Online learning experiences of adult applicants to a university in Ghana during the Covid-19 outbreak

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Abstract
The outbreak of Covid-19 led to the migration of 1729 adults, who had applied to the University of Ghana to go through an access course for writing the Mature Entrance Examination for admission into undergraduate programmes. A survey was conducted to explore the experiences of the students. The study revealed that over 90% of the respondents were proficient in the use of ICTs. They used the Sakai learning management platform, zoom, and emails for their teaching and learning engagements. Four in five (84%) respondents preferred 50% online tuition and 50% face-to-face tuition. They, however, had issues with poor internet connectivity, the high cost of data for the internet, and limited contact time. Basic support systems such as the provision of high-speed but affordable internet services and increased online interactions will be of help to such students.

Keywords
online learning, distance education, adult learners, covid-19, Ghana

Introduction
“All hands on deck, we need to move everything online as quickly as possible”
(Evans et al., 2020: 279) was the outcry across universities all over the world as the Covid-19 pandemic took hold.

The outbreak of the Covid-19 pandemic introduced new dynamics into the educational landscape (Dhawan, 2020). Providers of formal education had to innovate, to provide teaching and learning services to their registered students. One such instance was the case of mature applicants to the University of Ghana. For years, the University of Ghana has been admitting mature applicants, thus adults who are 25 years old or above to undertake undergraduate studies. Until the outbreak of

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Covid-19 in March 2020, the 1729 registered mature applicants had been scheduled for the Access Course over nine weekends in a face-to-face mode in ten regional capitals of Ghana. They were to be examined in Mathematics, English Language, and Logic after the Access Course. Successful applicants would then be admitted into the distance learning programme of the University of Ghana to study Social Science programmes.

In order not to disappoint the applicants, who were eagerly looking forward to passing their entrance examination to gain entrance into the University of Ghana, management had to quickly put in systems to migrate the applicants onto an online learning platform to complete their Access Course for the entrance examinations. This paper, therefore, seeks to find out the experiences of the mature students and suggest ways of improving online studies for a such cohort of learners. The findings from this study will further help to direct policy for e-learning among non-traditional students.

There have been studies on the influence of Covid-19 on online learning in Ghana but none of them have looked at the situation of adult learners who seek to enter higher institutions as non-traditional applicants. Adarkwah (2021) looked at effectiveness of and barriers to online learning especially in deprived communities and recommended the need for strategies for emergency transition to online learning. Chidambaram (2020) studied the success of online teaching at Valley View University in Ghana and commended the infrastructure that they had put in place such as server for the BigBlueButton for synchronous virtual learning. Amanor-Mfoafo et al. (2020) find out from their study on the readiness of Ghanaian parents to support children at home and recommended that e-learning training be organized for parents. The work by Demuyakor (2020) on Ghanaian students in China revealed that students were challenged with increased financial resources for online learning and slow internet connectivity. Aheto-Domi et al. (2020) looked at the readiness of tutors of Colleges of Education in Ghana for digital learning and found that the tutors were not trained to teach in a virtual environment. Dampson et al. (2020) found in their study on users at the University of Education, Winneba, Ghana and recommended the need to educate both faculty and students on the benefits that learning management systems offers. This study, therefore, seeks to investigate the situation of adult learners who had to study online during their preparation to enroll in higher education as non-traditional applicants.

Literature review

The outbreak of covid-19 and the rush for e-learning

The formal education sector is one of the areas that were most hit by the outbreak of the Covid-19 Pandemic. The Covid-19 disease caused by the novel coronavirus (SARS-CoV-2), started spreading rapidly across the globe, in December 2019 (Parker, 2020). Ghana recorded its first two cases of Covid-19 on March 12, 2020. On March 16, 2020, the Government directed closure of schools (Ministry of Education [MoE], 2020, United Nations Ghana [UNG], 2020). By 6th May 2020, UNESCO had estimated that 177 countries had closed schools, affecting 1.2 billion learners. In view of this, governments and ministries of education deployed distance learning delivery modes to keep students engaged (United Nations Educational Scientific and Cultural Organization [UNESCO], 2020; UNG, 2020; Viner et al., 2020). The online learning component of distance education, therefore, became ubiquitous because of the Covid-19 pandemic. Online learning is an educational process that takes place over the Internet as a form of distance education. In online learning, there is the use of computers or other information and communication technology resources to instruct students who are distanced from educational institutions (Adarkwah, 2021; Kim, 2020). According
Online learning refers to a type of teaching and learning situation in which (1) the learner is at a distance from the tutor/instructor, (2) the learner uses some form of technology to access the learning materials, (3) the learner uses technology to interact with the tutor/instructor and with other learners and (4) some kind of support is provided to learners. One could simply say that online learning is a form of education that leverages the use of information and communications technologies (ICTs) to access teaching and learning resources from an electronic platform (Alqudah et al., 2020). In this process of teaching and learning, the learner and the teacher are distanced in space and time (Kwapong, 2010). They use educational technologies and synchronous or asynchronous information delivery modes such as study materials, PowerPoint slides, videos, emails, online forums, and chat rooms to engage with students (Kwapong, 2007, 2010; Adarkwah, 2021) has noted that the term, online learning has been used as an overlapping concept with blended learning, e-learning, online courses, and online or distance education since its introduction in the year 1995. Online learning platforms are predominantly student-centered. Looking at the impact of online learning during the outbreak of Covid-19, may not be able to go back to teaching and learning in the same ways as we did before the outbreak of the pandemic (Kim, 2020).

