

---

## Meeting the challenge in a crisis: Students perceptions of emergency on-line teaching in Saudi Arabia

Beverley McNally  
*Prince Mohammad Bin Fahd University, bmcnally@pmu.edu.sa*

Carmen Winkel  
*Prince Mohammad Bin Fahd University*

Wejdan Al Obaydan  
*Prince Mohammad Bin Fahd University*

Follow this and additional works at: <https://journals.usek.edu.lb/aebj>

 Part of the [Business Commons](#), and the [Economics Commons](#)

---

### Recommended Citation

McNally, Beverley; Winkel, Carmen; and Obaydan, Wejdan Al (2023) "Meeting the challenge in a crisis: Students perceptions of emergency on-line teaching in Saudi Arabia," *Arab Economic and Business Journal*: Vol. 15 : Iss. 1 , Article 5.

Available at: <https://doi.org/10.38039/2214-4625.1026>

This Research Article is brought to you for free and open access by Holy Spirit University of Kaslik Journals. It has been accepted for inclusion in Arab Economic and Business Journal by an authorized editor of Holy Spirit University of Kaslik Journals.

## RESEARCH ARTICLE

# Meeting the Challenge in a Crisis: Students Perceptions of Emergency On-Line Teaching in Saudi Arabia

Beverley McNally\*, Carmen Winkel, Wejdan Al Obaydan

Prince Mohammad Bin Fahd University, Kingdom of Saudi Arabia

### Abstract

This paper explores the perceptions of a group of female Saudi Arabian university students, during the Covid-19 pandemic, regarding emergency on-line learning (EOL). The study utilized a mixed methods approach comprising two surveys. The first, examining the mechanics and structure of the shift. The second, a qualitative design eliciting the students' responses to EOL. While the students initially enjoyed the experience, as time progressed a sense of dissatisfaction developed which became worse the longer the lockdowns lasted. The results assist policy makers, social workers, and student advisors to prepare for future crises that may result in another prolonged lockdown.

*Keywords:* Covid-19, Emergency remote education, Saudi Arabia, Online survey research

## 1. Introduction

This paper explores the perceptions of a group of students to enforced emergency on-line learning (EOL) during the Covid-19 pandemic. The first case of Covid-19 occurred in Saudi Arabia on March 2, 2020. Face-to-face teaching ceased on March 16, 2020. Immediately, the next day, on-line teaching commenced. The expected duration for the shift to on-line was one to two months. However, this ended up extending to nearly two years. While school and university campuses partially opened in Fall of 2021, many students were still engaged with online learning or some version of hybrid learning (Winkel et al., 2022). Full face-to-face teaching was not planned to commence until Fall 2022. Consequently, the Covid-19 pandemic has highlighted the vulnerability of education systems world-wide (Hofer et al., 2021).

The Kingdom of Saudi Arabia reacted promptly and firmly to the pandemic by closing access to international borders, malls, recreational areas and religious occasions like the Hajj and Umrah

(Ebrahim & Memish, 2020). A variety of different strategies were implemented over the following year to combat the spread of the virus, including social distancing, the wearing of medical face masks, curfews, and a five-day state-wide lockdown. Curfews and complete lockdowns were imposed in certain cities and neighbourhoods during flare-ups. Hard lockdowns and curfews imposed throughout 2020 and into 2021, included a 24-hour lockdown during Eid al Fitr 2020, and restrictions on social activities. Mosques were closed to worship, both domestic and international air travel severely restricted (Bin-Dhim et al., 2021). For a summary of the key stages of Saudi Arabia's response see Table 1.

By mid-April 2020, the pandemic had affected 94 per cent of learners worldwide. This represented 1.58 billion children and youth, from pre-primary to higher education in over 200 countries (UNICEF, 2021). Consequently, the aim of this study was to identify the perceptions of a group of female Saudi Arabian university students regarding their experiences with emergency on-line learning (EOL) during the Covid-19 pandemic. This in turn gave rise to the following research questions:

---

Received 21 October 2022; revised 21 January 2023; accepted 21 January 2023.  
Available online 13 February 2023

\* Corresponding author.

E-mail addresses: [bmcnally@pmu.edu.sa](mailto:bmcnally@pmu.edu.sa) (B. McNally), [cwinkel@pmu.edu.sa](mailto:cwinkel@pmu.edu.sa) (C. Winkel), [wejdan.obaydan@gmail.com](mailto:wejdan.obaydan@gmail.com) (W.A. Obaydan).

<https://doi.org/10.38039/2214-4625.1026>

2214-4625/© 2023 Holy Spirit University of Kaslik. This is an open access article under the CC-BY-NC-ND license (<http://creativecommons.org/licenses/by-nc-nd/4.0/>).

Table 1. Timeline Covid-19 pandemic in Saudi Arabia.

