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The Effect of Coronavirus (COVID-19) on Face to Face Learning of Undergraduate Students in Mogadishu, Somalia.

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Abstract

The purpose of this research is to investigate the effect of Coronavirus (Covid-19) on face to face learning of undergraduate students in Mogadishu, Somalia. The study adopted the descriptive survey research design whose purpose is to describe the state of affairs and involves a method of collecting data by interviewing or administering questionnaires to a sample of individuals. The results of the questionnaire were then analyzed with the aid of SPSS. The sample of this study consisted of 200 students taken using simple random sampling technique based on Slovin's formula from 400 undergraduate students in Mogadishu, Somalia. The results of the study showed that Coronavirus (Covid-19) has negatively affected on education including, campus closure and class cancelations, learning disruption, unplanned and rapid shift to e-learning, lack of classroom activities such as pair work, group work, co-operative learning, and ability of the students to learn.

From the finding the study recommends that the Ministry of Posts, Telecom and Technology in conjunction with the higher education institutions should seriously consider ways of integrating the use of ICT in education and training. And also the study recommended that higher education institutions should establish center of open and distance learning that facilitates online programmes and offers online courses.

Keywords: Coronavirus (Covid-19), E-learning, Face to face learning of undergraduate students

Introduction

The COVID-19 pandemic is having an unprecedented impact on a global scale. COVID-19 was first reported in the city of Wuhan, China in 2019 and has continued to ravage the whole world since then. On 11th of March 2020, the World Health Organization (WHO) declared COVID-19 a pandemic based on the rate at which it was spreading and devastating human lives around the world. A disease which appeared in the Chinese region of Wuhan surprisingly spread so fast across China and other parts of the world (Wickramasinghe et al., 2020).As of 23 April 2020, about 2 million people have been confirmed to be infected with the disease across the world with more than 182 000 confirmed deaths related to the disease. Regions severely affected by major outbreaks include China, Europe, Iran, South Korea, and the United States. It is reported that symptoms of the disease include dry cough, fever, tiredness, shortness of breath, headache and general body weakness due to inducement of other ailments in the body (Zhong, et al., 2020).

Education has been hit particularly hard by the COVID-19 pandemic with 1.53 billion learners out of school and 184 country-wide school closures, impacting 87.6% of the world's total enrolled learners. Drop-out rates across the globe are likely to rise as a result of this massive disruption to education access.

The 'pile-on effect' of the coronavirus is that, during the global COVID-19 pandemic, interruptions to education can have long term implications — especially for the most vulnerable. University researchers have warned that Australia's school students face a decline in their learning and classroom performance as a result of the switch to online learning because of the COVID-19 pandemic. The researchers say the decline will inevitably affect the students' performance at university. Disadvantaged students face the greatest impact, the study found.

Over 209 million learners in Africa have been affected by COVID-19 pandemic (UNESCO, 2020). African continent is therefore the second most affected continent in the world after Asia that has over 590 million affected children. Some African countries (Kenya, Rwanda, South Africa, Senegal, Botswana, Gambia) can start preparing now as there is reasonable school connectivity and there are devices (tablets) for kids to take home.

Somalia government reported its first confirmed case of coronavirus (COVID-19) on 16 march 2020 and a month later the number of confirmed cases increased to 480. The government of Somalia closed all schools and universities under its control for an initial 15 days on 19 March, hoping to slow the spread of the disease. On 1 April, this lockdown was extended indefinitely due to coronavirus increase. As of 30 April 2020 the number of confirmed cases in Somalia rose to 582 with 28 related deaths. Governments all over the world, including Somalia government implemented lockdown in their various countries based on the severity of the pandemic to ensure that its spreading is contained and the curve flattened.

Researchers believe that Coronavirus is transmitted through droplets from an infected person. When such droplets fall on surfaces and someone comes in contact with it, mostly with the hand and thereafter touches the nose or the mouth with the hand, such a person would be infected with the virus. Consequently, medical experts postulate that social distancing remains the best way to contain the spread of the virus.