In the face of the Covid-19 outbreak, Evans et al. (2020) noted that “Any move to online learning, where the main facilitator is the use of the internet, requires effective integration of e-learning platforms, technologies, and pedagogies that should enable educators to offer new more effective and impactful learning opportunities” (p. 279). This move, however, came with its peculiar challenges. The study by Zhang et al. (2020) revealed that the introduction of online learning in China by the government under the policy, “Suspending Classes Without Stopping Learning” raised ambiguity and disagreement about what to teach, how to teach, the workload of teachers, and students, the teaching environment, and the implications for education equity. The authors, therefore, recommended that governments need to construct educational information superhighways, equip teachers and students with basic home-based teaching/learning equipment, train the teachers on online teaching, develop a national strategic plan on online education and support research into online education. In the health sector, a study by Cao et al. (2020) noted that the outbreak of the epidemic has introduced psychological pressure, which could be expressed in anxiety, fear, and worry and, thus, has called for monitoring of students to give them psychological counselling services.

Mature students will find themselves in a peculiar situation. Much as the rush for online learning presented an emergency response to continuous educational provision at all levels, there were challenges for the education providers and different categories of students such as the non-traditional ones (Dhawan, 2020).

**Current situation of online learning in Ghana**

Distance learning which has now evolved into online learning or e-learning has a history in Ghana. It dates to the correspondence education era. Over the years various governments of Ghana and administrators of higher education have explored ways of incorporating technology into the delivery of higher learning to help bridge the gap in accessing formal education. They have managed to introduce educational software for teaching and learning, online applications for admissions, course registration, and keeping students’ academic records such as results and general correspondence (Tagoe, 2012). Following Taylor’s (2001) work on the different generations of Distance Education, one could note that Ghana is currently operating between the third and fourth generations. In the context of the third generation, there are features of two-way, synchronous tele-learning with the use
of audio or video-conferencing facilities in the teaching and learning engagements while the fourth generation introduces flexible learning using online interactive multimedia.

Awidi (2008) however noted that much as Ghanaian universities have improved in the provision of net-working infrastructure and electronic devices, the integration of educational technology into teaching and learning has not seen much progress. Virtual interaction between students and faculty is minimal if not absent. This is confirmed in more recent research by Boateng (2015) who looked at opportunities, challenges, and expectations confronting adults who study online and concluded that their greatest challenge was with interactivity and thus they expected prompt feedback on their progress. In addition, students, faculty, and administrators continue to have issues with ownership of electronic devices for online learning. Data from the Ghana Statistical Service (2019) has revealed that only 7.2% of Ghanaians who are from 12 years old and above own a laptop, desktop, or tablet while 10% of the 74.3% of the population who use digital devices do not own the devices (Ghana Statistical Service, 2019). There are also issues of inclusivity in the ownership of electronic devices for online learning in Ghana. More males own devices than females while people with visual impairments have difficulty learning online (Amponsah, 2021).

In the case of the University of Ghana, the University introduced the Knowledge Environment for Web-based Learning (KEWL) as its e-learning platform in 2004 which according to Dadzie (2009) was utilized by only one lecturer as at the time of her study, then most recently the Sakai Learning Management System (Asamoah 2021a). Challenges such as limited ICT infrastructure and human resource capacity, unreliable power supply, poor internet connectivity and high cost of internet data remain (Asamoah 2021b). Adarkwah (2021) has therefore recommended that stakeholders in education must continue to pursue the integration of ICT in education in Ghana, and work with policies that seek to address the concerns of all diverse groups of students such as the urban poor, and rural students in their online learning endeavor.

The outbreak of the COVID 19 Pandemic has fast-forwarded the intentions to go fully online in the provision of formal education in Ghana and for that matter the University of Ghana despite the challenges outlined above. The mature applicants to the University of Ghana had no option but to undertake their course delivery and continuous assessment online using the Sakai Learning Management System supported by Zoom, Teams, and other virtual communication platforms. This study will help to explore the issues they faced and how such non-traditional students could be further supported in their online learning engagements.

Mature students and online learning

The growing demand for lifelong learning opportunities increased access to higher education, and the emergence of educational technologies for online learning (Oh and Hong, 2020) present both opportunities and challenges. Aguilera-Hermida (2020) have indicated that the most popular words used to describe the positive side of online learning tools are ‘accessible’, ‘fast’ and ‘easy’ whereas the most popular words that define the negative experiences of online learning tools are ‘internet dependency’, ‘impersonal’ and ‘confusing’. This indicates that online learning has pros and cons, and the situation could be worse for mature students.

