Egyptian Educators' Online Teaching Challenges and Coping Strategies during COVID-19

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Abstract
The present descriptive study investigated the challenges experienced and the coping strategies used by Egyptian university educators from different institution types while teaching online during the pandemic. The cross-sectional study drew participants (N = 222) from three different academic institution types, private universities, public universities, and adult education institutions, who responded to a survey that examined the technical, professional, administrative, social, and psychological challenges teachers encountered as well as their coping strategies. Data were analyzed quantitatively and qualitatively. Results indicated that the challenges and coping strategies reported by teachers varied according to the teaching context and the requirements of each academic institution. The most reported challenges experienced were exhaustion, internet problems, technical issues, and anxiety. Despite the challenges, participants reported a few positive effects, including feeling more productive, being motivated to learn something new, feeling appreciated by the students and administration, and feeling confident using online teaching tools. Results also revealed that the participants used social and professional strategies to cope with the circumstances accompanying the sudden shift to online teaching. The results indicated how challenges faced by educators from different institution types may diminish with more training on, and experience with, online teaching, forming communities of practice as well as other coping strategies they developed. Such findings should be helpful to educators, institutions, and policymakers in different academic institutions all over the world and in various teaching contexts.
Keywords: challenges, coping strategies, Egyptian educators, institution type, online teaching, Covid-19 pandemic.

Introduction

The COVID-19 outbreak, which hit some countries in late 2019, was declared a worldwide pandemic in the early weeks of 2020 (Lone & Ahmad, 2020; Di Gennaro et al., 2020). The deadly potential of the virus evoked individual and government responses, with many countries suddenly halting communal activities and declaring lockdown. New ways of executing transactions were sought, mainly virtually, like online shopping and teleworking; and online teaching and learning replaced face-to-face interaction.

One of the significant sectors impacted by the pandemic lockdown was the educational sector. Students and teachers had to face the reality of school shutdowns and the need to meet online for classes, activities, and assessments (Rapanta, Botturi, Goodyear, Guàrdia & Koole, 2020; Teräs, Suoranta & Teräs, 2020). Many teachers were faced with the challenge of learning to use a relatively new medium of instruction overnight as educational institutions sought and implemented new platforms that required training for both students and teachers on how to use the latest platforms in conducting classes: how to upload the material, how to ensure teacher-student interaction, and how to provide reliable assessments online.

When the pandemic struck, some institutions already had online components incorporated into their educational programs, especially well-funded private ones. Still, many programs suffered from a lack of funds to even contract a platform, let alone provide the training and support needed for their launch. In Egypt, some private universities had already incorporated online components into their educational programs (like emails, blogs, podcasts, google forms, Facebook groups, and LMSs such as Blackboard and Moodle), whereas public universities utilized very few, if any, online elements and depended mainly if not solely on face-to-face teaching. Access to technology was also limited for many students and teachers, depending on their demographic and socio-economic backgrounds.

In Egypt, with the rise in COVID-19 cases in early Spring 2020, each educational institution responded individually. Most private universities and adult education institutions were able to shift to full online teaching quickly and easily and provided the needed training and support. In contrast, most public universities either maintained face-to-face classes or implemented various degrees of hybrid education. Eventually, a decision to close all educational facilities was decreed on the national level on 14th March 2020 (Enterprise, 2020) due to the soaring number of COVID-19 cases. In response, those Egyptian institutions that had already made the shift to online teaching continued with no delay, while others that had no ready online platform had to make do, unprepared, with posting and sharing material online asynchronously (Mostafa, 2020). They gradually came to terms with full online teaching, experimenting with free media, and seeking more efficient platforms. It took public universities time to secure the necessary government funds to afford online platforms, after which they started training on the new mode.

Because teachers and students in most academic institutions in Egypt had little or no previous experience in the use of online platforms, professional development and information technology training and support for teachers and students alike were needed acutely during this transition, though in some institutions more than others (Khalil et al., 2020). Training was urgently necessary for teachers in the technical aspects of managing classes and designing and administering online assessments, as well as the pedagogical issues of online teaching and

learning such as conducting group work and enhancing student interaction online.

All such training and new dynamics involved daunting challenges. They added to teachers' workload, forced many teachers beyond their comfort zones, and aggravated their elevated stress levels. The challenges and anxieties experienced by teachers were voiced both formally and informally. Many teachers formed communities of practice to provide technological, pedagogical, and psychological support. Together, they developed some strategies to cope with this "new normal." The present study, therefore, investigates the challenges faced and the coping strategies used by Egyptian educators from different institution types. It was triggered by the authors' interest in the ways educators in different academic institutions addressed the challenges they encountered in relation to the Covid-19 pandemic. Results of the study would add to the body of research on online teaching. It would also give teachers insight as to how to deal with the pandemic-related challenges that have become common among educators in different parts of the world.