Statement of the Problem

Many schools and universities are opting to continue their normal classes on online platforms. This includes the use of online tools, such as group video programs, that allow teachers and students to meet and conduct classes over the internet. It is a massive, disruptive shift to move all the existing courses online in a matter of days. In general, a complete online course requires an elaborate lesson plan design, teaching materials such as audio and video contents, as well as technology support teams. However, due to the sudden emergence of the COVID-19, most faculty members are facing the challenges of lacking online teaching experience, early preparation, or support from educational technology teams. Although many schools and universities are continuing online, many students do not have access to computers or the internet in their homes. Without the proper technology, many students will be forced to miss out on their education until further solutions can be arranged. In addition, based on an analysis of students' responses in social media, for such a large-scale online teaching, the challenges for students did not come from technical operational obstacles. Instead, they have difficulties due to the lack of a good learning attitude. Students often have problems such as lack of self-discipline, suitable learning materials, or good learning environments when they are self-isolated at home. Online platforms should include multiple options for meeting practical teaching needs, such as synchronized video and voice for group learning and classroom interactions. However, in poorer or more rural areas, this has been limited by the technological facilities or even the cost of electricity.

Different studies have shown that although there are some examples of having a plan of using the distance/online learning during the pandemic, they are mostly concentrated on small cases and not a global crisis as it is happening in COVID-19 pandemic of 2020. Especially the countries that are having the limited technologies have problems in schools are not ready for the complete implementation of the countrywide online education (Sintema J, 2020). Results of different studies shows that the virtual teaching environments can be successfully used in school or higher education in case of having appropriate technical environment and support.

The shutdown of all educational institution in Somalia was first hand and immediate response by the government of Somalia to take proactive mitigation measures to keep or protect all students from possible risks of contracting Coronavirus because learning institutions are the places where many students meet, interact and communicate each other. This pauses a great danger and an outbreak like COVID-19 can rapidly spread. This is consistent with (Sintema, 2020) who also posited that schools are the breeding grounds and dangerous places for the spread of the virus. Because of this most students or learners are forced to be in their homes.

Despite this unfortunate situation, students are expected to learn with the use of web 2.0 tools. Perienen (2020), argued that with the coming of technology impacting almost all areas of life, the education sector too is witnessing a paradigm shift.

Due to restriction imposed by government of Somalia as a result of Covid-19 crisis, nearly all higher learning institutions in Somalia have migrated to online with immediate effect. Due to this, most universities released press statements to inform students on the risks of Covid-19 and adoption of technology for e-learning. For instance, the SIMAD University (SU) Senate resolved that in this shutdown, learning will continue through e-learning platforms like Google Meet, Google Classroom and Jamboard for teaching and learning. Similarly, Somalia National University (SNU) informed all its students and lecturers to use e-learning platform to ensure that students do not miss out of learning and started to deliver classes using Zoom video-conferencing.

Other universities such as Mogadishu, City, Jazeera, Hormuud, Banadir University… have also shifted to e-learning platforms to ensure that students do not miss out on learning or remain behind on the coverage of the course outlines. This is not surprising as (e.g., Basilaia & Kvavadze, 2020) also investigated the capacities of the country and its population to continue the education process at the schools in the online form of distance learning with different digital platforms.

In Mogadishu, e-learning is a new and not well established. For instance, there is no university or college that possesses center of open and distance learning and currently offers online courses. Thus, due to the Coronavirus outbreak, most universities in Somalia have migrated to online with immediate effect. Unplanned and rapid shift to online classes had given students a dilemma. Somali students are growing stressed dealing with the obstacles of e- learning, including poor e-learning skills, internet costs and data bundles, lack of face-to-face interaction and sometimes unreliable internet connection.

Literature Review

Coronavirus (Covid-19) and face to face learning

The world is currently struggling against the Coronavirus Disease (COVID-19) that is caused by the 2019-novel Coronavirus (2019-nCoV) that has underestimated its dangers (Zahar, 2020). There is currently little or no literature on COVID-19 in relation to educational studies. The only literature available is directly related to medical studies (Chinazzi et al., 2020; Hopman, Allegranzi, & Mehtar, 2020; Kraemer et al., 2020; Wu & McGoogan, 2020; Zu et al., 2020).

