

Chapter one

Introduction

1.1. Study background:

A lot of forms of activities and services provided by governments have been changed during the last three decades radically. The appearance of the internet made a good environment for delivering new applications and services. Based on new techniques of offering services, e-services were adopted and implemented by government institutions all over the world. The digital services are distinguished by decreasing cost, save effort, enhancing efficiency, save time, assuring transparency, and integrity. All over the world governments have worked hard to create models that include people, strategy, processes, and technology in addition to good action plans to delineate a successful application of non-traditional services through e-government (Ibrahaim & Alabdallat, 2020).

Public e-services is another name of e-government which refers to using the internet for offering and receiving public services, add to that, e-government uses technology to achieve reforms by fostering transparency, distance elimination, and empowering people to engage in the political processes that affect their lives. Whereas, the researcher defines e-government as the government that utilizes information and communication technologies (ICT) in her activities, transactions, and dealings. Public e-services include many forms of services such as e-application, e-marketing, e-participation, e-business, and e-learning.

Electronic learning (E-learning) is one of the modern techniques convenient for distance education, it is very resilient and enables ongoing improvements, upgrading and updating of the educating material, adaptations to various knowledge levels, of course, engagers, using materials from the internet and ICTs (Kollár & Brokes, 2009). In other words, E-learning is a computer technology medium that could be used to innovate the application of learning and teaching. It is the utilization of new technologies of multimedia and the internet for increasing the quality of learning by making access to the resources, services, remote exchange, and collaboration easy (Fadalla, 2018).

Education in Sudan started expanding in the nineties, schools of higher education were provided by computers and linked to the internet. Numbers of computers were distributed to secondary schools in all states including the states of South Sudan in 2002. Distance learning is offered by some Sudanese Universities Such as the Open University of Sudan which was founded in 2002. It aims to adopt contemporary teaching techniques as well as providing an excellent education for those who care about anytime anywhere in education. Another university that offers distance learning is Sudan University of science and technology, It offers for postgraduates particularly in the Major of Computer-integrated education. (Salah, Elsammani, & Yousif, 2010). Whereas the private universities that have been delivering e-learning during Covid19 in Sudan are four universities and one college: Al-Razi University, University of Technology, Arab Open University, Meroe University, and Al-Nahda College. (Altahkiir e-newspqaper,2020). In December 2019 Coronavirus disease (Covid19) appeared in China city of Wuhan caused an epidemic in Wuhan and rapidly spread all over the world, by

the end of March Coronavirus disease has confirmed in greater than ½ a million people over the world causing the death of more than 26000 people worldwide (Garcell, 2020).

The response of the government of Sudan, like other countries in the world, when coronavirus started, the federal ministry of health of Sudan began to screen the travelers arriving to Sudan via various ports and to collect their information. Early, in March the ruling cabinet of sovereign council and ministers created the (high committee for health emergencies). In order to coordinate the efforts of governmental and non-governmental efforts in combating coronavirus disease (covid19). The Committee comprises members of the Ministry of Health, Labour and Social Welfare, international, domestic and information affairs, economy, and the head of the CBS and the army, police, and security services representatives. All the steps and responses relevant to COVID-19 are a matter for the Committee and the Committee's decisions are generally based on the health minister's advice and information. The government began tightening the entry procedures from the affected countries in Sudan on 12 March. The federal ministry of health of Sudan transmitted teams from its neighboring countries to track port entries and provided the equipment required to isolate the countries. The surveillance of the Sudanese situation abroad, in particular in countries where cases of coronavirus are reported. In the first case of COVID-19 infection (and death) on 13 March, the government declared that all universities and schools were closed two days later.

On 16 March 2020, the Sudan Security and Defence Council declared a health emergency and the government closed all airports, land and sea border crossings with the exception of flights with assistance, technical and humanitarian assistance, and pre-programmed freight. The government of Sudan also used the police to impose a partial curfew in Khartoum State from 8 p.m. to 6 am on 24 March. The administration extended its curfew time by two hours from 6:00 to 6:00 on 31 March and granted leave until further notices to all governmental workers aged 55 and older, as well as pregnant and nursing women. Some private-sector businesses have sponsored their employees. The Labor and Social Minister have set up a committee to discuss the needs of people most affected by the steps to ensure confinement. On 13 April authorities declared that the virus has spread beyond the capital and that community meetings have been suspended and Friday prayers conducted at mosques located in the state of Khartoum and certain parts of the country. As of May 25, the Federal and Khartoum State Ministries of Health set up cinq isolation centers to separate and treat the COVID-19 cases: Khartoum Teaching Hospital, which consists of 110 beds, the Jabra Center, which is located in southern Khartoum and 110 beds (Kunna, 2020).