Date	Actions
First Case	March 2
Suspension of Umrah (prayers at Mecca)	March 4
Travel ban for some countries	March 9
International travel ban for 2 weeks	March 14
Malls close, work from home, schools closed, banning of serving food in restaurants	March 16
All Mosques Closed	March 17
Domestic travel ban	March 20
Extending international and domestic travel ban until further notice	March 29
24 h curfew in 7 cities	April 6
Curfew 3pm-6am in all cities	April 7
Ramadhan, curfew 5pm-9 am in all cities	April 26
Violations list for all forms of social gatherings with more than 5 people (family and non-family gatherings)	May 7
Nationwide 24 h curfew for Eid Al-Fitr	May 23–27
Reopening Stage 1: Curfew 3pm to 6am	May 28–30
Reopening Stage 1: Curfew 6am to 8pm	May 31-June 20
Public sector back to full attendance	June 14
Lifting of all curfews, return back to normal, continuation of social distancing and mask wearing	June 21
Vaccination Campaign starts	December 17, 2021
Extension of travel ban for citizens until May 17	January 29, 2021
Mandatory to activate Tawakkalna tracing App for entering public places	January 31, 2021
Ban for entry into KSA for 20 days	February 3, 2021
Suspension of all recreational activities for 10 days	February 4, 2021
Attending learning facilities (universities, highschools a middle schools)	August 29, 2021
Lifting outdoor masks and social distancing mandates	October 17, 2021
Postponing Kindergarten and primary schools in-person teaching until further notice	October 20, 2021
Allowing entry to Saudi from India, Pakistan, (Vietnam and Brazil)	December 1, 2021
Booster vaccination mandatory starting from February 2022	December 4, 2021

- How did students experience the instantaneous change to online learning?
- How did students compare online and classroom learning?
- What were the biggest challenges for students to adapt to online learning?

Utilizing a mixed methods approach the study explored the students' perceptions of their experiences during the Covid-19 pandemic. Specifically, the impact of the ongoing lockdowns and curfews on their engagement with EOL, from both a practical and psychological perspective. This paper proceeds with a discussion of the literature, then outlines the methods employed, the findings and discussion and finally the implications and limitations.

## 2. Literature

When undertaking a study such as this it is important to situate it within the context in which it occurs. Saudi Arabia is a transitioning society. As such the country is involved in a significant program of planned change. Planned change deemed to be the sign of societal transition (Levy, 1986) as cited in Sparkman (2015). The process of transition arising from the need for Saudi Arabia to establish a diversified economy. The transition program is

comprised of two main strands. The first, Saudization, a program designed to change from a high dependence on expatriate labour to a workforce comprised primarily of Saudi nationals (Vision-2030, 2016). A fundamental pillar to these changes is the development of human capital. Specifically, how a society can derive benefits from the investment in people (Sweetland, 1996). Sweetland (1996) goes on to contend that human capital theory (HCT) states that one of the primary means by which this investment occurs is through the provision of education. Thus, as the response to the Covid-19 pandemic progresses, there is value in examining the features of emergency online learning and the strategic imperatives that differentiate it from traditional on-line learning (Bozkurt & Sharma, 2020; Murphy, 2020; Turoff & Hultz, 1986).

The established convention of traditional online delivery is to target students who cannot be instructed in a traditional classroom setting, for example, geographic distance from institutional providers and family or employment responsibilities (Kidman & Chang, 2020). Moreover, traditional on-line courses have recognized quality standards, are designed to be delivered at different places and times with the aid of the internet and other technological aids (Means et al., 2014; Shin & Hickey, 2020, 2). Providers have the time to develop

strategy and tactics to ensure quality delivery of educational content.

While EOL draws on the technological advances and the pedagogy developed from the distance learning, the EOL is considered is a temporary solution in a crisis (Golden, 2020). Hodges et al. (2020, 3) define EOL teaching as:

A temporary shift of instructional delivery to an alternate delivery mode due to crisis circumstances, [which] involves the use of fully remote teaching solutions for instruction, or education that would otherwise be delivered face-to-face or as blended or hybrid courses and that will return to that format once the crisis or emergency has abated.

Critical to the implementation of EOL is the ability to make sound strategic decisions regarding the nature of delivery. Consequently, the recommendation is that instead of the generic term of on-line distance learning, the term emergency online learning (EOL) is used when referring to the educational response during Covid-19. Designing systems under the wrong assumptions and framing them around the wrong definitions will make providers more vulnerable to errors (Golden, 2020; Hodges et al., 2020). Omezzine et al. (2022) contending the ability of a society to respond to challenges is imperative to its future wellbeing. A factor essential to the future of transitioning societies such as Saudi Arabia.

As Sweetland (1996) argues, education adds value to a society and is one of the key pillars of the research focus and empirical analysis. This includes all forms of educational experiences that may have an impact on productivity and income (Zula & Chermack, 2007). Consequently, positive learning experiences and processes can be deemed to contribute the development of specific national competencies in order to meet the technological and economic challenges encountered during a transition process (Freeman, 1995) as cited in Omezzine et al. (2022).

