	ENGLISH: LANGUAGE SKILLS	CHEMISTRY: ENERGETICS	ECONOMICS: NATIONAL INCOME
29-04-2020	BASIC APPLIED MATHS: ALGEBRA	KISWAHILI: MATUMIZI YA SARUFI	COMMERCE: CONCEPT OF STOCK EXCHANGE	GEOGRAPHY: STUDY OF SOIL
30-04-2020	CHEMISTRY: ENERGETICS	ENGLISH: INTRODUCTION TO LANGUAGE	ECONOMICS: THEORIES OF DEMAND AND SUPPLY	KISWAHILI: MATUMIZI YA SARUFI
01-05-2020	PHYSICS: VIBRATION AND WAVES	GEOGRAPHY: WATER MASSES	ADVANCED MATHS: PROBABILITY	BASIC APPLIED MATHS: PROBABILITY
02-05-2020	CHEMISTRY: HALOGEN DERIVATIVES OF HYDROCARBONS	HISTORY: NEO- COLONIALISM	ENGLISH: APPRECIATING LITERARY WORKS	KISWAHILI: MAENDELEO YA FASIHI SIMULIZI







Fig.3: Tanzania Broad Casting Cooperation (TBC) Television programme

Time table for Advanced Secondary Schools (Form VI)