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# Forced to go online: A case study of learning consecutive and simultaneous interpreting under Covid-19 in Iraq

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**Abstract:** This paper explores the perspectives of Iraqi undergraduates studying consecutive and simultaneous interpreting (CI, SI) in the Department of Translation at Mustansiriyah University in Iraq following the sudden transition to the online environment due to Covid-19. The online mode of teaching and learning has never been adopted in Iraq before. This study, therefore, aims to investigate the challenges and opportunities that have emerged from this unprecedented experience of online learning. It does so by adopting a mixed-method approach combining an online survey and two online focus group sessions. We also conducted two online pilot experiments to test the feasibility of the Zoom app to teach CI and SI synchronously. The main findings of this study suggest that while a synchronous online learning environment would potentially contribute to enhancing interpreting skills, the online mode cannot totally replace actual classes in the Iraqi higher education context unless a rigorous infrastructure is first established.

**Keywords:** Online learning; synchronous; asynchronous; consecutive interpreting; simultaneous interpreting

## 1. Introduction

The impetus behind this study was to investigate students' new experience of learning consecutive and simultaneous interpreting (CI, SI) online as the Department of Translation (which teaches translation and interpreting modules) at Mustansiriyah University in Iraq had to switch to online learning for the first time at the onset of the COVID-19 pandemic in March 2020.

The advances in technologies have introduced non-traditional methods for teaching interpreting. While there are different terms used in the literature sometimes interchangeably to refer to these methods, including distance education (See Ko, 2006), e-learning (See Ibrahim-González, 2011) and online learning (Moor et al., 2011), in this paper, we use the term online learning. The latter specifically describes any learning experience occurring online which is mediated by the new media environment, i.e., the internet (Moor et al., 2011). Online learning of interpreting has been in place as either a separate or blended mode of study in many universities worldwide (e.g., Ibrahim-González, 2011; Lee and Huh, 2018; Perramon and Ugarte, 2020).

With the rise in communication technology, attention has been geared towards virtual learning environments (VLEs) and what affordances they can

offer to teach interpreting. These are "systems designed to support computer-based teaching and learning through which learners can access information, download content, and interact synchronously or asynchronously with lecturers and peers" (Trahan et al. 2011, p. 74 cited in Eser et al., 2020, p. 290). Tymczyńska (2009), for instance, explores how Moodle, a course management system, can be utilised to combine in-class and online learning activities for a healthcare interpreting course. Similarly, some European universities have developed software applications, multimedia tools, or sophisticated digital laboratories and virtual interpreting classes to teach interpreting online (e.g. Sandrelli and De Manuel Jerez, 2007; Blasco Mayor and Jiménez Ivars, 2007). Sabine Braun led the Interpreting in Virtual Reality project at the University of Surrey between 2011 and 2013 (Braun et al., 2013). The project trains interpreters in a tailored 3-D simulated interpreting environment hosted on the internet to provide an avatar-based experience. The application of avatars in interpreting learning has also been explored by Şahin (2013). In his study, Sahin focuses on Second Life, "a commercially available Internet-based learning platform that enables learners to access multisensory stimuli and quasi-professional practice settings" (Eser et al., 2020, p. 289). In 2017, Oktay Eser and Fatih Eser conducted a pilot project at Amasya University to test the feasibility of a three-dimensional virtual environment for interpreting using a pre-recorded animated dialogue and wearable technology (i.e., three-dimensional virtual reality glasses) (Eser et al., 2020). Reporting on this project, Eser et al. (2020) found that the technology could potentially simulate a real interpreting environment, enhancing interpreting training subject to the availability of proper "instructional support". However, it still faced several challenges, including equipment support and psychological barriers (Eser et al., 2020, p. 288).

In contrast to the above online experiences in interpreter training, interpreting used to be taught in actual classes in Iraqi universities, relying on traditional teaching methods. However, the COVID-19 pandemic created a new reality whereby universities worldwide were forced to move to online learning. Iraq was no exception. In Iraqi universities and other universities in the developing world, teaching via the online mode was an unprecedented experience (Baticulon et al., 2020). In Iraq specifically, the lack of a robust online infrastructure compounded by poor electricity and weak internet speed posed challenges for both lecturers and students. At its onset, the fresh experience of teaching interpreting online could be characterised by a random, unorganised, and decentralised process that lacked preparedness or a unified vision (Saif al-Din, 2020). It has further uncovered the lack of professional development all lecturers need to change their pedagogical strategies to fit the online learning environment. Consequently, at most universities, lecturers in general only slowly adapted to online learning, whilst some even resisted it, favouring traditional methods of teaching (Abdul Razaq, 2020). Such a slow response to online learning also applied to interpreting lecturers.

Early recommendations by the Iraqi Ministry of Higher Education and Scientific Research (MOHESR) were for universities to choose whatever freely available apps to communicate with the students online.[1] Google Classroom (GC), a free online platform launched in 2014 as a feature G-Suite for education, formerly Google Apps for education (Al-Maroof and Al-Emran, 2018), was then recommended for use in combination with other apps.[2] While there was no appropriate training on its use, workshops organised by individual lecturers on

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[1] See https://t.me/mohesr_official_channel/3061
[2] See https://t.me/mohieq/2033

the use of GC have been delivered regularly since May 2020.[3] Meanwhile, during the same period (May-June 2020), several universities issued detailed guidelines containing instructions on its use.[4]

Prior to the pandemic, the primary purpose of GC was to support face to face teaching and facilitate online learning asynchronously (Halverson et al., 2017). Since its introduction, the app has been "accepted and recommended by the educational community" for its flexibility and accessibility (Albashtawi and Al Bataineh, 2020, p. 79). GC can be accessed from any device and helps store, distribute, and share data between lecturers and students. It has been routinely updated to add new features. For instance, in April 2020, it was integrated with Google Meet, a video-communication service developed by Google, which was previously known as Google Hangouts, to facilitate synchronous online learning.[5] But even after the integration, GC continued to be used asynchronously in Iraq to teach interpreting during the academic year (2020-2021).

While there is ongoing emergent research exploring the online learning experience in the first few months of pandemic-related lockdowns in different parts of the world in relation to several disciplines (e.g. Baticulon et al., 2020; Adnan and Anwar, 2020), there is still a lack of similar research on online learning of interpreting during the same period. Using the case study of Iraq, our paper fills this gap in the literature by exploring Iraqi CI and SI students' perspectives about the fresh experience. Our study focuses on the learning process, excluding assessments. It draws on the Community of Inquiry (COI) framework to interpret its findings, using a mixed-method approach, including a survey, two focus groups and two online pilot experiments.