Moreover, the prolonged engagement with EOL has the potential to influence negatively the development of human capital particularly in developing and transitioning economies (Sweetland, 1996). The frameworks of HCT have both strengths and limitations for emergency on-line teaching. Netch (2016) argues that one strength is that it provides a frame by which to explore the relationships between education/training and the economic and social outcomes. An additional benefit is that the information obtained about the costs and benefits can inform policymakers' decisions pertaining to future

educational provision. However, there are limitations in that HCT does not provide insights into processes through which education and training translate into high levels of productivity and future economic wellbeing. Netch (2016) goes on to state that it is incumbent on policymakers to consider the context dependency of human capital investments to ensure the efficient allocation of resources and effective policy interventions.

However, EOL classes come with both challenges and limitations (Song et al., 2004). Song et al. (2004) goes on to state these include and are not limited to technical problems, low-level preparedness of students and faculty on how to use learning-management systems, insufficient digital infrastructure and at times tenuous access to the internet. Studies examining online learning during the Covid-19 pandemic revealed that students have experienced online classes as very stressful and that they spend more time studying than before the pandemic (Aguilera-Hermida, 2020). Other studies indicate that students are reluctant to participate and interact in online classes and loose interest in them after a period of time (Gurukkal, 2020; Rahman, 2021). Therefore, it is important the role of EOL, as an integral part of the educational process, is clearly understood (Kim, 2020).

Creating, further challenges was the rapidity with which institutions had to respond to the pandemic. Consequently, there was little time available for strategic planning. Rather, worldwide, responses were reactive, designed to keep the education process flowing for the immediate future (Aguilera-Hermida, 2020). For many faculty this meant engaging with little or no experience in on-line distance teaching (Rahman, 2021). Moreover, if institutions had some form of technological support this was often designed for asynchronous provision for smaller numbers of students. The pandemic required institutions to provide online platforms with synchronous delivery with significantly more capacity (Basilaia et al., 2020). Therefore, it is important that the experiences of the Saudi Arabian response to the pandemic is captured and used to develop strategies for the future.

### 3. Methodology

#### 3.1. Research model/design

The data was collected during 2021 from Saudi Arabian students who were involved in EOL. The research strategy was designed to replicate a mixed methods approach gathering both qualitative and quantitative data (Cresswell & Plano-Clark, 2011;

De-Leeuw & Hox, 2018; Flick, 2009). The Covid-19 pandemic restricted the method of data collection. Personal safety was paramount during this period in that face-to-face interviews were not possible. Therefore, the use of on-line surveys along with cost and efficiency considerations were deemed the most appropriate means of data collection. Consequently, two surveys using Google Forms were created to gather the data. The first a pilot study developed with the aim of identifying the key issues impacting on the student. Subsequently, a second survey was developed to explore the identified issues more deeply.

### 3.2. Sampling

The study utilized both convenience and snowball sampling to gather the data. Convenience sampling by the ease of access on the part of the researchers to the participants via email and online communication. Snowball sampling via a request to students to forward the survey links to their peers. This resulted in a sample size of 255 participants, who were all female, with 76.9% enrolled in Bachelor's degrees and 18.7% in pre-university entry programs. See [Table 2](#).

The gender make-up of the sample was female, a factor resulting from the gender division of the Saudi Arabian education systems. This limitation indicates that it would be beneficial to replicate the study with male students.

### 3.3. Data collection

To begin with, the initial survey was distributed via social media platforms for example, Twitter and WhatsApp. Specifically, targeting groups identified as being active in college or university student networks. The second survey was distributed between March and April 2021 to a group of female undergraduate students in a private Saudi Arabian university. The purpose of the second survey was to prompt the students to reflect on their experiences from a qualitative perspective. The students were given basic guidelines to assist them in focusing their responses. These included that the reflection should be at least 400 words long, concentrating on

the student's experience of their learning experiences during the Covid-19 Pandemic. The prompt was as follows: *Please write about your experience with online classes and give examples about when you thought you benefitted from online classes or when you thought it did not help your learning. Reflect also on your overall feelings and your experiences of online learning during the pandemic.*

### 3.4. Data analysis

The pilot study was analysed using the quantitative results produced by Google Forms. The second survey – the reflections; these were anonymized, and all participants gave permission for their publication as part of the research project. All texts were assigned an ID number before being extracted from the online survey. Thematic analysis was used in the first stage of data analysis. The procedure followed the six-steps recommended by [Braun and Clarke \(2006\)](#):

- familiarization with the data
- generation of initial codes
- theme search, theme review
- theme definition and naming
- report production

The reflections were analysed during this process using an open coding process to identify themes ([Braun & Clarke, 2006](#); [Guest et al., 2011](#)).