The Coronavirus 2019 (COVID-19) pandemic has had such an extensive impact on the global higher education sector. Many universities are responding in diverse ways, and given the speed of the changes unfolding, are not likely discussing and studying the changes evolving globally. . Initial responses in countries impacted by the 180 million Chinese students (primary, secondary and tertiary) market were focused on the delivery of online training to students who were unable to leave China and the economic impact on universities who relied on the income from this international cohort (Perrotta, 2020). Faculties rushed to convert curriculum to an online environment, mindful of technology and websites that could be accessed from China. It has complex ingredients as urgency, readiness to deal with Virtual Management System (VMS) and online teaching tools, digital fluency, and the necessity of dealing with the emotions of fear and boredom of social isolation. Yet, it was also a demonstration of the impact of poorly resourced institutions and socially disadvantaged learners where limited access to technology and the internet impacted on organizational response or students' ability to engage in an online environment (Zhong, 2020). Many scholars questioned if higher education was prepared for the forthcoming digital era of learning (Houlden & Veletsianos, 2020).

Online education is a complex issue. It is important to set realistic understandings and expectations of how it can support students affected by COVID-19 measures. Universities are not progressing strategic moves to online teaching. Rather, they are moving to emergency online delivery of in-person content. However, migrating from traditional or blended learning to a fully virtual and online delivery strategy will not happen overnight and is associated with many challenges such as the lack of 'home office' infrastructure , student infrastructure and general skillsets needed to professionally design and offer online/ virtual education.

E- Learning and face to face learning

As an alternative form of learning, universities and colleges took a shift from traditional classroom learning to a modernized approach of delivering instruction amid COVID-19 pandemic. With the use of technology, classes were conducted with the use of video conferencing, chats, and emails and with the universities 'respective Learning Management Systems (LMS). The outbreak of COVID-19 was unexpected and it forced Peking University to launch live online programs of a total of 2,613 undergraduate online courses and 1,824 graduate online courses in order to ensure the normal teaching operation, with 44,700 students stay at homes or dorms (Lei, 2020). In addition, US institutions have switched classes to online learning, cancelled spring break trips and students studying abroad in China, Italy and South Korea have been encouraged to return home to complete their studies. Universities across the US, in particular, have adjusted their programs in response to the spread of the coronavirus. Stanford University has called off the remaining two weeks of in-class lectures, urging its professors to move any remaining lessons online.

In South Africa, there are 1,187 confirmed cases of COVID-19 on 29 March, with one reported death (WHO, 2020a). Some higher education institutions undertook precautionary measures following earlier concerns of a lack of urgency raised by the South African Union of Students (Kyama et al., 2020). Some university infrastructure and maintenance activities such as research work could continue, while institutions were advised to use the break to explore digital and online delivery methods for teaching and learning to support programmes at a later stage (Chothia, 2020).

Of course, in day to day life, educators are often required to deviate from their lesson plans to accommodate unexpected scenarios as they arise. Fire alarms go off, the projector breaks down, a lecture is cancelled, and content is not covered. However, moving online is not just about adding new steps to some already fancy footwork. For some teachers it can provoke the kind of challenge that might be experienced by a classically trained ballet dancer moving to contemporary dance. Worries have been expressed by educators, students and parents of undergraduates about how it is possible that programmes can have the same outcomes online as on-campus, or worries that online is isolating, or that students will be left to fend for themselves (Fazackerley, 2020; Thompson, 2017). It is made up of the emergent and interdependent activities of teachers, students, administrators, learning technologists, technologies, and social and material, physical and digital environments (Fawns et al., 2020).

Face to face learning of undergraduate students

Universities and college campuses are places where students live and study in close proximity to each other. They are also buzzing cultural hubs where students are brought together from nations around the world. Recently, the foundations of this unique ecosystem have been impacted significantly by the rapid spread of the coronavirus (COVID-19) outbreak, creating uncertainty regarding the implications for higher education. Most institutions around the word are moving away from the traditional classroom face-to-face to digital learning. Further, the ongoing physical social isolation is impacting the academic workforce that traditionally is up the front of the classroom (Cappelletti, 2020).