The paper is structured as follows. First, it introduces the theoretical framework, which will guide the analysis in the discussion section. Second, it details the methods used to collect and analyse the data. Third, it reports on the study results. Last, it discusses the main findings, concluding with some future recommendations.

## 2. Theoretical framework

Drawing on the constructivist approach by Dewey (1933), Garrison and colleagues (2000) discuss the centrality of the cognitive, social and teaching elements of presence for the success of any educational experience and for achieving a collaborative community of inquiry. Both lecturers and students establish a community of inquiry that-in our case- is mediated by the online environment. Garrison (2007, p. 61) maintains that although a sense of community can be created online, it faces the challenge of re-producing the face-face interaction between lecturers and their students, which takes place in traditional classes (Mayne and Wu, 2011).

The three elements are interconnected and not presented in any hierarchal order. A cognitive presence is an essential element defined by Garrison and colleagues (2000, p. 89) as "the extent to which the participants in any particular configuration of a community of inquiry are able to construct meaning through sustained communication". It undergoes four different phases: triggering event, exploration, integration and resolution (Akyol and Garrison, 2011), which

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[3] See for instance الجامعة المستنصرية , كلية التربية , تدريسي في كلية التربية يوضح الية تطبيق خدمة Google Classroom (uomustansiriyah.edu.iq) للتواصل مع الطلبة خلال فترة تعليق الدوام

[4] See الجامعة المستنصرية , كلية العلوم , كلية العلوم تنجز دليلاً إسترشادياً عن طريقة تنزيل إجابات الطلبة من منصة Google Classroom (uomustansiriyah.edu.iq)

[5] Control Alt Achieve: Google Meet is now integrated in Google Classroom!

together form the Practical Inquiry Model developed by Garrison and Arbaugh (2007). Triggering an event begins when an activity is set out for the students to engage them and assess their knowledge. The second indicator is about exploring the problem students may face and the search for related information and logical interpretations. Once the problem is understood fully, students move to the third phase, whereby they can construct meaning and make decisions about ordering and integrating ideas. The last stage involves taking action to resolve a particular problem (Akyol and Garrison, 2011). This phase is the most difficult to achieve because it depends on a coherent social presence and strong teaching presence (Garrison and Arbaugh, 2007). Without these, students will not be able to find any practical solutions for the problems they encounter.

Learning is a cognitive activity and a social one (Braun et al., 2013). A social presence is understood as "the ability of participants in the Community of Inquiry to project their personal characteristics into the community, thereby presenting themselves to the other participants as 'real people'" (Garrison et al., 2000, p. 89). In other words, it is about students' perception that they are interacting with real people online (Sung and Mayer, 2012). Its importance lies in its facilitation of learners' processes of critical thinking and development of a sense of community (Garrison et al., 2000). The lack of social presence, on the other hand, would negatively impact learners and their achievement, causing them to feel unmotivated, frustrated, and unsatisfied (Hughes et al., 2007). The medium through which students and lecturers interact plays a significant role in either strengthening or undermining learners' social presence.

Compared to text-based environments, multimedia platforms such as those provided by videoconferencing tools can enable students to engage and interact with each other and their lecturers (Kear et al., 2014). Even though face-to-face learning perception among students can be "higher than online learning in term of social presence, social interaction, and satisfaction", the affordances offered by the virtual environment can open the space for more innovation (Bali and Liu, 2018, p.1). Moreover, they can allow better interaction due to the use of non-verbal signs (Allmendinger, 2010). With regard to interpreting, in particular, research shows that virtual learning environments such as 3D virtual worlds not only strengthen trainees' engagement but help to reinforce their interpreting skills and simulate real-life practices (Berber, 2008; Braun et al., 2013). Such environments, however, require equipment, training, and funding, which may not be available in all universities (Braun et al., 2013).

Cognitive and social presences heavily rely on the teacher, whose role is crucial for fostering a collaborative environment and developing students' critical thinking skills. As Garrison and colleagues (2001, p. 90) demonstrate, teaching presence is "a means to an end to support and enhance social and cognitive presence to realise educational outcomes". This element of presence involves three functions: the design of the course material and its organisation, the facilitation of the social presence, i.e., interaction and discussion, and instructions, including providing feedback to students (Anderson et al., 2001). Teaching presence refers to students' engagement in the online environment and peers and their overall perception of the experience (Shea et al., 2003; Zhang et al., 2016).

The sudden switch to online learning in Iraq without any previous experience on the part of teaching staff put the burden on the lecturers themselves to come up with practical solutions to restore the teaching presence in the online learning environment. Anecdotal evidence suggests that it was challenging for most interpreting lecturers to seek effective pedagogical strategies or approaches suitable for online teaching in such a short time. As a result, a robust teaching presence could not always be fulfilled, which, in turn, affected the social and cognitive presences. In other words, to establish an

appropriate teaching presence in the online environment, lecturers need time and professional support to prepare the online course by "designing its structure, developing multimedia lectures, creating learning tasks, and setting up schedules" (Zhang et al., 2016, p. 889). In the discussion section, we will discuss the study findings in the light of these three concepts.


## 3. Methodology

### 3.1 Background of the study and research questions

Our research involved third-year students studying CI and fourth-year students studying SI in the Department of Translation at Mustansiriyah University in Baghdad, Iraq. As mentioned in the introduction, the study aimed to explore the students' online experience of learning CI and SI. Before the pandemic, these two modes of interpreting were taught face-face by three lecturers, focusing mainly on the practical aspects of interpreting. In other words, students were originally trained to practise CI and SI three times a week in the department's interpreting laboratory. However, the interpreting laboratory was looted entirely in the aftermath of the US-led invasion (Aljazeera, 2004). It has not been possible to replace it with a new specialised lab to this date due to bureaucratic red tape. The alternative involved a sound lab, which needed adaptations to make it suitable for interpreting training purposes. During each session, students were trained to practise each mode by consecutively or simultaneously interpreting Arabic or English-language recordings involving various topics and genres, including political statements or conference speeches. Each recording was divided into chunks to allow students to participate. Due to the time limit of each session (50 minutes), the teacher was not always able to give detailed feedback on individual students' performance. Instead, each teacher aimed to provide general feedback on the most commonly made mistakes, providing tips for improving interpreting skills.