Research Questions

Based on the above, the present study aimed to answer the following research questions:
1. What types of pandemic-associated online-teaching challenges (e.g., technical, professional, and psychological) were experienced by Egyptian university educators in the three institution types (private and public universities, and adult education)?
2. What types of coping strategies (e.g., technical, professional, and social) were used by Egyptian university educators in the three institution types?

Literature Review

This section reviews research on the impact of online teaching on educators and how they have coped with the sources of stress associated with the situation. The studies cover various geographical locations, focusing on the challenges teachers have faced while teaching online, strategies they have employed to cope, and the positive effects they have experienced, nevertheless. As far as the present research is concerned, no studies have been conducted on Egyptian university educators, which this study attempts to explore.

Challenges

Several research studies have explored the challenges encountered by university educators while teaching online, whether before or during the Coronavirus pandemic. The challenges they covered were psychological, administrative, and technical ones.

Bennett (2014) explored the effect of adopting online teaching tools on British teachers' negative emotions, including anxiety, fear, humiliation, or anger. The analysis identified such adverse outcomes of online teaching tools as a) personal identity (in terms of fear of inadequacy), b) taking the blame for failures in the system (giving rise to feelings of embarrassment and frustration), and c) working with others, depending on how critical colleagues are of them and the technology and the resultant humiliation, and emotional battle inhibiting and challenging dominant practices.

In the same year, Windes and Lesht (2014) examined the attitudes of faculty teaching in different academic institution types toward online teaching. Participants included teachers with

and without online teaching experience from three different American institution types: private, public, and community colleges. A total of 342 teachers participated in the study. Teachers belonging to the three institution types faced the same challenges, however, to different degrees. The most common of these challenges were the loss of face-to-face interaction with students, time commitment, adapting the curriculum to be taught online, the quality of teaching being affected, and concerns about the right to intellectual property.

In 2020, during the Coronavirus pandemic, Schaffhauser explored the challenges associated with online teaching. An extensive survey was administered to approximately 1000 American K-12 teachers. Expectedly, most responses were negative ("uncertain" (81%), "stressed" (77%), "anxious" (75%), "overwhelmed" (74%), "sad" (60%) and "lonely" (54%) as well as exhausted, unsupported, and unappreciated). Additionally, teachers were most concerned about the students' overall well-being; lack of social time among students; teachers' lack of face-to-face connection with students; and lack of access to identifying if students were struggling. The study underlined the need for quick courses for teachers on using online technology, developing online creative activities, strategies for enhancing student interaction online, techniques for identifying weak students remotely, and enhancing student-teacher connection.

Another study, by Hyseni-Duraku and Hoxha (2020), examined the challenges associated with remote learning. To achieve that goal, semi-structured interviews were conducted with teachers and parents from different regions of Kosovo. Teachers reported that home isolation and the changes associated with it led to teacher anxiety, discomfort, confusion, and the overload of information related to online teaching. The challenges teachers encountered included the large number of students to handle, teachers' ongoing communication with parents, and students' difficulty in dealing with technology. Teachers suggested they should enhance their level of knowledge in technology, as well as the level of communication with students during online teaching.

Hassan, Gamji, Nasidi and Azmi (2021) explored the challenges faced by international ESL students during the pandemic. They used a qualitative method to collect their data, namely focus group interviews with 15 international students at a Cypriot university. Their findings indicated that the challenges were mainly related to internet connectivity, insufficient knowledge of web-based tools, and failure to upload large files.

Similarly, Alvi, Bilal, and Alvi (2021) examined the challenges that the Covid-19 pandemic imposed on university teachers and students of an English for Specific Purposes (ESP) course in Saudi Arabia. Twenty EFL teachers were interviewed while 80 female students in a medical preparatory year responded to a questionnaire. The findings of the interviews and the questionnaire indicated that internet issues, lack of computer literacy and technical competence, as well as lack of digital resources in the subject matter taught were among the complaints the participants reported. Technophobia was another emotional challenge experienced by teachers and students alike.

The research reviewed in this section, even though in different parts of the world (e.g., Cyprus, Kosovo, Saudi Arabia, UK, and US), agreed on the types of challenges encountered while teaching online, whether before or during the Covid-19 pandemic. These include, but are

not limited to, stress, anxiety, workload, exhaustion, and lack of support. The present study aimed to explore the challenges experienced by Egyptian university educators in relation to online teaching during the pandemic.

Positive Effects

Several studies have also examined the positive effects associated with the use of online teaching, whether before or during the Covid-19 pandemic. This section spans the period between 2009 and 2020. Despite the variety in the background of the educators explored, there seems to be an agreement about the type of positive effects generally experienced by teachers.