Online learning is found to widen access to higher education for non-traditional adult learners and those who might normally not have the chance (Howard et al., 2020; Kwamong, 2019; Stone et al., 2016) to study for a university degree (Stone et al., 2016). Compared to younger students, mature or adult learners are found to be more satisfied with learning at a distance. The intrinsic motivation helps them to stay committed and, therefore, gets them sustained in the learning enterprise (Kahu et al., 2013). E-learning has some inbuilt flexibility, which creates an opportunity for
mature students to combine work, studies, and family roles (Kwapong, 2010). The work by George (2020) revealed that the new strategies allowed students to undertake self-study, which is guided by the course lecturer, which gave them some level of convenience, compared to the traditional teaching methodology. Guo (2020) has noted that the emergence of online health education media has helped to overcome some health problems and facilitated accurate systematic health education for the adult population. The study by Bayley and Waldron (2020) revealed that the adult participants benefited from learning music in both online and offline contexts. When it is well done, students tend to appreciate the independent learning opportunities, the flexibility of time, and space that online learning offers (Alqudah et al., 2020).

Online learning is an approach that enables peers to engage in cooperative and collaborative learning Aguilera-Hermida, (2020). Online learning enables students to study at their convenience (Toquero, 2020). Distance learning is easier to implement in emergency situations such as the outbreak of severe influenza pandemic (Schwartz et al., 2020).

There are, however, some challenges associated with online learning. These challenges are in connection with student engagement, persistence, and success. Adult learners, who are not used to the use of educational technologies, could be challenged in their learning processes (Stone et al., 2016). Loneliness or isolation, inability to manage time, alongside work, properly enough to meet all set deadlines, and a combination of family and study roles are issues that mature online learners face. Poor internet connectivity and lack of ICT infrastructure also pose challenges to online learning for those in remotest communities. Where internet connectivity is available, there is the issue of cost of internet data, software, and other resources for successful online studies. In some communities, basic needs such as reliable electric power supply could pose a challenge to online learners. Apart from that, the capacity of the instructor or tutor in online instruction has implications for the performance of the adult learner. If the instructor or tutor is not well trained in the setting up and facilitation of online learning, adult learners are bound to suffer. The study by Aziz et al. (2020) found attitude and technology skills as possible barriers to effective online learning. There are also cases where instructors who teach in face-to-face mode become reluctant to teach online, due to fear of the unknown and the thought of being replaced by computers (Kebritchi et al., 2017). The study by Rapanta et al. (2020) revealed that students, especially those with special needs were challenged by limited communication and socializing and longer screen time while teachers had issues with restricted options of teaching methods, inability to cover the entire content as planned, limited technology skills for successful online learning and unavailability of e-resources in the local language.

Notwithstanding the barriers to online learning, most adults have taken the opportunity to enhance their capacities, upgrade their qualifications for better job opportunities, undertake several liberal educational enterprises and meet other goals in education. What is critical is putting in place strategies that will support and sustain both students and faculty in their online teaching and learning engagements.

**Strategies for online teaching and learning for adults**

Given the opportunities that online learning presents to adult learners, researchers have come out with different strategies for managing online learning for adults, especially in critical situations such as the outbreak of a pandemic. There are strategies for designers and managers, faculty, and students for the effective delivery of online learning.
Designers and managers of online teaching and learning

The managerial and social aspects of online learning and teaching are critical for the success of online students (Baran and Jones, 2020). Effective planning, learner preparation, and enhanced interaction have to be ensured by designers of online teaching and learning platforms and programs (Rapanta et al., 2020). E-learning designers must consider the relations between online teaching, cognitive, and social presence (Ke, 2010).

The study by McQuiggan (2007) revealed that administrators of distance learning programs must perceive and manage faculty as adult learners and set up a faculty development model that includes the adult learning principles and how they could be applied in an online teaching and learning system. This will help to cultivate a reflective practice among faculty and enable them to explore new possibilities for teaching and learning in both online and face-to-face environments. In another study, McQuiggan (2012) recommended that administrators and faculty development specialists should move from one-size-fits-all training interventions and redesign capacity-building programmes within an adult learning framework that enables change. From the perspective of transformative learning, the process must be perceived as a transformation but not a translation.

Feedback is very useful for a successful online academic relationship to gain an active, quality learning experience through faculty, student, and content engagement. The feedback must be on both sides – from faculty to students and students to faculty. Both faculty and students must be organized, communicative, energetic, maintain a consistent presence in the online classroom, be able to navigate the educational technology with confidence, be timely in their responses, and meet the set deadlines. Tanis (2020) is of the view that holding students to high standards of academic performance, academic honesty, and professional conduct through the various online assessment activities is a critical factor for faculty in online teaching and students as well. Similar observations have been made in the study by Overstreet (2020). The author notes that due to the difficulty in building relationships and community in online courses with students who are studying at a distance, especially with courses that are limited by tight time constraints, the faculty must be organized, utilize social networking and initiate regular communication. Designers, therefore, have to take note of these and provided the needed features for effective and prompt feedback when setting up online academic programs.

Assessment be it formative or summative is a key strategy for successful online learning meanwhile it is seen as the most challenging part of the adoption of online learning by institutions that traditionally teach face-to-face and assess students as such. They are mostly concerned about ways of avoiding cheating and ensuring the integrity of the examinations. In this regard, the online learning experts who participated in the study by Rapanta et al. (2020) indicated that continuous assessment is the best assessment model in an online learning environment.