The traditional training was substituted by asynchronous online learning immediately following the first lockdown in Iraq in March 2020. Therefore, lecturers did not have enough time to re-design their courses or plan for new pedagogical approaches that could be more applicable to the online learning environment. What they could generally do was uploading practice audios or videos, as well as PowerPoint slides or pre-recorded lectures onto GC three times a week. Students were then asked to upload their interpreted renditions. Feedback on their performance was not always provided by all the lecturers, as discussed later. Other apps and interfaces, such as Telegram- a social messaging app-, the Academic Profile- Mustansiriyah University internal management system-, Zoom- a cloud-based videoconferencing app-,among other apps, were inconsistently used in combination with GC to communicate with the students. However, the process was fraught with challenges and difficulties, as revealed by our study findings.

In light of the above, our research paper was set out to answer the following questions:
1. What were the challenges facing CI and SI students when they first moved to online learning?
2. Were there any learning opportunities emerging from this experience?
3. To what extent was an asynchronous learning environment adequate for improving students' interpreting skills?
4. Is it possible to employ a synchronous online environment to teach interpreting in the two modes?

### 3.2 Methods

We adopted a mixed-method approach to address our research questions, integrating quantitative and qualitative approaches to collect and analyse the data (Pluye and Hong, 2014). A mixed-method approach "combines the strengths of, and [compensates] for, the limitations of quantitative and qualitative methods" (Pluye and Hong, 2014, p. 30). Thus, we used a survey to gather information from a good number of respondents (Munn and Derver, 1990) as set out below. However, surveys are not the best methods for "collecting explanatory data about emotions, opinions and personal experiences" (Saldanha and O'Brien, 2014, p. 152). To gain a deeper understanding of the students' online learning experience, we conducted two online focus groups.

Focus groups help to reinforce existing knowledge about participants' views and attitudes (Saldanha and O'Brien, 2014). Therefore, both the survey and the focus groups were used to answer the first three questions. Moreover, focus groups can be used as a means of "brainstorming and generating new ideas" (Edley and Litosselitti, 2010, p. 170). In this regard, focus groups were beneficial for our research because they enabled us to discuss the possibility of conducting an online synchronous learning experiment where the participants could be involved. Therefore, we carried out two online pilot experiments to test the efficiency of the Zoom app for a synchronous online learning experience of both CI and SI training. This method addressed our fourth research question.

### 3.3 Participants, data collection and analysis
#### 3.3.1 Survey

We designed an internet-mediated survey (Saldanha and O'Brien, 2014) using Google forms. It was distributed to 350 CI and SI students by the first author of this paper via email in May 2020. Consent was obtained at the start of the survey, and study data were anonymised. Participants were asked to answer all the questions voluntarily, and they were informed about the different stages of the study. A total of 137 students responded to the survey (61 SI students and 76 CI students). The survey consisted of four sections. The first section asked students about the module they were enrolled in and whether they had received any kind of training on online learning. The three main sections were designed using a 5-point Likert scale. The first group of questions explored the level of agreement among students on their access to the internet, the internet speed, skills required or acquired to use the internet, their communication with the teacher and peers, the support provided by the university, department, or the teacher, and the usefulness of the asynchronous environment for the two modes of interpreting (See Table 1 in the Appendix).

The last two sections probed students' opinions on the effectiveness of online resources and apps or interfaces utilisation (see Table 2 and Table 3 in the Appendix). Each section had a qualitative component, where participants could add further comments. We sent the survey questions to an independent researcher to check the readability of the questions before sharing them with the study participants. At the end of our survey, we asked those willing to participate in the focus groups to provide their email addresses.

We entered the survey data into SPSS (Statistical Package for the Social Sciences), a statistical software programme, version 26. The programme facilitated the statistical calculation of the weighted mean (WM) of the Likert scale for each question (See Appendix) after converting the graded responses into numerical values for the purpose of this study. We also used descriptive analysis by calculating percentages for each response. The numbers gained from the WM of the Likert scale and the percentages helped us to generate more

focused and in-depth focus group questions around barriers facing students and how they adapted to the new situation.

### 3.3.2 Focus groups

Thirteen students (six SI students and seven CI students) participated in the focus groups sessions. We used a homogenous focus group technique based on the module (Smithson, 2000). In other words, one focus group consisted of CI students and the other of SI students. This technique helps minimise the dominance of a single voice "overriding other voices" (Smithson, 2000, p. 108). A semi-structured approach was employed to design our focus groups. Semi-structured focus groups enable the moderators to prompt the discussion using a set of open questions, with a considerable degree of flexibility (Edley and Litosselitti, 2010). The first question was a general one seeking descriptive information to help break the ice between the participants (Saldanha and O'Brien, 2014). The subsequent questions addressed obstacles to online learning of interpreting and whether there were any emergent opportunities. The language in which we conducted the focus groups was English, but students who favoured speaking in Arabic could do so. Both focus groups were run synchronously online via Zoom. Each session lasted for 90 minutes and was moderated by both authors. We used the Zoom Record feature to record both sessions after securing our participants' consent.

We fully and manually transcribed the audio recording of the two focus groups translating Arabic-language data into English. We analysed the transcripts thematically, combining Boyatzis' (1998) coding reliability approach and Braun and Clark's (2006) reflexive thematic analysis (TA). We did this by following the latter's six phases of analysis: familiarisation with the data, generating initial codes, searching for themes, reviewing themes, defining and naming themes, and producing the report. At the same time, we sent our codes to an external researcher to verify them for rigour. We then combined the online survey and focus group data and analysed them qualitatively into themes. While our themes fall into what Braun and Clarke (2019) call domain summary themes, we interpreted them more critically in the discussion section.

### 3.3.3 Online pilot experiments

We conducted the two online experiments separately to test the applicability of Zoom for teaching CI and SI. Informed consent to participate in the online pilot experiments was sought from participants just prior to the focus group sessions. In other words, the same focus groups participants took part in the experiments. Each experiment session lasted for 90 minutes. To test the synchronous features provided by Zoom for CI training, we used an 11-minute long English-language video titled "The Top 10 Celebs who give the Best Award Show Speeches".[6] The use of the video was essential to retain the non-verbal signs, which could assist in the process of interpreting. We used one video only because, unlike SI, CI involves pauses to allow for note-taking. On the other hand, in the SI experiment, we used two shorter audios after converting them to mp3 to simulate actual classes, where students usually interpret in isolated soundproof booths and are not able to see the speaker. The first audio was just under 3-minutes long and was an excerpt from Obama's weekly address titled "Taking action to spur competition in the airline industry". The second audio, on the other hand, was a 2-minute-long remark by King Abdullah II of Jordan at the Global Vaccine Summit.[7] Unlike the CI session, we were only able to use world leaders' speeches in the SI experiment because the main objective of the SI

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[6] https://www.youtube.com/watch?v=VI1Mol2wxFo
[7] https://www.youtube.com/watch?v=rGLahI7B9Ws
https://www.youtube.com/watch?v=sFlz4LY9jvk

module is to train students in the interpreting of mainly political speeches. We conducted a brief survey at the end of the experiments, asking students whether they were happy with the synchronous experience.