Sørebø, Halvari, Gulli and Kristiansen (2009) investigated Norwegian teachers' motivation to continue using online technology voluntarily in online courses. Specifically, the study investigated how the fulfillment of basic needs like e-learning competence affected teachers' sense of usefulness and enjoyment. The questionnaire responses obtained indicated the positive impact of perceived autonomy and perceived competence on teachers' intrinsic motivation as a predictor of intentions to continue using e-learning. The study emphasized the need for user training and support not only before online learning onset but as a continuous part of its subsequent use.

Emotional wellbeing was another positive aspect explored by Bennett (2014). She examined the effect of opting to use new technological teaching practices on high education lecturers' emotional wellbeing in the UK. She explored the positive impact of loving work, enjoyment, and confidence. The participants of this study were 16 higher education lecturers ranging in experience from six years of teaching to first timers using Web 2.0 tools. The study used lengthy interviews, which were analyzed using Coupland, Brown, Daniels, and Humphreys' (2008) analytical framework of emotional upgrading and downgrading and coping strategies. Positive emotions were identified regarding teachers' growing confidence in their skills and expertise, and support received from co-workers.

In 2020, during the Coronavirus pandemic, Schaffhauser's study aimed to explore the challenges mentioned above, and the successes (both pedagogical and psychological) associated with online teaching. In their extensive survey, administered to approximately 1000 American K-12 teachers, some positive emotions were expressed, indicating self-efficacy (including "capable" (77%), "motivated" (66%), and "confident" (61%)). However, teachers' confidence seemed to emerge more from their abilities to adjust (81%) than from their students' abilities to do so (57%).

The above review of studies exploring the positive effects of online teaching in relation to the pandemic reveals various positive feelings. The studies reviewed, except for the last one, were conducted prior to the outbreak of the Covid-19 pandemic. One interesting observation is that the positive outcomes of online teaching before the pandemic, namely motivation, confidence, and capability, were also identified in relation to online teaching during the pandemic.

Coping Strategies

This section reviews research carried out on strategies used by educators to cope with the challenges associated with online teaching, whether before or during the Covid-19 pandemic.

Hyseni-Duraku and Hoxha (2020), besides examining the impact of the pandemic on teachers and students, explored recommendations by teachers and parents to cope with the situation. Their semi-structured interviews with teachers and parents showed, among other things, that teachers suggested they should enhance their level of knowledge in technology, as well as the level of communication with students during online teaching. The authors concluded that, by following certain strategies, teachers in Kosovo were ready and motivated to upgrade their skills to enhance the quality of education in the country.

In an Indian university teaching context, Roy (2020) focused on communication modes between students and teachers. Because of the flexible nature of online instruction, teachers had the opportunity to diversify the tools they used during the pandemic, ranging from email or WhatsApp groups to video conferencing tools like Webex and Zoom, and teaching web platforms like Moodle and Google Classroom. Roy's article concludes with advice for teachers to use what is suitable and enjoyable for them to do an excellent job teaching online.

Other attempts have been made to meet teachers' needs to cope during the pandemic. William Woods University cited the initiatives made by different organizations and businesses to combat the crisis (2020). Several tips were provided to teachers in dealing with online teaching, mainly to keep everything simple, to make use of one digital platform for students to use from home, to give students more autonomy with assignments and tasks, as well as engage students through connecting with them on an individual basis.

Matvienko, Kuzmina, Yamchynska, Kuzmin and Glazunova (2021) investigated how teachers coped with challenges encountered at a Ukrainian university because of the pandemic. They applied a mixed method, engaging 206 full-time and 115 future part-time teachers of English in responding to a questionnaire. The results of their study underscored the significance of lifelong learning and self-education. The authors concluded that in facing the many drawbacks of the Ukrainian educational system, a great deal depends on the will to become "agents of change".

Similarly, Alvi et al.'s (2021) study of the challenges faced by university teachers and students in a Saudi ESP program made a number of recommendations to cope with such challenges. The authors suggested nurturing teachers' and students' digital competencies, incorporating both synchronous and asynchronous interactive activities between faculty and students, as well as organizing faculty development programs to promote the different competencies of faculty, digital, pedagogical, and technical. Hassan et al. (2021) made a similar recommendation of developing training and orientation programs to support educators in Cyprus at times of need.

The studies reviewed in this section on coping strategies reveal that educators have resorted to various ways to deal with online teaching. While before the pandemic, educators tended to focus on pedagogical factors, during the pandemic, there has been more reliance on psychological factors, showing compassion and empathy, as well as effective communication. This is in

addition to a realistic approach to face the challenges, like improving teachers' technological skills and giving clear instructions about what is expected of students.