When designers and managers or administrators of online teaching and learning programs, especially for adult learners, take note of the crucial roles of well-planned and programmed user-friendly platforms supported by feedback and assessment features, they will put in systems to meet these criteria and provide training support for both faculty and adult learners to teach and learn in conducive online platforms. They could also put in monitoring systems for receiving prompt feedback from users to help improve online learning platforms for adult learners.

Faculty

Teachers teach the way they were taught. Therefore, adapting to new ways of teaching that depart from their norm becomes challenging. Their transition from traditional face-to-face classrooms to
online classrooms makes it challenging for them to find their teacher-self. A total reorientation is therefore critical in an online teaching and learning environment (Rapanta et al., 2020). Researchers have offered strategic ways for online teaching and how faculty have to be reoriented, resourced, and supported to work effectively online. Poon (2013) has recommended that in the situation of teaching online, especially during emergency times, the teaching style has to be kept simple. Simple and clear approaches in teaching that spell out modalities for instruction and assessment help to address the negative effects of online learning for underserved students (Howard et al., 2020). Instructors and facilitators, therefore, have to be well trained to provide effective support systems. Critical thinking, creativity, collaboration, and communication are required no matter whether the class is taught online or offline (Kim, 2020). Faculty-student communication, student-student communication, and content engagement in online classes are important in the process (Tanis, 2020). In the online learning system, teachers act as both constructors and actors. Their roles change from that of a content expert to that of a coach and a facilitator. As they design the tasks, environments, and resources for learning by students, they also have to shift between the roles of orchestrators and facilitators to create a teaching presence. A study by Rapanta et al. (2020) revealed that the design of activities for online learning must have a social, cognitive, and facilitatory presence. As a strategy for successful online delivery, the authors entreat faculty to use good resources that they can leverage. Baran et al. (2011) have noted that teachers have to be perceived as adult learners who need to always transform their perception of online teaching as they go through critical reflection and action. The authors recommend that collaborative work groups, community building, and group discussions should be incorporated into their online training interventions. Faculty cannot just take things for granted in an online learning engagement especially when it is targeted at adults. They have to subject themselves to training that will adequately prepare them to measure up to the expectations of the online delivery mode. That way adult learners will not struggle much to find their levels in their online classrooms.

**Students**

Students form the nucleus of the online learning enterprise. Their unique perspectives and experiences cannot be overlooked when designing and administering online academic programs. Designers and administrators of e-learning platforms and faculty have to pay attention to their peculiar position when working with them. Motivation and encouragement help to sustain them in their online learning environments (Ditta et al., 2020). Strategies that enhance learner participation, and self-directed and independent learning help to enhance their studies online. Poon (2013) has noted that the characteristics and the varied situations of the learners have to be factored into the design and delivery of online learning. Basic things of how students access and use the study materials should not be overlooked when engaging adult learners online.

Davenport et al. (2020) have indicated in their study that, not only do adult learners benefit from formal learning, but the formal learning process also benefits from engaging with adult learners as they share their lifelong experiences and bring them to bare in both the face to face and online classrooms. Adults learn by observing, asking, and seeking out others who have expertise. They follow step-by-step instructions in books or on websites and try to follow them to practice and build their skills. They also utilize tools and materials and try to draw guidance from experts. Their life experiences and knowledge are also utilized as natural collaborators, teachers, and mentors to those who happen to be their teachers. They are therefore a gift to their teachers as they share and utilize their lifelong knowledge and skills in any teaching and learning environment. The such potential
they carry to the online learning environment as well and must be strategically harnessed for the success of academic programmes that they engage in.

Much as students are expected to be autonomous in their online studies, they are expected to overcome isolation, not feel alone, learn as social beings, and learn from each other even at a distance. This is ensured by adopting active learning strategies to promote optimal learning. Receiving feedback from their peers, educators, and technological tool brings about learner satisfaction (Rapanta et al., 2020). Phillips (2005) has noted that as online continuing education continues to grow, educators will benefit from the application of creative and active learning strategies to enhance learning. In this process, the role of educators will evolve from expert authority to that of a coach and a facilitator as the students also emerge as independent and responsible for their learning. In the process of active learning, the needs of learners will be assessed, the power of feedback will be fully harnessed and the desire for lifelong learning will be established among students. The study by Ke (2010) revealed that adult students who have a stronger sense of community can attain a higher level of learning satisfaction. This is because social presence aids the attainment of cognitive objectives by helping to instigate, sustain, and support critical thinking among a community of learners. Fact-checking is critical for online learners. With the fast-growing nature of online content, students have to be oriented to adopt fact-checking strategies to help them develop more effective online evaluation strategies. Students have to be trained by their online facilitators to evaluate unfamiliar websites, critique digital evidence, and locate reliable sources during an open search on the internet.