## 4. Results

### 4.1 Lack of rigorous online infrastructure

Developing an infrastructure for online learning requires planning, formal training, organisation, and decision-making, among other things (Venkatesh and Zhang, 2010). As mentioned in the introduction, online learning had never been used previously in Iraq. Nor has it been blended with campus learning at any point before the pandemic. This means that an online infrastructure had not yet been developed when universities suddenly moved to online learning due to the pandemic. Furthermore, our survey and focus groups data indicate that non-institutional challenges, mainly patchy internet service and frequent power cuts, have also impacted building such an infrastructure.

### 4.1.1 Internet reliability and power cuts

One of the main barriers to online learning in general, and to that of CI and SI, in particular, was weak internet service. Patchy internet was disruptive to both lecturers' and students' learning experience. We, therefore, received divergent responses to the statement on students' accessibility to the internet (see Table 1 in the Appendix), with 30% of the respondents undecided. Meanwhile, 32.8% of the respondents strongly agreed with the statement on the significance of internet speed for their online learning, and 14.6% agreed.

A weak internet connection meant that the process of uploading and downloading practice audios or videos was particularly time-consuming. All focus group participants brought this point up. One CI student complained: "Uploading videos takes ages. It's a big problem". Another SI participant expressed frustration over internet service, which made him unable to download some pre-recorded lectures: "Internet may go off, and I cannot download the lecture recording". Other students also pointed out that lecturers themselves sometimes were unable to upload videos or receive students' recordings.

Our focus group participants said students were able to address this problem by simply being patient, resilient, and persistent. They would keep trying different technological techniques to download audios or videos when the internet speed was slow. One student thus mentioned that she had to convert an audio file uploaded by her teacher on GC to Telegram, where she could change its resolution and successfully download it.

During the focus groups discussion, all SI and CI participants complained about frequent power cuts, which badly affected Internet coverage in Iraq. "Electricity is another problem hindering our online learning", says an SI participant. As noted by Istepania (2014, p. 2), "Electricity production was marred with exceptional power cuts and the situation was worsened following the invasion by the U.S.-led coalition in March 2003". To compensate for power, the majority of Iraqi households rely on private generators. So, when there is a power cut, Iraqi families would switch to the private generator (Afp, 2013), meaning there is a period when there is an inevitable loss of power. This can last from a few minutes to hours. To solve this problem, some of our focus groups participants said they opted for an interruptible power supply UPS attached to their devices so that they could remain connected whenever there was a power cut. However, having a private generator is still something impoverished families cannot afford, leaving questions about the feasibility of online learning for all students.

*4.1.2 Limited institutional support*

Institutional support for both lecturers and students is a crucial component of a solid online infrastructure. Drawing on Gold et al. (2001), Aldholay and colleagues (2018, p. 117) define institutional support as "the activities performed by the higher management of public universities in clarifying the goal and vision of online learning to students and encouraging them to become involved with the system directly". These activities include clear instructions, guidance, frequent communication, and training on the use of digital platforms (Aldholay et al., 2018). In response to the first question in our survey on whether students received any training on internet platforms for online learning purposes, 60% of our survey respondents said they never received any training in online learning. Their answer was unsurprising given the fact that there was no IT team or unit within the department or university, which could provide training to students on how to use the online system (Wang and Wang, 2009). In the open comment section in our survey, one student considered online interaction with their teacher before the pandemic as a sort of training when s/he wrote, "it [training] only happened once before the Corona pandemic. I sent my video simultaneously interpreting to the teacher and received feedback from her. So it was a kind of an online process". The fact that online communication with the teacher was confused with training is telling. It shows that some students were not even aware of what training should entail. When we asked the same question during our focus groups, both CI and SI students confirmed that they never received any such training.

Guidance received by the students from their university or department was initially minimal. In our survey, the WM of the support provided by the university or the department was 2.70 and 3.06, respectively. Our focus groups respondents said that the limited communication between them and their department or university had impacted their motivation to learning. They only received scattered instructions passed by MOHESR to the department and then to the students' representatives, who would then share them with other students. As a CI student puts it,

> The only instructions we get were sent by the ministry to the department, and then the department sent it to [students] representatives, who sent them to other students. It is not support, just instructions, unhelpful ones. It has been frustrating. They asked us to change our names from Arabic to English or put photos, placing the burden on students, especially female students who may not want to put their pictures due to social barriers.[8]

The lack of support or training has made the students become more independent learners. In our survey, 41% of the respondents agreed with the statement on obtaining new skills, and 21.9% strongly agreed. Its WM was therefore high (3.71). YouTube seemed to be particularly useful for self-training purposes. It had a high WM of 3.64 in our survey. During our focus group discussions, our participants appreciated independent learning as an advantage, which helped them learn or develop new skills. According to our participants (abbreviated as CI or SI parts):

> Now, I know how to use Microsoft Office. I can upload and download videos. I did not have any computer training before, but the situation forced me to train myself. YouTube helped me a lot in this regard. (CI Part 1)

> I believe that every experience gives us something to learn. (CI Part 2)

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[8] Some female students from conservative backgrounds cannot use their photos on social media.

I also learnt how to use Microsoft Word more efficiently. I gained technological skills. (CI Part 3)

I could use many apps I haven't used before, like GC, Zoom, Microsoft Teams. (SI Part 1)

Multi-tasking is a new skill. (SI Part 2)

You have had to depend on and train yourself at this point. I started to do this when we moved to online learning relying on YouTube. (SI Part 3)

Moreover, students were mostly reliant on the lecturers. This explains the relatively high WM of the corresponding statement in our survey on the support received from the teacher (3.62). However, the other statement on the communication with the teacher had a lesser WM of 3.6. Only 10.2% of the students strongly agreed with the statement, 27% agreed, and 29% were undecided.