Lacking physical interaction may also affect the completion rate (Haigh, 2004). Body language is absent in e-learning. Apart from this lack of physical interaction, e-learning is also criticized for not having facilities like traditional campuses: internship, volunteer opportunities, access to physical library, book stores, career and development counselling (McCraken, 2004). Some learning institutions tried to provide these facilities but they were too limited (McCraken, 2004). E-learning may not be suitable for certain groups of learners, especially science students who need extensive physical science laboratory experiments (Vernon, 2002;Bourne, Harris & Mayadas, 2005). Difficulty in teaching in an e-learning environment is another issue, as instructors may not be able to teach well. Moving into e-learning is difficult for instructors who are already familiar with the traditional teaching environment (Angelina, 2002a, p.12; Strauss, 2003; Kearsley, 2000;Wang, 2003).

Conceptual Framework

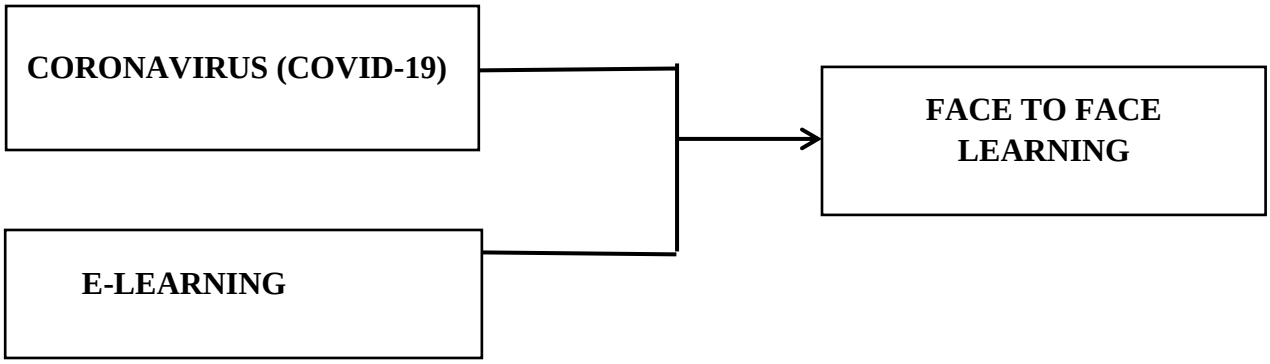

Figure 1: Conceptual Framework

Methodology

Research Design and Target Population

The study used a descriptive research design to achieve the study objectives. The Office of Human Research Protection (2013) defines a descriptive study as a study that is conducted with the aim of establishing the relationship between variables without affecting the environment.

The study involved three private universities and one public university targeting the semester 1,2,3,4,5,6,7, and 8 which have an enrolment of 400 pupils making up the population of this study. For purposes of this study, simple random sampling method was used to select a sample of 200 students. Sample is part of the total number and the characteristics of the population (Sugiyono (2010: 81). The sampling technique used in this research was simple random sampling technique with the following Slovin's formula:

$$n= \frac{N}{1+Ne^2}$$

N= 400 $e = (0.05)^2$ n=? $n= \frac{N}{1+Ne^2} = \frac{400}{1+400e^2} = 200$

Sample Procedure

The primary data of this study collected by using questionnaire, Questionnaire is used in view of the realty that the study will concerned with variables that can't be observing such information, The questionnaires of this study was developed by the researcher and they based on literature review whose congruent their dimensions of research and research objectives through steps in order to get relevant information on the research questions then researchers structured questionnaires into three sections: part (A) profile of the respondents, part (B) research questions one. Part (C) research questions two; and format of questionnaire designed as five point liker's scale. The SPSS analysis process is used for analyzing the data gathered by the researcher from the survey process. The SPSS analysis process is enabling the researcher to gather the appropriate information. The researcher formulated the research questions which are provided below:

- How does Coronavirus (Covid-19) affect face to face learning of undergraduate students in Mogadishu, Somalia?
- How does E-learning affect face to face learning of undergraduate students in Mogadishu Somalia?