Online learning has gone through a revolution. According to Pikhart and Klímová (2020), the current eLearning platform is no longer an attractive option for students who desire to create content, collaborate, and interact with each other as they can do on social media platforms. The formal academic environment will therefore have to mimic this strategy to achieve successful online learning. This approach will utilize the potential of Web 4.0, artificial intelligence, deep learning, machine learning, and computational linguistics. E-learning 3.0 featured machine learning, deep learning, and artificial intelligence while e-learning 1.0, 2.0, and 3.0 brought new approaches to education with the use of computers and screens. It will not be attractive and motivating for the technologically savvy students if their educational providers stick to the earlier e-learning features without leveraging on the added features and potentials of Web 4.0 and the creativity it offers for customized content development in the teaching and learning enterprises. Tanis (2020) has noted that for online teaching and learning to be effective, a well-designed classroom that promotes student engagement with faculty, peers and course content is a necessity. Adarkwah (2021) studied the online learning situation that Ghanaian students faced in the face of Covid-19 and recommended that policies of e-learning should meet the needs of all categories of learners such as the urban dweller, the urban poor as well as students in rural communities, where infrastructure is very limited.

This study brings out the perspectives of the non-traditional applicants of the University of Ghana who had to be migrated onto the Sakai Learning Management System during the Covid-19 outbreak to take their Access Courses and Continuous Assessments in an online environment.

**Method**

The study was designed to assess the experiences of adult applicants to the University of Ghana in the online learning environment during the outbreak of Covid-19. When the Government of Ghana announced the closure of schools in March 2020, managers of the access course decided to migrate the students to complete the remaining 7 weeks of tutorials of the mature access course online. This was followed by a period of 2 weeks of revision during which mock examination assessments were
conducted. After the revision period, they came to campus in person, to take the final examinations, observing all the laid down Covid-19 protocols.

When the decision was made to teach them online, the data of the applicants were immediately exported onto the Sakai Learning Management platform. All learning resources were also uploaded online. Students were to access all their study materials, tests, assignments, and results on the Sakai platform. In situations where tutors wanted to engage students on other platforms such as Zoom, students had to access the link through their Sakai platforms. This was a measure to trace the footprints of both tutors and learners.

The instrument used for this study had closed-ended questions except the last item that asked for their comment. The instrument was designed to find out the profile of the adult applicants in terms of gender, age, level of education at the time of the application to the University of Ghana, employment status, marital status, level of income; source of their information about the access course, their proficiency in the use of information and communication technology, how they engaged online during the access course be it through emails, zoom, WhatsApp, google classroom or other platforms, their preferred mode for tuition – either online or face-to-face contact, challenges they faced with the online tuition and general comments on their overall experience of the online learning. Specifically, some of the questions were stated as follows:

- What were the modes of online engagement?
- Would you prefer to have online tuition or face-to-face when admitted to the University?
- What is/are some of the challenges (s) associated with your online learning?
- How did you hear about the University of Ghana’s Access Course?

The instrument was designed in google forms and administered using the online learning platform Sakai and other class social media platforms from July 13 to July 31, 2020.

At the close of the portal, a total of 754 students out of an estimated 1729 applicants had responded to the survey, representing 43.6%.

To qualify to respond to the questions, each respondent had to first consent to answer the questions before proceeding to the actual questions. That is, once the applicant opened the form, a detailed description of the study was provided to allow them the opportunity to agree to continue with the questions or not. As much as possible, questions were detached from each other to allow a respondent to decide whether to answer a particular question or not.

As a way to guarantee confidentiality, the data did not pick any personal identifiers. All responses were anonymized during the data analysis.

IBM SPSS version 20.0 was used to analyze the data. The main statistical procedures utilized were descriptive statistics showing frequencies and percentages which have been presented in the form of tables and charts.

Table 1 presents the background information of the respondents. Concerning the sex of the participants of the survey, 50.7% were females and 49.3% were males. On age, half (50.4%) of the participants in the survey were less than 30 years old, 41.9% of them were between 30 and 39 years old and the remaining (7.7%) of them were 40 years old and above. Concerning higher educational attainment, three in four (74.9%) participants had completed SHS/A level/post-secondary, 16.6% of them had obtained Diplomas/HND from tertiary institutions, and the rest had Vocational/Technical (3.7%) training, and basic education (4.8%). For their employment background, more than half (52.3%) of the respondents were in full-time employment, with the rest being in part-time employment, self-employed, and or unemployed. For their marriage profile, two in three (66.4%) participants were single with the rest being married and or divorced/separated/widowed. They had varying income levels. Two in five (42.4%) were earning less than a cedi
equivalent of USD172.41 per month while the rest earned between USD172.41 and USD344.8, and some did not disclose their income information or did not have any income.