When we reflected on these figures in our focus groups, we found that there was disagreement among students on the support provided by the teacher in question. CI students generally commended the teacher's role, maintaining that they had no issues communicating with her. According to one CI student, the only support he received was "from their teacher. As for the department or the university, there is nothing I can recall". On the other hand, SI students had a less positive experience due to the limited communication with their lecturers, and consequently, the lack of feedback received. As two SI participants noted:

Lecturer only sends us videos. No feedback. We should rely on ourselves. (SI Part 1)

We think feedback could have been valuable. (SI Part 2)

Several participants in our two focus groups interpreted written feedback as the most crucial support they felt they needed the most. They believed that the online learning environment could potentially allow for more detailed feedback than the one they used to receive in the classroom. For them, feedback was vital for understanding and for improving the quality of their interpreting. In other words, feedback was essential for fostering a cognitive presence. According to three CI and SI participants:

I think the best kind of support is to give us feedback on whether our interpretation is good or not. (SI Part 1)

This is the first time we receive written feedback. We wish this to continue even if we go back to class. (CI Part 1)

Feedback is perfect. It is more detailed than the classroom. The more detailed the feedback, the more valuable it is. (CI Part 2)

Similarly, in our survey, written feedback had the highest WM among other online resources (3.65) (please refer to Table 2 in the Appendix).

A strong teaching presence significantly helped CI students to overcome any lack of motivation they first experienced. In contrast, a less supportive and less active teaching presence negatively impacted SI students' perceptions of their new online learning experience. SI participants were generally not pleased with the new environment. However, some of them proposed a justification for the limited communication they had with their SI lecturers. In their opinion, their lecturers might have had inadequate resources, training and computer

skills and, therefore, participants felt it would be unfair to blame them for the poor communication.

> The lecturers could have just given us feedback, but there are little things they could do online. (SI Part 1)

> I feel the teacher was disappointed by the experience. (SI Part 2)

> What else the lecturers could do? (SI Part 3)

> Students and lecturers were not prepared for this type of study because of the lack of capabilities. (SI Part 4)

> I think our lecturers need to be more trained about managing an online class, and so do students. (SI Part 5)

Other SI participants disagreed as they thought the lecturers should have communicated with them. They could not find any justifications for a weaker teacher's presence. As two SI students put it, "No, the teacher could have been more collaborative, communicating with us…The teacher is responsible and should have communicated with us". Without an appropriate teaching presence, it is hard to achieve cognitive or social presences. As indicated by SI focus group participants, the lack of feedback, in particular, was frustrating and had a negative impact on their motivation to learn.

### 4.1.3 Poor internal server

Even though Mustansiriyah University launched its Academic Profile in 2017[9], a learning management system supposedly akin to Canvas or Blackboard, the system has remained limited in its capacity and features, mainly offering a single-direction channel of communication. In other words, while it allows lecturers to upload their lecture slides or notes and to make announcements, it does not allow students to communicate with their lecturers. Nor does it provide a discussion board where students can post questions or exchange ideas. The system has only been useful for accessing exam grades and results. Therefore, it was no surprise that the system was given the lowest score among our survey list of online interfaces, with only a 1.98 WM. In other words, 46% said the Academic Profile learning management system was the least useful, and 24% said it was not very useful (see Table 3 in the Appendix).

Likewise, our focus groups participants criticised the system for its slow and inefficient service. A CI participant commented that the "the Academic Profile is crap and so slow, we need to wait three to four hours to download lectures, and it is really [a] very bad service; actually, it is like nothing".

### 4.2. Google Classroom as an alternative learning platform

To compensate for the ineffective Academic Profile, and in line with MOHESR recommendations, CI and SI lecturers employed GC in combination with other apps. That is why it was ranked the highest app among the list of apps and interfaces in our survey, with a WM of 3.64. The first author of this paper used the platform to communicate with the students, upload audio and video clips for students to interpret and provide feedback. As discussed earlier, GC was predominately used asynchronously, which still had its own advantages and disadvantages as set out below.

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[9]https://uomustansiriyah.edu.iq/web_college.php?id_dept=8&lang=en

*4.2.1 Advantages: Self-learning skills*
Our survey data showed that videos, audio recordings, PowerPoint slides, and pre-recorded lectures uploaded to GC were rated highly by our respondents, with a WM of 3.96, 3.63, 3.37 and 3.58, respectively (see Table 2 in the Appendix). Our survey results also demonstrated that learning asynchronously had some potential, primarily enabling students to practise their recording activities multiple times, which gave them more flexibility and control, and boosted their self-confidence. Therefore, the statement with the highest-ranking WM (4.05) was about control. Furthermore, our respondents largely agreed with the statement on the benefits of practising homework many times (WM of 3.91). They also responded positively to statements no.7, 8 and 9 on flexibility (3.72 WM), confidence (3.81 WM), and time management (WM of 3.29) (see Table 1 in the Appendix).

Meanwhile, our focus group participants said they felt they became more self-confident and flexible as they had more control over their time. They could re-play their practice audios or videos countless times until they felt they mastered the interpretation. As one SI participant puts it, "I can repeat the videos many times and can research the topic, look up words. This gave me much time to interpret. It gave me flexibility and control". Another SI student found the asynchronous training more beneficial than face-face learning due to the lack of a specialised lab, as previously explained. He said that he "could hear the sound of relevant audios or videos more clearly now". These results suggest that the cognitive presence could be partially restored. A point we will revisit in more details in the discussion section.

*4.2.2 Disadvantages: Limited peer discussion and lack of pressure*
*Limited peer discussion*
GC asynchronous environment appeared to hinder peer discussion. The relevant statement on peer discussion received a WM of 3.6, but it had conflicting responses (only 7% strongly agreed, 32% agreed, 28% neutral, 24% disagreed). Our focus groups discussions also mirrored these responses. Our participants disagreed on whether they could engage in peer discussion or not. They did not use GC to communicate with each other. Instead, they resorted to Telegram, "a cloud-based app which allows users to exchange videos, pictures, audios, or any file stored in a server without occupying space in their mobile device" (Abu-Ayfah, 2019, p. 51) to enable student-student communication. This social media app has been increasingly used in various fields, including English language teaching (e.g. Naderi & Akrami, 2018). In our survey, Telegram received a high WM of 3.97.