Research Hypothesis

H1: Coronavirus (Covid-19) has negative influence on face-to-face learning of undergraduate students in Mogadishu, Somalia.

H2*:* E-learning has negative influence on face to face learning of undergraduate students in Mogadishu, Somalia.

Reliability Test

To measure reliability the researchers used Cronbach's alpha. It is most commonly used when there are multiple Likert questions in a survey questionnaire that form a scale, and you wish to determine if the scale is reliable. In the light of the collected data, the Cronbach's Alpha is found to be less than and near to 1.0. This shows that it is reliable since there are some scholars who suggest that a chronbach's alpha of 0.71 is reliable, as it is argued by kathuri & palls (1993) the instrument with validity coefficient of at least 0.70 or 70% are accepted as valid in research.

Cronbach's Alpha	N of Items
0.838	19

Table 01: Reliability Test

Kaiser-Meyer-Olkin and Bartlett's Test

Bartlett‟s Test of Sphericity and the Kaiser–Mayer–Olkin (KMO) test are used to measure construct validity of the factor analysis. Sample adequacy is measured by KMO and the value of Bartlett‟s Test of Sphericity should be significant for the construct validity. All these indicate the study includes adequate sample size. Factor analysis is justified here as KMO value is more than .60 and Bertletts test shows that it is significant to use the factor analysis in the study. According to this analysis, the sig value is less than 0.05 which is 0.000.The KMO value is between 0.8 to 1.this reflect meritorious as well as the positive data representation process. The alternative hypothesis selected by the researcher should be taken into consideration by rejecting the null hypothesis.

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.	.859
Approx. Chi-Square	1341.773
Df	171
Sig.	.000

Table 02: Kaiser-Meyer-Olkin and Bartlett's Test

Findings

Profile of Respondents

As shown in tables 4.1, the majority of the respondents, 146 (73.0%) were male compared with, 54(27.0%) of female. Hence, the above finding reveals that majority of the respondents were male. In terms of age, 125 (62.5%) of the respondents were between 21-30years old. In terms of class, 20% were in semester 4 and the rest were in other semesters. In terms of the marital status, exactly 77.0% of the respondents were single.

	Demographic Profile	*Frequency*	*Percent*	*Cumulative %*
	Male	146	73.0	73.0
Gender	Female	54	27.0	100
	Total	200	100	
	Below 20	46	23.0	23.0
Age	21-30	125	62.5	85.5
	31-40	15	7.5	93.0
	Above 40	14	7.0	100
	Total	200	100	
Marital	Single	154	77.0	77.0
Status	Married	46	23.0	100
	Total	200	100	
Class				
	Semester 1	13	6.5	6.5
	Semester 2	39	19.5	26.0
	Semester 3	34	17.0	43.0
	Semester 4	40	20.0	63.0
	Semester 5	20	10.0	73.0
	Semester 6	21	10.5	83.5
	Semester 7	4	2.0	85.5
	Semester 8	29	14.5	100
	Total	200	100	

Coronavirus (Covid-19) and face-to-face learning of undergraduate students

The study sought to find out how Coronavirus (Covid-19) affects the face-to-face learning of undergraduate students and the findings are presented in table 4.2. The findings indicate that 71.5 % respondents agreed that Coronavirus (Covid-19) has caused campus closure and class cancelation, 76% respondents agreed that Coronavirus (Covid-19) has impacted classroom learning and consequently the ability of the students to learn, 78.5 % of respondents agreed that Coronavirus (Covid-19) caused educational disruptions and 77% of respondents agreed that Coronavirus(Covid-19) has negatively affected classroom activities (e.g., pair work, group work ,co-operative learning) . The overall aggregate mean score for this Coronavirus (Covid-19) was 4.00 and the standard deviation at 1.328.

These results support the findings of BestColleges, (2020), 78% of households with a high school or college student have experienced disruptions stemming from COVID-19. A worrisome side effect of these disruptions has been the impact on student mental health. Among students impacted by COVID-19, an overwhelming majority (81%) somewhat or strongly agreed they were experiencing increased stress.