## 4. Findings and discussions

The findings of both the pilot study and the qualitative survey identified a consistency of perceptions about EOL. While in the initial stages everyone was accepting of the situation, as time progressed it became apparent that EOL was waning in popularity. The findings of the qualitative part of the study revealed the presence of eight themes, see [Table 3](#) for summary of themes:

- Struggle with Focus,
- Social Isolation,
- Technical Issues,
- Comprehension Issues,
- Lack of Accountability,
- Increased workload,
- Concerns about the quality of educational provision,
- Additional pressure to perform.

The findings of both the pilot study and the second survey are now discussed in detail.

Table 2. Distribution of level of education enrolment.

Level of Education	Number (%)
Master Program	1.8
Bachelor-Program	79.5
Pre-university	18.7



Table 3. Theme of participants reflections <sup>a</sup> (N = 225).

Theme	(%)	Example quotes
Struggle with Focus	70	Students get very distracted as some students just attend classes for the sake of attending and sitting in your home with family it also somewhere brings a distraction be it your younger sibling playing, or you are getting lazy mood while sitting on your bed. When a teacher and a student connect face to face that gives another impact, studying along with your peer group in the classroom, that enjoyment of studying is vanished.
Social Isolation	66	Not only that, but online classes offer little to no actual social interaction, so that takes its toll on people who are extroverted and would like to get to know their peers better. As an introvert, I both like and hate online classes, because it offers me the social isolation that I willingly prefer but at the same time, I'm always sleepy and unfortunately sleep through most of my lectures.
Technical Issues	55	Some of us sometimes face connection issues like when the connection went off, or some are unable to connect to the network for some reason. Also, some students from outside the region live in Villages, and they have poor connections. When the system breaks down, we had a hard time dealing with log in to our courses.
Comprehension Issues	50	About my experience in online classes I thought it would benefit me and would be easier. I realized it's the opposite it's hard to learn online because you can't focus clearly, and that understanding is more difficult so as the communication in the online classes because from all I see they are focusing on that assignment more than the explanation of what we learn.
Lack of Accountability	23	There's no incentive for me to really pay attention in classes because I don't lose anything if I can easily have access to notes and whatnot during tests so there's actually no need to study or put in the necessary effort to get good grades,
Increased Workload	22	Don't really like how some of my teachers are giving us more assignments now than in the past. Also, I don't understand how to do a lot of classwork Being physically in a classroom, I have more classmates to ask for help. In class, I can ask the teacher for help as many times I need, and there's a higher possibility I will understand the assignment.
Concerns about quality of education	10	Nonetheless, online classes also had many cons. It messed up my sleep schedule, took away the social aspect of college, and affected the overall quality of education.
Parents Pressure	5	Everyone is praising me for my social skills! I loved going to university ... I would hang out with my friends at least. I had my own freedom before COVID. During online classes, suddenly everything has changed! My father is trying to control me He even attends my classes, which makes me uncomfortable.

<sup>a</sup> Number of themes does not add up to total number of participants because in some interviews multiple themes were mentioned.

#### 4.1. Concerns about quality of education

Ten percent of the students stated they felt the quality of online teaching was not as effective as face-to-face teaching. Concern was expressed regarding their learning progress and the academic value of what they learned.

Both the students and the teachers face a lot of issues like electricity breakdown, or sometimes network issues. As it all relies on machinery, these things will happen with everyone for sure. Some students get this issue in real & some use it as a weapon for hiding. But in short, it impacts the quality of education. It somewhere brings students to lose interest.

#### 4.2. Technical issues

Access to stable internet connections and appropriate devices are vital for successful EOL. During Covid-19 millions of students have not had access to

online classes due to their socio-economic background (Baloran, 2020). The study participants belong to the educated middle and upper classes and reported no issues accessing a suitable device or the Internet. Nevertheless, more than half (55%) of the participants reported technical problems. In some cases, this was attributed to the learning platform used by the university. Often the university attached a module to an existing student management system, as opposed to purchasing a customized system. Fluctuating Internet connections were identified as a reason for technical difficulties on many occasions.

Sometimes my luck is very bad when the Internet connection drops during preparation. I feel bored when the connection drops. When the doctor reaches my name, I cannot answer that I have attended.

Some students, on the other hand, have stated that they had problems using the learning platform, especially at the beginning of the semester. Lack of

knowledge or skills leading to high levels of frustration was very evident.

I think my experience is similar to all the students around the world. Since we had a sudden pandemic, we were not prepared for online system especially college students. Now for my experience in the first week I couldn't figure how to enter class after that the professor sent me a message that that I will drop from the course if I miss next class and I panicked so much the first semester was a disaster to be honest.

#### 4.3. *Struggle with focus*

Most participants (70%) reported difficulty with concentration. Disruptions such as social media, internet, movies, or family cited as the main distractors. Many students stated that working in their own room did not provide a learning atmosphere. The reasons proffered were distractions by family members or preferring to relax. Students attributed their concentration difficulties to sleep disruption, lockdown and social distancing negatively affecting their sleep patterns. They reported either sleeping less or staying awake at night, only to fall asleep during the day. Consequently, they missed many online classes or had difficulty staying awake during lectures.