Our focus groups participants said that some students used Telegram to form private groups where they could communicate with one another. However, the tool was not productive for all students, as revealed by our focus groups data. Some students felt that Telegram discussion was restricted to "basic questions", which were only useful for some students. According to one CI participant, "Most students use Telegram to post questions. It is useful for the mid and lower-level students, not for top students. They ask any question and other students try to reply and solve problems for them". Thus, Telegram did not amount to a collaborative learning environment. Nor did it help to improve students' cognitive skills.

Regardless of the app, some students felt unmotivated to interact with other students due to the surrounding political context. Before the global crisis, Iraq witnessed a massive protest movement in which many students were involved, demanding political and economic reforms. The protest was met with violence and did not yield a radical change (Abdul-Ahad, 2019). Participants reflected upon this during the focus group sessions. In one SI participant's words, "If we

ask students to have a group study or discussion, most of them, like 75%, would say it's not the right time. We are going through a lot already". All other students agreed. "Yes. I agree, too. You'd be ridiculed", another student pointed out.

*Lack of pressure*

Learning interpreting asynchronously was found to be the main obstacle to developing students' cognitive skills. Interpreting requires a synchronous environment, where students can interpret as they listen to the speaker. Without this environment, students could not perform under pressure, which is vital for simulating interpreting in real-life scenarios. That is why we received varied responses to our survey statement: "asynchronous teaching of interpreting helps to improve my interpreting skills", which had a low WM of 2.67. While 24.1% of the respondents agreed with the statement, 41% could not decide, and 15.3% disagreed. Furthermore, 40% of the students agreed that "asynchronous teaching compromises some elements of interpreting", which had a WM of 3.26. 38% of the respondents chose neutral.

In our focus group discussions, all CI and SI students highlighted the importance of pressure for their interpreting practice. They were concerned that interpreting asynchronously would not make them competent interpreters after graduation. They, therefore, noted:

> We have to give ourselves a minimum amount of pressure. (SI Part 1)

> Flexibility may help, but we need to put ourselves under pressure as we did in class when we were in direct interaction with the teacher. (SI Part 2)

> The only thing that CI could help is by simulating the environment that you're expecting to work under, mainly the pressure you feel while performing in front of your teacher and colleagues. The element of stress was gone when we started doing online. You have a lot of time to do it, so it became similar to other types of translations. (CI Part 1)

> While we have a lot of time to practice, it puts us out of the natural environment of CI. We don't take things seriously. We just keep repeating the videos until we perform a good interpretation and send it. It doesn't reflect our skills. (CI Part 2)

Students said that a synchronous learning environment was crucial for improving their interpreting skills. Still, they were concerned that this might not be achievable due to internet speed and power cuts. We, therefore, suggested conducting an online pilot experiment on Zoom to test its suitability for training interpreters in both modes. We wanted to test it live as a synchronous learning experience with the students. Zoom is another popular video conferencing app, which enables a synchronous learning environment. It has several features, including "annotation tools, polls, breakout rooms and video and screen sharing" (Kohnke and Moorhouse, 2020, p. 2). Recent research shows the effectiveness of these features for creating an interactive and social synchronous environment (Kohnke and Moorhouse, 2020).

*4.3 Experiment*

Both CI and SI sessions went smoothly with no interruption. Fortunately, internet connectivity was acceptable, and no one experienced any power cuts. We first tried to make use of the Breakout Rooms feature but found out that it isolated students and lecturers from one another. So, we decided against using Breakout Rooms. All students had a chance to interpret more than once. Also, each student received instant feedback on their performance. Zoom could fully retain the features of the CI. The quality of the sound was clear, and no problems

were faced. In the SI experiment, however, echo and noise could be heard, affecting the sound quality and interfering with the interpretation. To overcome this problem, we uploaded the source videos onto GC, where students could immediately access, download, and hear whilst concurrently interpreting via Zoom. Zoom interactive features such as In-Meeting chat and nonverbal feedback enabled by various signals: Raise hand, Yes or No, Go slower or Go faster, allowed all students to engage.

The End of Meeting Feedback Survey helped us to gain information from the students on the quality of the session. All participants said they benefited from the experiments and found that Zoom could be a suitable solution for providing a synchronous environment that is necessary for strengthening the cognitive presence. At the same time, they felt that combining the synchronous and asynchronous online environments could achieve optimal learning outcomes.


## 5. Discussion and conclusions

Our findings revealed that the three presences in the COI framework were largely undermined in the first few months following the abrupt transition to online learning in Iraq. Firstly, internet connection, which is the cornerstone for a successful online learning experience (Stanley, 2019), was not stable. A patchy internet connection and slow speed, therefore, interrupted students' learning. Frequent power cuts further complicated the unstable internet service.

Secondly, a solid infrastructure for online learning was underdeveloped before the transition. This is because face-face learning was the only mode of study adopted in Iraqi higher education, as previously explained. In this regard, and based on our survey and focus groups data, organisational support was minimal and was reduced to basic instructions, described by our participants as insufficient and unclear. Amid lack of training and poor communication with the university or department, students felt they were thrown into disarray, describing the experience as chaotic at first. Students, therefore, mainly relied on their lecturers. A teaching presence was the catalyst for effective cognitive and social presences. Unlike CI students who felt motivated to learn interpreting online primarily due to the active role of their teacher, SI students were disappointed by a weaker teacher presence, and thus, were less motivated to learning SI online. In the case of SI students, limited communication with the lecturers and lack of feedback meant that the three main elements of teaching presence: design of collaborative learning activities, facilitation of discourse in the form of meaningful guidance, and direct instruction in the form of intervention and correction of any misconceptions (Garrison et al., 2001; Mulayim and Lai, 2015) were lost.

Teacher's feedback, a vital aspect of the third element in the teaching presence, was seen by our survey and focus groups respondents as the most crucial factor for enhancing the cognitive presence. Studies demonstrate that detailed feedback helps to strengthen students' translation and interpreting skills (Neunzig and Tanqueiro, 2005; Lee and Huh, 2018). As shown by CI students, in contrast to traditional classes, where students interpret shorter chunks and receive general feedback only due to the large student cohorts, the online environment has allowed for elaborative feedback. All CI students said they would like this to continue after returning to traditional classes. In-depth feedback positively influences teaching presence, which, in turn, directly contributes to facilitating more effective cognitive and social presences (Garrison and Arbaugh, 2007; Lee and Huh, 2018).