To avoid or lessen the outbreak of Covid19, schools around the world were closed, cities locked down and many unnecessary trading places were shut down. In mid of March 2020 Covid19 which is currently circulating reached Sudan, by the end of May same year there were (5026) confirmed cases and (286) cases of death. But both numbers are expected to be more because of the limited number of tests and hesitation of people to report. Therefore, Schools and Universities were shut down, exams were postponed. The government of Sudan has made isolation centers all over the country Sudan and put measurements in order to protect or prevent Covid19 pandemic from widespread also, the government intensified the social media campaign for social distance, wearing masks, washing hands, and raising the awareness

overall (Elsheikh, Bakheet, & Degoot, 2020). Until the 4th of December 2020, there were **(18,535)** cases, **(1,271)** deaths, and **(10,672)** recovery cases. This according to (worldometer.info). Due to the Coronavirus pandemic, many schools and universities adopted E-learning techniques as alternative methods to the offline and face to face classes, but unfortunately, it did not happen in Sudan. There are around 36 governmental universities in Sudan, they have not been delivering online learning in the era of covid19 pandemic, except one university, its Sudan university of science and technology and it offers only for master students.

The linear below shows the total cases of covid19 in Sudan.

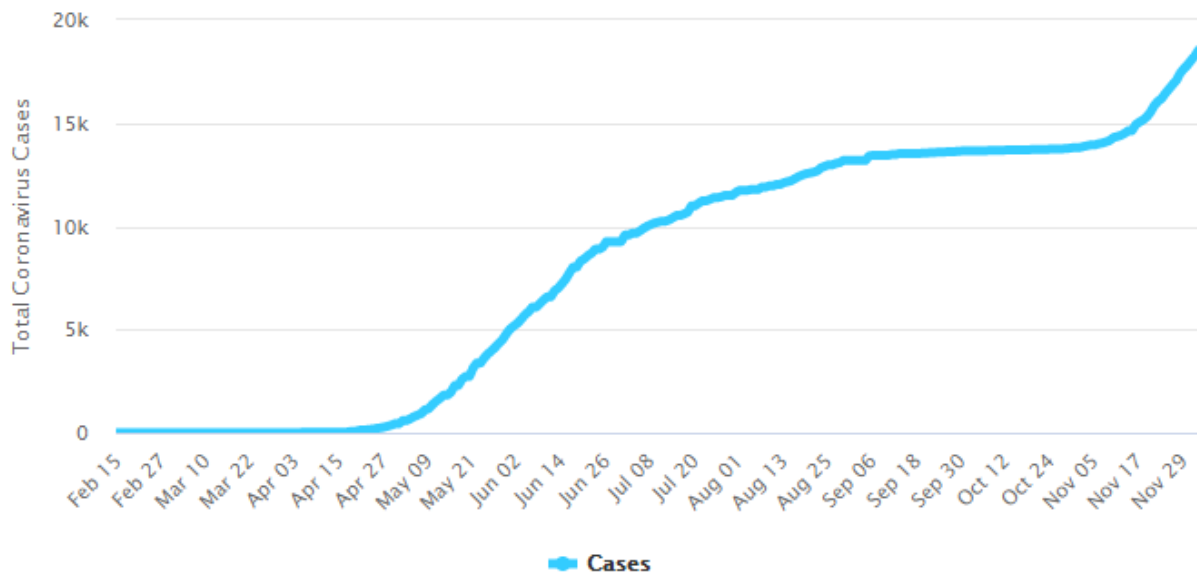


Figure (1.1) Total cases of covid19, Source: worldometer.info (2020).

The chart below shows the daily cases of coronavirus in Sudan.

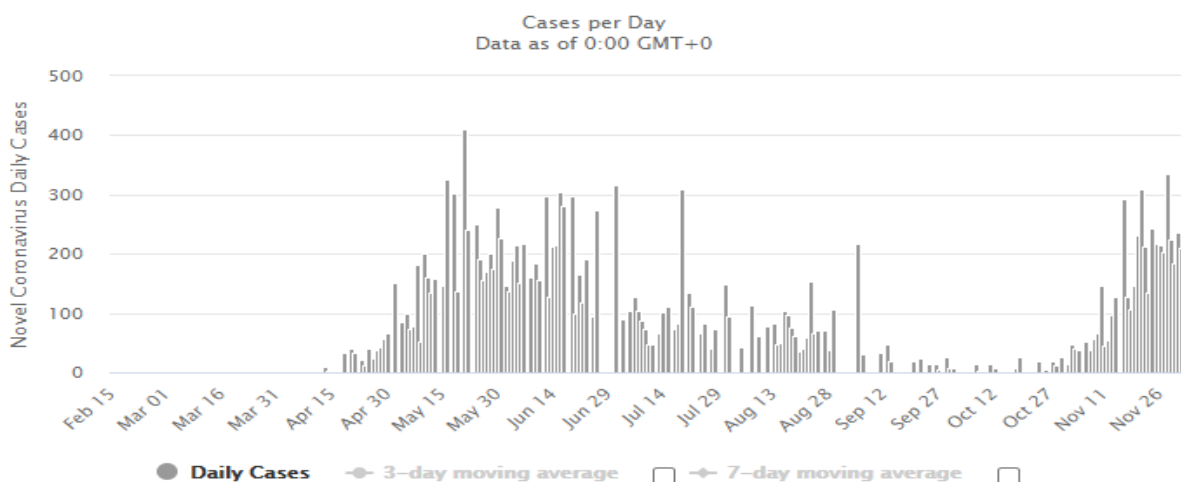


Figure (1.2) Covid19 daily cases, Source: worldometer.info (2020).