Students get really very distracted as some students just attend classes for the sake of attending and sitting in your home with family it also somewhere brings a distraction be it your younger sibling playing, or you are getting lazy mood while sitting on your bed. Students need to have a strong motivation to connect and keep on studying, which is quite difficult. When a teacher and a student connect face to face that gives another impact, studying along with your peer group in the classroom, that enjoyment of studying is vanished.

Struggle with focus and self-discipline was provided as the main reasons for difficulties with online classes. 63.1% stated that they are struggling with self-discipline during the EOL period.

#### 4.4. *Social isolation*

The students (66%) identified loneliness, feelings of isolation, and lack of contact with friends and family members as among the most serious problems. Freshmen identified the lack of contact with fellow freshman as particularly stressful. As was the lack of transition from high school to college and the experience of being a college student.

Although I am not opposed to this, it has been difficult to begin my university journey with minimum contact from fellow peers and students. Inevitably, this made me question how long this dilemma will last since I always believed that the people who you meet in this stage of your life are the key factors to making your college experience the most memorable—and experiencing it from behind a screen doesn't give you much to work with when it comes to socializing.

Within the theme of social isolation was the phenomenon of the invasion of homes by online classes. This has been identified in prior studies where, once exclusively private spaces became co-opted by screens and online learning platforms, leaving students no space for recreation or relaxation (Williamson et al., 2020, 111).

#### 4.5. *Increased workload*

Research has identified a perceived increase in workload and activities in online instruction during the pandemic (Son et al., 2020). The participants' in this study (22%) stated that teachers would give them more homework, assignments and the exams were more difficult.

In online education, instructors give students extra tasks and homework then the usual amount. Having overload home works is difficult, which some instructors make students feel so much pressure.

The students found that they were expected to complete more tasks and were struggling with time management to complete assignments or homework on time. Only 2.7% of the students were not satisfied with the assessment methods while the majority (36.4%) was moderately satisfied and 30.2% stated they were very satisfied with assessment methods. The majority of the students (56%) rated the online classes negatively. While 32% said online classes were a positive experience for them, about 12 percent said online education had both positive and negative effects.

The next stage of the surveys attempted to ascertain the attitude of students regarding online classes and to learn about what they liked and disliked about online learning. The data in Table 4 revealed that participants rated the support they received from university and instructors were moderately helpful, which was supported by findings of similar studies (Rahman, 2021) (see Table 5).

Only 14.2% of the participants felt that EOL was not stressful at all. While 34.2% felt moderately

Table 4. Learning environment and support.

Question	Not at all helpful	Slightly helpful	Moderately helpful	Very helpful	Extremely helpful
How peaceful is the environment at home while learning?	4%	20.4%	24%	28.9%	22.7%
How helpful are your teachers while studying online?	4.9%	16.9%	33.8%	31.1%	13.3%
How helpful was your university in offering you resources to learn online?	5.8%	23.6%	31.6%	27.6%	11.6%
How helpful is your family while you are studying online?	3.6%	11.6%	16.9%	30.7%	37.3%

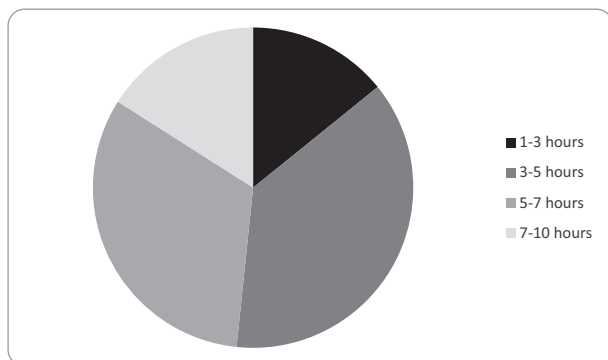
Table 5. Interaction with classmates and instructors.

Question	Never	Once in a while	About half the time	Most of the time	Always
How often do you talk to your classmates?	4.9%	35.1%	29.8%	19.6%	10.7%
How often do you have a 1-to1 discussion with your instructors?	10.2%	50.2%	25.8%	9.3%	4.4%

stressful and 23.1% very stressful, 7.6% stated online classes were extremely stressful. Regarding the time that was available to complete assignments, 64.9% said they had enough time to complete assignments, 35.1% disagreed. The majority of students indicated that their families were most helpful during online classes. Support from the university, on the other hand, was rated much lower, the majority (31.6%) of participants stated that the university was moderately helpful.

Most students (37.3%) attended online classes for 3–5 h per day, 32.4% for more than 5 h. This number is relatively high in comparison the other studies (Rahman, 2021; Son, 2020) (see Graph 1). Despite the length of time spent per day in online classes, they were perceived as being less effective and overall, a negative experience. 33.8% of participants stated that online classes were moderately effective and only 19.6% felt that remote learning was very effective. Studies in other countries revealed very similar findings, showing that students would prefer face to face instruction as opposed to online classes (Gurukkal, 2020; Rahman, 2021).