In a new survey by BestCollege (2020) on students stressed out due to Coronavirus, it is noted that 78% of households with a high school or college student have experienced disruptions stemming from COVID-19. A worrisome side effect of these disruptions has been the impact on student mental health. Among students impacted by COVID-19, an overwhelming majority (81%) somewhat or strongly agreed they were experiencing increased stress.

Table 4.2 Coronavirus (Covid-19) and face to face learning

Coronavirus (Covid-19)	SA (%)	A (%)	N (%)	D (%)	SD (%)	Mean	Std. Deviation
Coronavirus (Covid-19) has caused campus closure and class cancelation	42.5	29	8	7.5	13	3.81	1.395
Coronavirus (Covid-19) has impacted classroom learning and consequently the ability of the students to learn	57.5	18.5	7.5	9.5	7	4.10	1.288
Coronavirus (Covid-19) caused educational disruptions	52	26.5	6.5	4.5	10.5	4.05	1.309
Coronavirus (Covid-19) has negatively affected classroom activities (e.g., pair work, group work ,co-operative learning)	53.5	23.5	7.5	5.5	10	4.05	1.318
Average score						***4.00***	***1.328***

E-learning and face-to-face learning of undergraduate students

The study sought to find out how e-learning affects face-to-face learning of undergraduate students and the findings presented in table 4.3. 50.5% of the respondents felt that e-learning tools does not enhance students learning , 73.5 % agreed that students have difficulties using online material , 53.5% of the respondents do not see e learning enhance the quality of teaching-learning Process, 62.5 % agreed that e learning is not efficient as a traditional learning

Method, 81.5% agreed that internet connection and data bundle costs too much, 68.5 % agreed that Internet connection is unreliable, 46.5 % agreed that they have access to a computer with an Internet Connection, 76% agreed that e- learning does not work as well as face to face learning,72% agreed that e-learner face difficulty in understanding objectives of course outline,76.5% agreed that they often have to deal with technical problems (e.g., errors of the software, slow access to the internet).. The overall aggregate mean score for this e-learning was 3.58 and the standard deviation at 1.362.

In concurrence with Garrett (2009), it is suggested that to simply upload links as lesson components is not enough; well-rounded lessons with suitable activities and proof of participation should be devised. A study by Hara and Kling (2000) indicates that the difficulty and distress experienced by students online might not be adequately understood. Also Singh and Gill (2015) and Hamade (2013) found that it had a negative effect on student study times.

Table 4.3 E-learning and face-to-face learning of undergraduate students

E-learning	SA. (%)	A. (%)	N. (%)	D. (%)	SD. (%)	Mean	Std Deviation
E-learning tools enhance students learning	24	13.5	12	19	31.5	2.79	1.586
Students have difficulties using online material	37.5	36	8.5	7	11	3.82	1.306
E-learning enhance the quality of teaching-learning Process	19.5	6.5	20.5	26	27.5	2.65	1.445
E-learning is not efficient as a traditional learning Method	37	25.5	14.5	10.5	12.5	3.64	1.393
Internet connection and data bundle costs too much	59.5	22	5.5	7.5	5.5	4.23	1.184
Internet connection is unreliable	45	23.5	11	6	14.5	3.79	1.438
Students have Access to a computer with an Internet Connection	22	24.5	16.5	18.5	18.5	3.13	1.429
E- learning does not work as well as face to face learning	51.5	24.5	6	5	13	3.97	1.398
E-learner face difficulty in understanding objectives of course outline	32	40	10	7	11	3.75	1.279
Students often have to deal with technical problems (e.g., errors of the software, slow access to the internet).	42	34.5	14.5	3.5	5.5	4.04	1.097
Average score						***3.58***	***1.362***

Face-to-face learning of undergraduate students

The study sought to establish the effects on face-to-face learning of undergraduate students. Table 4.4 presents the findings from the respondents, 88% of respondents agreed that face to face learning is more beneficial than e learning , 80.5% of respondents agreed that classroom environment makes it easier for them to communicate with their lecturers and classmates, 85% of respondents agreed that face to face instruction would help them learn more , 83.5% of respondent agreed that face to face instruction would be a better way for them to learn the content/course materials and 83.5% of respondents agreed that face to face instruction would help them understand the course concepts better. The overall aggregate mean score for this face to face learning was 4.26 and the standard deviation at 1.088.