For marketing purposes and also as a way of checking their use of online platforms for basic activities, the respondents were asked to indicate how they got to hear about the Access Course for mature applicants and the entrance examinations. Responses, as detailed in Table 2, revealed that the main source of information about UG’s Access Course is family and friends (46.4%) followed by the University of Ghana’s website, flyers/banners, newspapers, social media, and others. Much as family and friends served as the lead sources of information, it is interesting to note that there was evidence of the use of social media by 7.2% of the respondents. This gives an indication of some level of online activity among some of the respondents, which could contribute to building their capacity for online engagement for teaching and learning.

| Variable                     | Frequency | Percent |
|------------------------------|-----------|---------|
| Gender                       |           |         |
| Male                         | 371       | 49.3    |
| Female                       | 381       | 50.7    |
| Age                          |           |         |
| <30 years old                | 379       | 50.4    |
| 30–39 years old              | 315       | 41.9    |
| 40 years old and above       | 58        | 7.7     |
| Educational level            |           |         |
| Basic (Primary/JHS)          | 36        | 4.8     |
| Voc/Tech                     | 28        | 3.7     |
| SHS/A’Level                  | 563       | 74.9    |
| Tertiary (Diploma/HND)/Professional | 125     | 16.6    |
| Employment status            |           |         |
| Full-time employment         | 393       | 52.3    |
| Part-time employment         | 119       | 15.8    |
| Self-employed                | 167       | 22.2    |
| Unemployed                   | 73        | 9.7     |
| Marital status               |           |         |
| Single                       | 500       | 66.4    |
| Married                      | 235       | 31.3    |
| Divorced/Widowed/Separated   | 17        | 2.3     |
| Income group                 |           |         |
| <GHC1000                     | 319       | 42.4    |
| GHC1000-GHC2000              | 220       | 29.3    |
| >GHC2000                     | 51        | 6.8     |
| Non response                 | 162       | 21.5    |
| Total                        | 752       | 100.0   |
Results

Proficiency in information and communication technology

The proficiency in information and communication technology (ICT) of the respondents has implications for successful engagement on the online teaching and learning platforms.

To find out their level of proficiency in ICT, basic questions such as ranking their knowledge of Microsoft Office and the Internet were asked. In response, two in five (39.8%) of the participants indicated that they had advanced knowledge of Internet. A slightly lower percentage of them had advanced knowledge in Microsoft Office (17.4%). Furthermore, as much as 5.3% of the participants did not know at all of Microsoft Office, whereas less than a percent of them did not know about internet (0.5%). Also, as much as 32.3% of the participants had beginner knowledge of MS office, whereas just about (14.1%) of them had beginner knowledge of internet. Therefore, overall knowledge of internet was higher than in MS office. A closer review of the results will reveal that as knowledge of the Internet was higher, over 90% of the respondents were proficient in ICT which was good for their online teaching and learning engagements. Figure 1

Means of online engagement

There are different means of engagement in online learning. For the Access Course, students were enrolled on the Sakai Learning Management platform. Besides that, they could use other means that they found convenient for the students. So, most of the tutors complemented it with zoom meetings. This was confirmed by the students in their responses. From the study, the majority (90%) of the participants indicated that they were engaged on the Sakai platform. Other platforms utilized were zoom (76.1%), emails (53.1%), WhatsApp (47.6%), and Telegram (1.3%). Figure 2 gives a pictorial view. It appears students found the learning management platform, Zoom, and emails to be user-friendly, hence the high utilization of those tools.

Tuition preference

Further to the item on the means of online learning was the question on tuition preference of the respondents. The responses revealed that four in five (84%) respondents prefer 50% online tuition and 50% face-to-face tuition. About 12% of them prefer only online and the remaining (4%) want strictly face-to-face tuition. The results give an impressive signal for possible interest in online

### Table 2. Source of information about UG access course.

| Source              | Frequency | Percent | Percent of cases |
|---------------------|-----------|---------|------------------|
| Family/Friends      | 349       | 30.9    | 46.4             |
| University website  | 295       | 26.1    | 39.2             |
| Flyer/Banner;       | 246       | 21.8    | 32.7             |
| Dailies (Newspaper) | 89        | 7.9     | 11.8             |
| Social media        | 81        | 7.2     | 10.8             |
| Radio               | 39        | 3.5     | 5.2              |
| Television          | 30        | 2.7     | 4.0              |
| Total               | 1129      | 100     | —                |

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learning. The results indicate a high interest of the adult learners in blended learning by having 84% of the respondents desiring to have 50% online and 50% face-to-face tuition. On top of that, 12% prefer only online with only 4% indicating a preference for face-to-face tuition only. When the mature applicants are successful in their entrance examinations, they will be admitted into the distance learning programme of the University of Ghana. This result is therefore a good indicator of their interest in the blended mode that the distance education programme uses.

**Challenges with online tuition**

Online learning comes with challenges. The respondents were, therefore, asked to indicate the challenges that they faced during the online learning engagements. From the results, the number one challenge with online tuition that the respondents indicated was poor internet connectivity (78.7%).

This was followed by a high cost of internet data (51.1%), lack of understanding of the grading system (24.3%), inadequate contact time (17%), poor feedback on students’ concerns (8.9%), and unsuitable time of engagement for the online studies (1.3%). See Table 3 for details.

The study went further to find out more about how much they invested in internet data for their studies. Hence, they were asked to indicate how much they spent per zoom meeting.
The responses revealed that the average cost of data per zoom meeting was USD 3.6 per meeting. This is on the high side for the average Ghanaian. There is thus the need for government support by negotiating with telecommunication companies to provide a special educational package for all students. These also call for policies that will improve IT infrastructure for teaching and learning.