The minority of students (7.1%) did not enjoy online classes at all. However, 36.4% of participants



Graph 1. Duration of Online Class Attendance per Day

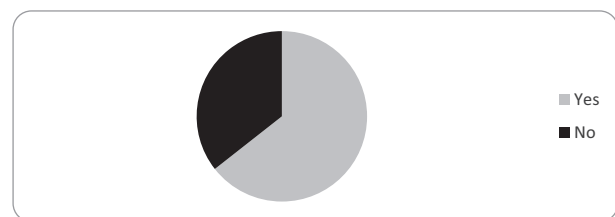
stated that they absolutely enjoyed their online learning experience. While the majority (40.4%) of participants enjoyed online learning but stated they would change some things.

A major criticism was the lack of interaction with professors. Most students expressed their preference for blended-learning concepts instead of online instruction alone. When comparing their learning experience with traditional face to face instruction the students stated that they do not learn as much as before (see Graph 2).

#### 4.6. Discussion

The findings of this study indicate that there are implications for the future development of human capital in Saudi Arabia. It is accepted the initial technical issue were to be expected given almost the entire populace of Saudi Arabia shifted virtually overnight to internet-based work. As the technical issues such as stability with internet access and related technology began to be resolved – the length of time of EOL engagement began to take priority. Specifically, the length of time EOL was conducted exacerbating the ability to plan effectively for a future post Covid-19.

The length of time of engagement in EOL created its own constraints both educationally and



Graph 2. Did you learn much in online and as in face-to-face instruction?



psychologically. Specifically, the lack of interaction with fellow students and professors, (the informal interactions that happen on-campus) and the difficulty of concentrating on lessons were reported. There was recognition that for faculty the on-line environment was just as new and unfamiliar as it was for the students. It is recommended that institutions provide appropriate training and development for both faculty and students to support increased confidence in alternative forms of EOL delivery.

The students stated the greatest level of support was received from their families. Yet, the lack of physical separation between home and university was considered particularly disruptive. There was sense of disquiet expressed regarding the insufficient support from their institution. This was attributed to the systems and processes not being available to support the pastoral care of students. It is recommended that pastoral care policies and processes are developed specifically for EOL situations. This will permit a more robust implementation in the future.

Questions were raised as to whether the ad hoc online platform was the best alternative available and if the situation were to continue then maybe a specialized on-line platform would be needed. As stated previously the universities added an online module to existing student learning management systems as opposed to a purchasing a specifically designed on-line platform. There is evidence to suggest that if on-line and/or blended learning is to become a feature of educational provision then significant investment in customized IT platforms will be required (Bryan et al., 2018).

The EOL process constrained interaction between students and their lecturers' consequently limiting engagement with online classes. This situation was exacerbated by the structure of the virtual classroom which limited interactions and was therefore considered by the students as only moderately successful. The findings indicated the EOL is a short-term solution and the longer the duration the less effective it became. When this study was conducted the duration of EOL had been 18 months and was predicted to continue for some months to come. Consequently, creating issues for virtually all participants. Specifically, physical and psychological consequences such as low mood, anxiety, sleep disturbances, and periods of depression and apathy.

There was criticism of the monotony of the online classes. The vast majority taught as lectures and the material presented as either a Power Point presentation or worksheets and videos. While the classes were the same time allocation as face-to-face

teaching, the students' perceived them as too long and requiring too much work and difficulty concentrating on the content. The participants stated that as time progressed, they had difficulty taking the classes seriously, hardly participating even if the professor asks questions.

## 5. Conclusion and recommendations

As per Omezzine et al. (2022) the ability to turn the short-term indicative EOL responses into long-term solutions is imperative if an effective EOL response ecosystem is to be developed. Therefore, the findings of this study provide a base to contribute to the development of an EOL ecosystem. Specifically, coming to understand how the participants experienced online emergency education during the pandemic. Also, the comparison between online learning and face-to-face instruction and what they perceived their greatest challenges were. The mixed methods strategy provided an insight into some extremely personal struggles, as well as overarching issues shared by the majority of the study's participants. There appears to have been a negative impact on the development of human capital during the EOL process. It is recommended that further research be conducted including male students to measure the extent of this impact. Many of the participants stated that their experience with emergency online teaching was negative. Although they did acknowledge some of the positive effects of online classes for example, time at home with the family, no commute to university and the flexibility allowing students to watch recorded lessons. However, these positive incidents did not occur at a significant level to constitute themes. Future research into the positive learning achieved is recommended.