McAleavy and McCystral (1996) found out that half of the students for an Advance Diploma in Education from the University of Ulster commented that it was rather hard to seek advice, as compared to face-to-face instruction. Physical classrooms however will enable learners to learn faster, as they can always refer to the instructors or peers for guidance. Engaged students are attentive and participate in class discussions, exert effort in class activities, and exhibit interest and motivation to learn (Fredricks, Blumenfeld, & Paris, 2004; Marks, 2000; Skinner & Belmont, 1993).

Table 4.4 face to face learning of undergraduate students

Face-to-face learning	SA. (%)	A. (%)	N. (%)	D. (%)	SD. (%)	Mean	Std. Deviation
Face to face learning is more beneficial than e learning	58	30	3.5	3	5.5	4.32	1.065
A classroom environment makes it easier for me to Communicate with my lecturers and classmates	47.5	33	8	5.5	6	4.11	1.145
Face to face instruction would help me learn more.	64	21	7.5	3.5	4	4.38	1.039
Face to face instruction would be a better way for me To learn the content/course materials	52.5	31	7	4.5	5	4.22	1.088
Face to face instruction would help me understand The course concepts better	60	23.5	8	3	5.5	4.29	1.102
Average score						***4.26***	***1.088***

Discussions

The purpose of the study was to examine the effect of Coronavirus (Covid-19) on face to face learning of undergraduate students in Mogadishu, Somalia**.** The results of the study showed that Coronavirus (Covid-19) has negatively affected on educational activities. Some of summarized effects of this pandemic include; campus closure and class cancelations, learning disruption, lack of classroom activities such as pair work, group work, co-operative learning and ability of the students to learn.

These findings reflect a similarity to the findings by Onyema et al., (2020), who stated Coronavirus pandemic created multiple problems for education sector leading to decreased education opportunities for underprivileged learners and those in rural areas. And also the study was found that unreliable internet connections, internet costs and data bundles, poor e learning skills, network issues, lack of e learning training and resistance to change, etc. are the major challenges for electronic learning during the Coronavirus pandemic university closure. Internet and data bundle costs appeared to be the highest obstacle to E-learning during Covid-19 pandemic. Majority of respondents (81.5%) agreed that internet connection and data bundle costs were the major factors that restricted their commitment in E-learning. The findings were in line with those of Fasae and Adegbilero-Iwari (2016) who disclosed that poor internet connectivity and unstable electricity connections were the primary barriers. Additionally, difficulties of using online material, lack of E-learning skills, technical problems, etc. also caused lots of problems for face to face learning during Coronavirus shutdown.

Conclusions

The main purpose of this study was to determine the effect of Coronavirus (Covid-19) on face to face learning of undergraduate students in Mogadishu, Somalia. Data was collected using self-administered questionnaires that comprised of students questionnaire.

It is obvious that Coronavirus (Covid-19) has negative effects on education. It has major effects on face to face learning such as pair work, group work, and co-operative learning. These effects were felt by both educational institutions, lecturers and parents. Thus, the study acknowledges that the decision to shut down of higher education institutions for Covid-19 across the world may be hurtful, but it is sensible considering the rate of spread, and the dangers imposed by Coronavirus pandemic

Recommendations

The following recommendations were made based on the literature review and the empirical investigations in the study:

- The Internet Service Providers (ISP) should come up with policies that will address and govern the issues of data bundles and internet connection during Covid-19 Pandemic.
- Higher education institutions should establish center of open and distance learning that facilitates online programmes and offers online courses.
- The Ministry of Posts, Telecom and Technology in conjunction with the higher education institutions should seriously consider ways of integrating the use of ICT in education and training.
- Higher education institutions should integrate environmental and health courses in the curriculum.
- Students should also be taught to gain knowledge and behavior practices on the prevention of infectious diseases.

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