Additional comments provided by the mature applicants include the fact that they are satisfied with the programme (21.7%, they are grateful for the opportunity to participate in the course (20.7%); they have acquired new knowledge in internet use and tools such as Sakai and Zoom and found network connectivity to be problematic (5.4%). Other comments include the fact that students want access to recorded lecture videos (4.7%) the need for increased enrolment of students (2%) and flexible online time (2%); the issue of not marking assignments (1.8%); the need to give students with connectivity problems extended deadlines for submitting their work, and the need to provide students with [affordable] internet data bundles.

### Discussion of results

**Proficiency in information and communication technology**

Internet use is an integral part of everyday life in contemporary society (Alfredsson, 2020). The study by Taha et al. (2014) revealed that internet experience had a significant impact on the ability of adults to perform certain tasks. Most adults use technology regularly (Scanlon et al., 2015) and demonstrate a wide variation of skills (Brown and Strommen, 2018). Meanwhile, their abilities vary in the knowledge and use of the Internet (Kwapong, 2009). Some of them rate their skills in the use of technology as poor or average (Scanlon et al., 2015). Internet experience has a significant impact on the ability of adults to perform certain tasks. In their study, Taha et al. (2014) found that only 21.6% of the respondents indicated they had no experience with the internet and had no basic understanding of excel. Adults who are not exposed to technology become limited in their daily activities.

Meanwhile, they have cognitive capacity and the opportunity to learn new technology-related functional skills. Adult learners mainly use the Internet for e-mail, search engines for news, health, economics, product, and all sorts of information that are relevant to their lives, and also for communication with their families and friends. Much as most adults cannot live a day without the Internet, the older ones find the pace of technology leaving them behind and putting them in socio-cultural isolation (Harvey and Nascimento, 2020).

The results from the study on adult learners revealed that over 90% of the respondents were proficient in ICT which comprises knowledge of the internet and Microsoft Office, this is good for

### Table 3. Challenges with online tuition.

| Challenges                              | Frequency | Percent | Percent of cases |
|-----------------------------------------|-----------|---------|------------------|
| Poor internet connectivity              | 592       | 43.4    | 78.7             |
| High data cost                          | 384       | 28.2    | 51.1             |
| Lack of understanding of grading system | 183       | 13.4    | 24.3             |
| Inadequate contact time                 | 128       | 9.4     | 17.0             |
| Poor feedback on students concerns      | 67        | 4.9     | 8.9              |
| Time of engagement not suitable         | 10        | 0.7     | 1.3              |
| Total                                   | 1364      | 100     | —                |

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their online teaching and learning engagements. What is critical is to further build their capacity to enable them to maximize the use of ICTs (Lee et al., 2020; Amanor-Mfiafo et al., 2020) and also reach out to the most vulnerable adults such as the oldest, those with lower income, and lower educational attainment and, thus, are not able to access online resources and digital technologies (Son et al., 2020).

**Means of online engagement**

Non-use of popular online media brings about social exclusion among adult learners who is found to be late in adopting new online media? Some of the common media that are or could be used synchronously or asynchronously include Google products, TV School, Zoom classroom, Skype, or Microsoft teams. The content could be video, voice, text, or a combination of all (Dhawan, 2020). Information Technology jargon such as online, Google, Internet, and login do not often mean anything to adult learners. Adults also have to cope with emotional reactions like fear, enjoyment, curiosity, frustration, and stress especially when they feel old, not well educated, not experienced in technology, and unable to operate basic gadgets (Hage et al., 2020). The majority (90%) of the mature applicants of the University of Ghana were engaged via the Sakai learning platform followed by zoom (76.1%), emails (53.1%), and then WhatsApp (47.6%). This indicates that, unlike the observations by Hage et al. (2020), adult learners are building their confidence in online learning. What is critical is to orient them to enhance their utilization of learning management systems as noted by Dampson et al. (2020).

**Tuition preferences**

Real-time, computer-based classroom has proved to be equally effective as the physical classroom especially when it is asynchronous Mullen (2020). About 88% of the respondents in the study by Hacisalihoglu (2020) revealed that the Covid-19 pandemic had an impact on their education, with 19% indicating a preference for online over face-to-face learning. Meanwhile, Yang et al. (2020); Julien and Dookwah (2020) have noted that face-to-face learning is essential for courses such as Mathematics. Kee (2020) has also written that digital immigrants require face-to-face interaction, WhatsApp groups, and blended learning approaches. The study that was conducted on mature applicants to the University of Ghana revealed that four in five (84%) respondents preferred 50% online tuition and 50% face-to-face tuition. This is very impressive. What they will need are our support systems to be able to sustain their learning activities for the successful completion of their period of studies. Respondents in the study that was conducted by Adnan et al. (2020) mentioned that they could manage their study time effectively online and easily complete assignments in time but not undertake group tasks and complete the entire course online. Meaning that they preferred a blend of both face-to-face and online interactions. For an online learning program to be effective, the learners have to be oriented on how to cope with the fast-paced online classes and be given sound computer and technological skills to learn from online lectures. In the case of Ghana, tutors will also have to be oriented to be able to support adult learners to successfully study online (Aheto-Domi et al., 2020).