Future research on a regular basis to ascertain the true impact on human capital development is vital. Specifically, is there a Covid-19 generation? Research has suggested that blended learning models will become more prevalent (Alexander, 2005). Further research is recommended examining the veracity of this assertion. One of the criticisms of the participants was that online classes were too long; too many assignments and homework given and thus the workload and time spent in front of the screen became onerous. Research investigating the reality of this assertion is imperative. Specifically, research attempting to establish if there is an ideal time length for on-line classes.

Technical problems also beset on-line classes. Although the vast majority of students had access to adequate devices such as laptops and tablets, there

were fluctuating internet connections and problems with the online learning platform. Most of the students found these problems were extremely disruptive and burdensome and had an impact on their motivation as well as academic performance.

## 6. Limitations and future implications

Limitations arose from the social distancing and lockdown measures in Saudi Arabia precluding face-to-face interviews. Furthermore, it was not possible to interview male participants because of the gender separation in Saudi Arabia restricting networks. Notwithstanding these limitations, the results of this study provides a base of information for faculty and institutions about students' experiences with EOL during the Covid-19 lockdown. The results can also be useful for policy makers, social workers, and student advisors in order to develop an EOL ecosystem for future pandemics or crises.

## Conflict of interest

No conflict of interest was identified during this study.

## References

- Aguilera-Hermida, A. P. (2020). College students' use and acceptance of emergency online learning due to COVID-19. *International Journal of Educational Research*. Open Access <https://doi.org/10.1016/j.ijedro.2020.100011>.
- Alexander, S. (2005). *E-learning: Blended directions*. August pp. 17–18). Singapore: E-Agenda Conference.
- Baloran, E. T. (2020). Knowledge, attitudes, anxiety, and coping strategies of students during COVID-19 pandemic. *Journal of Loss & Trauma*, 25(8), 635–642. <https://doi.org/10.1080/15325024.2020.1769300>
- Basilaia, G., Dgebuadze, M., Kantaria, M., & Chokhanelidze, G. (2020). Replacing the classic learning form at universities as an immediate response to the COVID-19 virus infection in Georgia. *International Journal for Research in Applied Science and Engineering Technology*, 8(III), 101–108. <https://doi.org/10.22214/ijraset.2020.3021>
- Bin-Dhim, N. F., Althumiri, N. A., Basyouni, M. H., Alageel, A. A., Alghnam, S., Al-Qunaibet, A. M., & Ad-Dab'bagh, Y. (2021). Saudi Arabia mental health surveillance system (MHSS): Mental health trends amid COVID-19 and comparison with pre-COVID-19 trends. *European Journal of Psychotraumatology*, 12(1), Article 1875642. <https://doi.org/10.1080/20008198.2021.1875642>
- Bozkurt, A., & Sharma, R. C. (2020). Emergency remote teaching in a time of global crisis due to CoronaVirus pandemic. *Asian Journal of Distance Education*, 15(1), i–vi. <https://doi.org/10.5281/zenodo.3778083>. <http://www.asianjde.org>
- Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative Research in Psychology*, 3(2), 77–101. <https://doi.org/10.1191/1478088706qp063o>
- Bryan, C., Leeds, E., & Wiley, T. (2018). The cost of online education: Leveraging data to identify efficiencies. *Online Journal of Distance Learning Administration*, 21(2), 49–52.
- Cresswell, J. W., & Plano-Clark, V. L. (2011). *Designing and conducting mixed method research*. Thousand Oaks, CA: Sage Publications.
- De-Leeuw, E. D., & Hox, J. J. (2018). Internet surveys as part of a mixed-mode design. In M. Das, P. Ester, & L. Kaczmirek (Eds.), *Social and behavioral research and the internet* (pp. 45–76). Sussex: UK Routledge.
- Ebrahim, S. H., & Memish, Z. A. (2020). Saudi Arabia's drastic measures to curb the COVID-19 outbreak: Temporary suspension of the Umrah pilgrimage. *Journal of Travel Medicine*, 27(3), 29–39.
- Flick, U. (2009). *An introduction to qualitative research*. Thousand Oaks, CA: Sage Publications.
- Freeman, C. (1995). The national system of innovation in a historical perspective. *Cambridge Journal of Economics*, 19(1), 5–24. <https://doi.org/10.1093/oxfordjournals.cje.a035309>
- Golden, C. (2020). *Remote teaching: The glass half-full*. EDUCAUSE Review (blog). 1 August <https://er.educause.edu/blogs/2020/3/remote-teaching-the-glass-half-full>.
- Guest, G., MacQueen, K. M., & Namey, E. E. (2011). *Applied thematic analysis*. Thousand Oaks, CA: Sage Publications.
- Gurukkal, R. (2020). Will COVID 19 turn higher education into another mode? *Higher Education for the Future*, 7(2), 89–96. <https://doi.org/10.1177/2347631120931606>
- Hodges, C., Moore, S., Lockee, B., Trust, T., & Bond, A. (2020). The difference between emergency remote teaching and online learning. *Educause Review*, 27(March 27), 1–12. <https://er.educause.edu/articles/2020/3/the-difference-between-emergency-remote-teaching-and-online-learning>.
- Hofer, S., Nistor, N., & Scheibenzuber, C. (2021). Online teaching and learning in higher education: Lessons learned in crisis situations. *Computers in Human Behavior*, 121(August), Article 106789. <https://doi.org/10.1016/j.chb.2021.106789>
- Kidman, G., & Chang, C.-H. (2020). What does “crisis” education look like? *International Research in Geographical & Environmental Education*, 29(2), 107–111. <https://doi.org/10.1080/10382046.2020.1730095>
- Kim, J. (2020). Learning and teaching online during Covid-19: Experiences of student teachers in an early childhood education practicum. *International Journal of Early Childhood Education*, 52(July), 145–158. <https://doi.org/10.1007/s13158-020-00272-6>
- Levy, A. (1986). Second-order change, definition and conceptualization. *Organizational Dynamics*, 15(1), 5–20. [https://doi.org/10.1016/0090-2616\(86\)90022-7](https://doi.org/10.1016/0090-2616(86)90022-7)
- Means, B., Bakia, M., & Murphy, R. (2014). *Learning online: What research tells us about whether, when and how*. New York: Routledge.
- Murphy, M. P. A. (2020). COVID-19 and emergency eLearning: Consequences of the securitization of higher education for post-pandemic pedagogy. *Contemporary Security Policy*, 41(3), 492–505. <https://doi.org/10.1080/13523260.2020.1761749>
- Netch, S. (2016). *The strengths and limitations of human capital theory in educational research and policy making " Cross cutting conversation in education: Research, reflections and practice* (blog). University of Vermont, 15 August <https://blog.uvm.edu/cessphd/2016/01/19/the-strengths-and-limitations-of-human-capital-theory-in-educational-research-and-policymaking/>.
- Omezzine, F., Oruganti, V., & Isabel Maria Bodas Freitas. (2022). Learning from crisis: Repurposing to address grand challenges. *Innovation and Development*, 12(1), 59–69. <https://doi.org/10.1080/2157930X.2021.1930397>
- Rahman, A. (2021). Using students' experience to derive effectiveness of COVID-19-lockdown-induced emergency online learning at undergraduate level: Evidence from Assam, India. *Higher Education for the Future*, 8(1), 71–89. <https://doi.org/10.1177/2347631120980549>
- Shin, M., & Hickey, K. (2020). Needs a little TLC: Examining college students' emergency remote teaching and learning experiences during COVID-19. *Journal of Further and Higher Education November*, 1–14.
- Song, L., Singleton, E. S., Hill, J. R., & Koh, M. H. (2004). Improving online learning: Student perceptions of useful and challenging characteristics. *The Internet and Higher Education*, 7(1), 59–70. <https://doi.org/10.1016/j.iheduc.2003.11.003>
- Son, C., Hegde, S., Smith, A., Wang, X., & Sasangohar, F. (2020). Effects of COVID-19 on college students' mental health in the