SI students, on the other hand, felt disappointed by the absence of feedback. They described feedback as the most important thing they wanted their lecturers to provide. However, some of our SI participants justified their lecturers' relatively passive role and lack of feedback when they said lecturers themselves needed training and might not have been well-prepared for online teaching. Indeed, lecturers also require support from their faculty or organisation in the form of mentorship programmes, training workshops, peer-discussion, etc. (e.g., Kopcha, 2010; Baran and Correia, 2014). Amid the lack of professional support, lecturers in Iraq had to rely on themselves to develop their technical abilities and skills in a short time to re-produce both the cognitive and social presences. Not all lecturers were successful at this, which explains students' varying responses to questions on the support provided by the teacher or their communication with the students.

Despite all these challenges, there were some opportunities. At an individual level, students said they could adapt by relying on themselves and becoming autonomous learners. Autonomy allowed them to gain or advance diverse general or interpreting-specific skills, which positively impacted their online learning experience perceptions. A successful online learning experience can be made possible by self-directed learning and good technological skills (Smith et al., 2003; Cercone, 2008). However, these are not enough for "constructing meaning through sustained communication" or collaboration among students, which is vital for enabling critical thinking and improving students' understanding, i.e., cognitive presence (Garrison et al., 2001, p. 89).

Moreover, not all students were able to develop these characteristics (Dabbagh, 2007), especially due to the lack of training on the use of online interfaces for learning purposes. A collaborative learning environment was challenging to create initially due to the poor features of the internal university server, prompting both lecturers and students to seek other alternatives in line with the recommendations of the Iraqi Ministry of Higher Education. In this regard, our findings demonstrated that Telegram was the most popular tool used by students to share information or post questions.

In recent years, Telegram has been a popular social app widely used by the youth worldwide due to its various features that allow its users to share files in different formats without taking much space in their mobile phones (Ghobadi and Taki, 2018). Emerging research on the use of Telegram in higher education shows that the app is gaining popularity among students learning English (Abu-Ayfah, 2019) as it has the potential to establish a social, and consequently cognitive presence, enabling "collaborative learning" (Aghajani and Adloo, 2018, p. 434). Telegram enables its users to form groups where they build a cohesive community and engage in peer discussion. However, in our focus group sessions, there was disagreement among participants on the effectiveness of online peer discussions in general. Unlike CI students who benefited from Telegram by forming private groups where they were able to exchange ideas or post questions, SI students felt more isolated and did not communicate with each other.

Even in the case of the former, the questions asked in the app were seen by the students as "basic" and could neither help to keep them engaged, nor could they help advance their skills. In other words, the exchange of information could not amount to a "collaborative community of inquiry" (Garrison et al., 2000, p. 96). Social presence goes beyond the mere process of asking questions or sharing information. It can only be dictated and reinforced by the "tone of the message", which "in a true community of inquiry...[should be] questioning but engaging, expressive but responsive, sceptical but respectful, and challenging but supportive" (Garrison et al., 2000, p. 96). Unless organised and facilitated by the direct intervention of the teacher in the form of guidance, structured

discussion and activities, Telegram or any other app with similar potentials would fail to address social presence. Without combining a social presence with an effective teaching presence, cognitive presence cannot be fully realised.

Based on our study findings, the experience was slightly different in GC, which was the key online interface used by the lecturers of both interpreting modes to teach interpreting. As mentioned earlier, GC was solely employed asynchronously in 2020. Emerging research around the utilisation of GC or the Classroom Suite of Educational Tools reflects students' satisfaction with the learning and communication features provided by the platform (e.g. Heggart and Yoo, 2018). To the best of the authors' knowledge, there is no research on its effectiveness for teaching translation or interpreting studies to date. The nascent experience of online learning of CI and SI at Mustansiriyah University also reflects its potentials for improving the online learning experience. Many students said they enjoyed the flexibility offered by the asynchronous online learning GC environment. The majority said they became more confident interpreters as they could practise interpreting many times. Literature indicates that when students repeat material several times, their performance improves by increasing detailed and general comprehension (e.g. Iimura, 2007). Having more control also allowed trainees to interpret at their own pace. They said they could identify their mistakes and learn new vocabularies, which could help boost their confidence in the long term.

Nonetheless, using GC asynchronously was not useful for establishing a social presence, especially when the teacher's presence was less effective. According to our focus group participants, GC was not helpful for establishing peer discussion. Earlier studies reported feelings of isolation, disconnectedness or loneliness by online learners (e.g. Woods, 2002; Vonderwell, 2003; Sung and Mayer, 2012). A synchronous learning environment is necessary to help online learners engage and overcome such barriers (Mulayim and Lai, 2015). Furthermore, interpreting is a "dynamic process that involves a high level of verbal and visual interaction" (Ko and Chen, 2011, p. 125). A successful online learning programme should accommodate both interactions in a relatively similar way to face-to-face teaching (Ko and Chen, 2011). SI, in particular, requires a synchronous environment where students can interpret at the same time the speaker is talking. Interpreting in all its modes is a "cognitive process" (Mª Teresa Bajo et al., 2000, p. 27), requiring developing comprehension and listening skills so that the interpreter can practise interpretation under a "temporal pressure" (Mª Teresa Bajo et al., 2000, p. 28). The pressure is a vital element for training interpreters in both modes. Its absence does not help realise the learning outcomes, weakening the interpreters' performance in real-life situations.

Subject to appropriate teaching presence, learning CI and SI asynchronously may achieve the first two phases of the cognitive presence: triggering an event and exploring information. However, it does not help students integrate or connect ideas before testing them to resolve real-life situations. The mere repetition of information and the inability to generate new ideas indicate a superficial learning approach (Newman et al., 1996). Nearly all of our focus groups participants thought that interpreting asynchronously was not adequate for their training. According to them, interpreting without being under pressure would not help them to become good interpreters in reality. In other words, they wanted to take their cognitive presence a step further beyond the exploratory level. To achieve this, GC needs to be used in combination with another videoconferencing tool with synchronous features that can help to simulate real-life interpreting scenarios- albeit only partially. The absence of a robust infrastructure, training and advanced technology makes it hard for interpreting students and lecturers to resort to more sophisticated synchronous

tools. Freely available and affordable tools such as Zoom or Google Meet can be a good alternative in light of Iraq's exceptional circumstances, which can also be found in other developing countries. The pilot experiments show that Zoom or any other similar app can potentially offer efficient solutions for training interpreters in both modes. Zoom can be solely used for CI training. However, in SI interpreting, it requires integration with GC for better sound quality.