1.2: Research problem:

As a result of the great progress that has occurred in the field of information and communications technology (ICT), which was clearly reflected in different lifestyles as general and in the teaching and learning process, in particular, it was necessary to implement this technology in improving and developing programs of education at different levels. This is extremely important, to introduce all that is new and updated in the educational curricula, which leads to improvement of output. Within this framework, many developed and developing countries have taken the e-learning technique as a systematic method for developing their educational programs. E-learning technology is characterized by the speed in receiving information and providing an interactive educational environment that contains computers and Internet-based applications, so that the learner can access the learning resources easily and conveniently, at any time and place. E-learning is adopted intensively all over the world during the Coronavirus pandemic. When Covid19 broke out in Sudan, the government issued orders to lockdown Cities, Schools, Universities, and other government institutions. Lockdowns of schools happened in many countries around the world, but students continued their studies online, as happened in our university UMY. In Sudan students never continued their studies online, therefore, research questions can be formulated as follows:

1. Why students in the majority of Sudanese universities did not continue online learning during Covid19?
2. How lectures and students can gain e-skills?
3. How can Universities profile adaptive E-learning systems as alternative means for teaching and learning in case of pandemics in the future?
4. How to overcome the online-learning barriers in Sudanese universities?

1.3: Objectives of the research:

1. To investigate factors that prohibited students to continue their studies online during Covid19.
2. To explore the basic hinders of adopting E-learning in the majority of Sudanese universities.
3. To understand how Sudanese universities can adopt E-learning in the future to be ready for the unexpected and probable pandemics.
4. To recognize the willingness and satisfaction of students toward online-learning in Sudan.

1. 4. Benefits of the research:

1. This research will discover the problems of e-learning in Sudanese universities.

2. This study attempts to provide the Universities of Sudan with suggested solutions.
3. One main benefit of the study is to understand the satisfaction of the students toward e-learning.

1. 5. Overview of thesis:

This study dealt with a very important topic, namely government electronic services in Sudan: E-learning in the period of the Corona epidemic as a model. This research deals with e-learning in Sudan as one of the public e-services provided by the government to people. The purpose of this study is to identify the most important factors that impeded the adoption of e-learning in Sudan during the Corona epidemic period, and the study also tries to present proposals and solutions to those obstacles, and how to prepare for the future if there is any other epidemic. In order to obtain data and information for this research, the researcher used secondary and primary data sources. Secondary sources were books, scientific papers, reports, newspapers, and other documents that are relevant to the study. The journals and articles that used in this research have collected from very recognized websites such as Emerald, Google scholar, IEEEExplore, academia.edu, Springer link, Science Direct, Web of the science core collection, ACM digital library, and Libgen Iceland. All the journals are peer-reviewed. The primary data were collected by two modes, namely questionnaires and interviews. The questionnaire consisted of sixteen (16) statements with five (5) points-Likert scale, namely strongly agree, agree, neutral, disagree and, strongly disagree, the questionnaire was online, targeting randomly 132 Students and instructors from the University of Bahri- Sudan. To receive the response to the questionnaire, the link to the online questionnaire was sent to WhatsApp groups of Bahri University Staff. To analyze the data, SPSS was used, and for more interpretations and explanations, tables and charts were used. Also, a semi-structured online interview was conducted by two of the professors from the University of Khartoum and the University of Bahri. They have been selected because of their positions and their experience in online learning. Therefore, the methods that are used in this study are mixed methods. This research has concluded that there are five main factors that have prevented students and professors in Sudanese universities from adopting e-learning in emergency situations as an alternative approach to traditional education in the classroom. These factors are the frequent power outages in Sudan and lack of electricity in some areas, especially rural ones, the weak internet networks and its lack of coverage for all areas in Sudan, especially the rural ones, the lack of electronic skills among most students and some professors, the widespread poverty in Sudan prevents students from owning computers and, the smartphone, and finally the weak communication infrastructure in Sudan. The study also concluded that there are a number of measures that must be taken if e-learning is to be adopted in Sudan. Some of these matters relate to the government and some of them relate to teachers and students. Electricity, poverty, and network connection in all regions of Sudan are factors related to the government. Therefore, many participants emphasized that the government should modernize electrical energy sources and provide electricity in all parts of Sudan, urban and rural. Poverty is also one of the factors that are related to the state, as the results of the respondents showed that government financial support for students in Sudan is an important factor and helps students prepare to adopt digital education, so the government must fight poverty and eliminate the causes of poverty among students in Sudan. In addition, training plays an important role in

providing teachers and students with the necessary skills that enable them to carry out their tasks efficiently and effectively.