- United States: Interview survey study. *Journal of Medical Internet Research*, 22(9), Article e21279. <https://doi.org/10.2196/21279>
- Sparkman, T. E. (2015). The factors and conditions for national human resource development in Brazil. *European Journal for Training and Development*, 39(8), 666–680. <https://doi.org/10.1108/EJTD-03-2015-0016>
- Sweetland, S. R. (1996). Human capital theory: Foundations of a field of inquiry. *Review of Educational Research*, 66(3), 341–359. <https://doi.org/10.3102/00346543066003341>
- Turoff, M., & Hultz, S. (1986). *Remote learning: technologies and opportunities* " world conference on continuing engineering education, lake buena Vista, FL, USA. May 7-9 <https://files.eric.ed.gov/fulltext/ED332656.pdf>.
- UNICEF. (2021). Covid-19 and school closures: One year of education disruption. In *Global monitoring New York UNICEF*.
- Vision-2030. (2016). *National transformation program 2030*. Saudi Arabian Government (Ryaid) <http://vision2030.gov.sa/en>.
- Williamson, B., Eynon, R., & Potter, J. (2020). Pandemic politics, pedagogies and practices: Digital technologies and distance education during the coronavirus emergency. *Learning, Media and Technology*, 45(2), 107–114. <https://doi.org/10.1080/17439884.2020.1761641>
- Winkel, C., Strachan, L., & Aamir, S. (2022). Saudi female student experiences with Emergency Remote Teaching during the Covid-19 pandemic – a narrative approach. *International Journal of Emerging Multidisciplinaries*, 1(1), 1–13. <https://doi.org/10.54938/ijemdss.2022.01.1.117>
- Zula, K. J., & Chermack, T. J. (2007). Human capital planning: A review of literature and implications for human resource development. *Human Resources Development Review*, 6(3), 245–262. <https://doi.org/10.1177/1534484307303762>