**Challenges with online tuition**

Online learning presents some challenges. The challenges could be from the students, instructors, and the educational institution (Rasheed et al., 2020; Aboagye, 2021). Adult learners often lack
basic digital literacy and have difficulty in using digital devices such as smartphones and other multimedia interactive devices that use touchscreen technology. This has contributed to a sharp digital divide in the twenty-first century (Blazić and Blazić, 2020). Compared to younger adults, adult learners are less likely to own digital media tools such as smartphones. There could be a deficiency in digital skills. However, they have more daily free time to engage online (Moore and Hancock, 2020). Ghana is faced with the issue of ownership and inclusivity, especially among the visually impaired learners (Amponsah, 2021).

In a study by Adnan et al. (2020), the sudden shift from traditional classroom face-to-face learning to online learning posed challenges to the higher education students who participated in the research. As a result, they had reservations about online learning. The students had issues with limited high-speed internet facilities, poor interaction between students and instructors, and ineffective technology. Similar observations have been made in studies that have focused on Ghana (Adarkwah, 2021; Amanor-Mfoafo et al., 2020; Demuyakor, 2020). With the home study as a result of Covid-19, parents find the online, home-based learning and teaching as having a low impact, being less costly, not adding much value to the learning, and being time-consuming (Ngeywo et al., 2020). Students have been challenged with self-regulation and the use of technology for studying; teachers are reluctant to utilize technology (Dampson et al., 2020), while educational institutions had difficulty in providing suitable technology (Rasheed et al., 2020; Adarkwah 2021).

There is also the big issue of cost (Bariham et al., 2021; Demuyakor, 2020). Much as face-to-face studies, online and blended learning could present lower costs (Chirikov et al., 2020), a limited budget makes it difficult to allocate funds for investment in new educational technologies. Socioeconomic challenges emanate from social and economic factors such as payment for courses, subscription to internet packages, access to study materials, and other teaching and learning resources (Abdulmajeed et al., 2020).

In finding out the challenges they face, the mature applicants of the University of Ghana noted poor internet connectivity (78.7%), high cost of data (51.1%), lack of understanding of the grading system (24.3%), inadequate contact time (17%), poor feedback on concerns raised by students (8.9%) and unsuitable times of engagement for the online studies as the challenges that they faced on the program. It was further revealed that expenditure on data for zoom meetings was an average cost of USD 3.6 per meeting which is on the high side for the average Ghanaian. This confirms the finding by Demuyakor (2020) and Bariham et al. (2021) that there is a high cost of participating in online learning. Students spend so much money to buy internet data for online learning and internet connectivity could also be very slow for students in remote communities. Aboagye (2021) who also studied the Ghanaian situation has noted the need for governmental assistance in this case.

**Recommendations and Conclusion**

The impact of Covid-19 on all sectors of the economy including the education sector called for innovative approaches to managing teaching and learning. Online learning came in handy. Meanwhile, the sudden movement of courses to the online platform presented challenges to students, especially adult learners. The study of the adult learners of the University of Ghana who had to be migrated to the online platforms reveals that their knowledge of internet was higher than in MS Office; over 90% of the respondents were proficient in ICT; 90% were engaged via the Sakai platform; followed by zoom (76.1%); emails (53.1%), and WhatsApp (47.6%); 84% preferred 50% online tuition and 50% face-to-face tuition. Some of the challenges they faced included poor internet connectivity (78.7%) and high data cost (51.1%). Expenditure on data for zoom meetings was an average of USD 3.6 per meeting.
The adult learners developed an interest in blended learning, and basic support systems such as the provision of high-speed but affordable internet services will be of help to the students.

Aboagye (2021) noted in his work that the government should assist students to get laptops and tablets as some students rated challenges with phones and laptops. Students should also be introduced to online learning to build their online learning experience.

The blended approach should, thus, be used in higher educational institutions. Peer support should also be promoted to facilitate communication and collaborative problem-solving among adults in online learning (Chen et al., 2020). The adult learner should also be trained on how to use new technology (Harvey and Nascimento, 2020). Dhawan (2020) cautions that to make e-learning effective in such difficult times, there should be an efficient use of technology that has minimum procurement and maintenance costs but can be used to facilitate the educational processes effectively.

Online learning has come to stay. The advantages are tremendous. Once the challenges are addressed, students and providers of formal education in Ghana will perceive and utilize online learning as the new normal. What is critical is the provision of ICT resources and support systems to assist adult learners in Ghana to overcome all the challenges. Recognizing that about half of the students are comfortable with online learning, the University of Ghana should leverage on that to consolidate efforts at promoting e-learning at all levels of study in the University. The access course will have to be continuously conducted online so that more students across and outside the country could be reached. The University could also consider conducting the final entrance examinations for the mature applicants online or in a blended mode to make it fully accessible to foreign applicants. The University could use its corporate position to arrange with telecommunication companies and the government to provide software, internet data packages, and electronic devices such as laptops for students at subsidized prices. Meanwhile, for the sake of adult learners and those who are not very ready for online learning, administrators and faculty will have to be oriented to start simple and build on as students progress gradually to find a balance and work confidently in their online classrooms.

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