Zoom has its limitations, though, especially when we are dealing with a large cohort of students. To maximise its benefits, students need to be divided into small groups so that everyone has the opportunity to practise interpretation and receive feedback from the teacher. This task demands extra effort and time from the lecturer. Involving seminar tutors who can lead Zoom sessions might be a solution. In both modes, breakout rooms can potentially be helpful for exams and evaluation, allowing one-to-one contact between the student and the teacher.

Despite its limitations, we cannot underestimate the importance of Zoom or any other freely available videoconferencing apps for training interpreters in Iraqi universities where state-of-the-art interpreting laboratories may not be available. However, for the online learning experience to be successful, it would first and foremost require developing an appropriate infrastructure, which includes a fully functional internal online system supported by an IT unit. In the case of Mustansiriyah University, its Academic Profile needs to be developed to allow for multi-dimensional communication between the lecturers and their students and between students themselves. Other freely available online interfaces or apps, such as GC or Zoom, can still be used in combination with the Academic Profile. Training and organisational support for both students and lecturers would be essential for ensuring online learning success. The proper design of an online course suitable for teaching interpreting online would be another crucial step required before adopting online learning. The Community of Inquiry (COI) framework can be used for this purpose.

In light of other barriers to online learning in Iraq, including patchy internet connection and interruptions to electricity supply, it remains questionable whether online learning can completely replace the conventional methods of teaching interpreting. Our findings echo other similar research on online learning in higher education in developing countries (e.g. Adnan and Anwar, 2020). However, if a sufficient infrastructure becomes available, online learning might potentially compensate for the lack of the necessary equipment for teaching interpreting in class.

While our study is limited to the case of Iraq, its conclusions can be tested in other similar contexts. The preliminary nature of our online experiments also calls for further research into the feasibility of videoconferencing tools for online learning, especially when dealing with larger cohorts of students.

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## Appendix

Table 1: Weighted mean of survey statements

| Statement | Strongly Agree | Agree | Neutral | Disagree | Strongly Disagree | Weighted Mean |
|---|---|---|---|---|---|---|
| 1. I am able to easily access the internet as required for my studies. | 14 (No. of respondents) 10.2% | 37 27% | 41 30% | 37 27% | 8 5.8% | 3.08 |
| 2. Internet speed is significant for my online learning. | 45 32.8% | 20 14.6% | 17 12.4% | 23 16.8% | 32 23.4% | 3.16 |
| 3. I can gain new technological skills. | 30 21.9% | 57 41.6% | 36 26.3% | 9 6.6% | 5 3.6 | 3.71 |
| 4. I can access more resources online. | 36 26.2% | 53 38.7% | 30 21.9% | 9 6.6% | 9 6.6% | 3.71 |
| 5. E-learning gives me more control. | 47 34.3% | 60 43.8% | 23 16.8% | 4 2.9% | 3 2.2% | 4.05 |
| 6. It enables me to practise my homework a number of times. | 43 31.4% | 57 41.6% | 25 18.2% | 7 5.1% | 5 3.6% | 3.91 |
| 7. It gives me more flexibility. | 28 20.4% | 57 41.7% | 42 30.6% | 6 4.4% | 4 2.9% | 3.72 |
| 8. It boosts my confidence. | 38 27.8% | 55 40.1% | 29 21.2% | 10 7.3% | 5 3.6% | 3.81 |
| 9. It helps me to manage my time. | 19 13.9% | 40 29.2% | 53 38.7% | 13 9.5% | 12 8.7% | 3.29 |
| 10. I can engage with my peers in online discussions. | 10 7.3% | 44 32.1% | 39 28.5% | 33 24.1% | 11 8.0% | 3.06 |

| | | | | | | |
|---|---|---|---|---|---|---|
| 12. Asynchronous teaching of interpreting helps to improve my interpreting skills. | 13<br>9.5% | 33<br>24.1% | 57<br>41.6% | 21<br>15.3% | 13<br>9.5% | 2.67 |
| 13. Asynchronous teaching compromises some element of interpreting. | 6<br>4.4% | 55<br>40.1% | 52<br>38.0% | 17<br>12.4% | 7<br>5.1% | 3.26 |
| 14. I get sufficient support from my university. | 6<br>4.4% | 34<br>24.8% | 54<br>39.4% | 22<br>16.1% | 21<br>15.3% | 2.70 |
| 15. I get sufficient support from my department. | 12<br>8.7% | 41<br>30.0% | 43<br>31.3% | 26<br>19.0% | 15<br>11.0% | 3.06 |
| 16. I get sufficient support from my teacher. | 30<br>21.9% | 53<br>38.7% | 32<br>23.4% | 17<br>12.4% | 5<br>3.6% | 3.62 |

Table 2: Weighted mean of online resources

| Online Resources | Most useful | Useful | Neutral | Not very useful | Least useful | Weighted Mean |
|---|---|---|---|---|---|---|
| Pre-recorded lectures | 26<br>19.0% | 58<br>42.4% | 28<br>20.4% | 20<br>14.6% | 5<br>3.6% | 3.58 |
| Powerpoint slides | 17<br>12.4% | 54<br>39.4% | 35<br>25.5% | 25<br>18.2% | 6<br>4.4% | 3.37 |
| Recorded audios | 28<br>20.4% | 58<br>42.3% | 30<br>21.9% | 15<br>11.0% | 6<br>4.4% | 3.63 |
| Written feedback | 38<br>27.7% | 50<br>36.5% | 23<br>16.8% | 16<br>11.7% | 10<br>7.3% | 3.65 |
| Videos | 50<br>36.5% | 52<br>38.0% | 20<br>14.6% | 10<br>7.3% | 5<br>3.6% | 3.96 |

Table 3: Weighted mean online apps and interfaces

| App/ interface | Most useful | Useful | Neutral | Not very useful | Least useful | Weighted Mean |
|---|---|---|---|---|---|---|
| University profile | 5 3.6% | 11 8.0% | 24 17.5% | 34 24.9% | 63 46.0% | 1.98 |
| Google Classroom | 44 32.1% | 49 35.8% | 26 19.0% | 14 10.2% | 4 2.9% | 3.64 |
| Telegram | 45 32.8% | 63 46.0% | 14 10.2% | 11 8.0% | 4 2.9% | 3.97 |
| Zoom | 19 13.9% | 19 13.9% | 41 29.9% | 27 19.7% | 31 22.6% | 2.70 |
| Skype | 13 9.5% | 14 10.2% | 41 29.9% | 34 24.8% | 35 25.5% | 2.53 |
| YouTube | 39 28.5% | 54 39.4% | 24 17.5% | 11 8.0% | 9 6.6% | 3.64 |