This review of the literature has, thus, focused on three primary variables in relation to online teaching, before and during the pandemic: challenges, positive emotions, and coping strategies. It has identified similarities in emotions associated with online teaching, positive and negative, and it has demonstrated several strategies that educators have employed to deal with the stresses associated with online teaching in general, either in 2020 or before. However, it has made clear that no studies to date have examined the Egyptian context in terms of the discrepancies among different academic institutions in the kinds of challenges faced by teachers and/or the various methods employed to address these challenges. The present study aims to add to the body of research on online teaching by examining such factors in a new teaching context, that of Egypt, in three institution types: adult education, private universities, and public universities, through eliciting Egyptian educators' responses to a survey that deals with challenges and coping strategies during the pandemic.

Methods
Design
This is a cross-sectional descriptive study with a quantitative-qualitative design. It investigates the pandemic-associated online-teaching challenges and the various types of coping strategies used by Egyptian university educators at three institution types: adult education, private universities, and public universities.

Survey
A survey was created specifically for the study. It consisted of three parts: a) demographic data and information regarding the online teaching context, b) challenges regarding online teaching during the pandemic, and c) coping strategies. Question types varied, including five-point Likert-scale items, multiple-choice questions, and open-ended questions. (See Appendix for the complete survey.)

Ethical Considerations
The survey was validated by two educators, one from a public university, the other from a private university. Their feedback was taken into consideration when finalizing the survey. Next, IRB approval was sought by one of the researchers through her university Institutional Research Board. Complying with IRB requirements, the survey informed participants about the purpose of the research, and the possible uses of the data for research and/or conference presentation, promised anonymity, and sought respondent consent before participation.

Data Collection
Initially, the survey was piloted before obtaining IRB approval in November 2020; this helped refine a few of the survey questions for better clarity. Once IRB approval was obtained, the data collected from the pilot was discarded entirely.

In collecting the actual data used in the present study, messages were sent in December 2020 and January 2021 to department heads, course coordinators as well as various university staff contacts via email, WhatsApp, and Facebook. Such messages requested participation and

dissemination. They were followed up with reminders until a reasonable number of responses was obtained.

Statistical Tests

The responses obtained were analyzed statistically using Excel sheets to obtain descriptive statistics. Mainly, three statistical tests were used, namely, frequency counts, means and percentages. To normalize the unequal numbers of the respondents from the different institution types compared, percentages within each educational institution type were used instead of the actual frequency counts. Additionally, the "Agree" and "Strongly Agree" responses were calculated together, and so were the "Strongly Disagree" and "Disagree," while the "Neutral" was calculated independently, thus providing simpler statistics for the three institution types involved.

Participants

The target participants for the study were Egyptian university educators from three different institution types. Therefore, stratified sampling was implemented in the sense that it included participants from the three target categories. However, the numbers of the three category members collected were unequal. The sampling was also convenient as the sample included only participants who were available and willing to take part in the survey despite the probable bias of not including those who did not volunteer to participate.

After excluding non-Egyptians and schoolteachers from those who responded to the survey over the period from 25/12/2020 to 19/1/2021, the participant body from the three institution types was as follows: 45 adult education instructors, 78 private university instructors and 99 public education instructors, totaling 222 instructors. They varied in age, gender, educational background, teaching status, and experience with technology (namely, computers and the different online platforms used).

While adult education instructors were mainly part-timers (95.5%), most public university educators were full-timers (95%), and almost two-thirds of the instructors working in private institutions were full-timers. As for gender, the participants from the three academic institution types were predominantly females (90%).

The educational background of the participants was as follows. The majority (64.5%) of those teaching adults had a BA, while most private university instructors (61.5%) had an MA. Interestingly, those who had a Ph.D. and others who held post-doctoral positions at public universities were divided equally (41.5%), together comprising the majority of public university respondents.

As for experience with technology, two-thirds of the participants from the three institution types (total 66.5%) had experience of 20+ years using computers. Also, almost half the participants (47.5%) rated their computer literacy skills as "Very Good," almost none thought of their skills as poor, while nearly one-third said they had excellent computer literacy skills.

As for the teaching modes implemented during the pandemic, most respondents from the three institution types (58.5%) applied a hybrid system, including face-to-face and online

teaching. As can be seen from Table One below, while public university instructors were the ones who applied hybrid teaching the most (90%) due to the late provision of online platforms and the limited opportunities for technical training till the time of the survey in the public sector, the majority of instructors in adult education institutions (80%) employed online teaching only, while private university educators were more inclined to teach fully online (59%).

Table 1. *Online teaching mode used*

	Adult	Private	Public	Total
Hybrid mode	20%	41%	90%	58.5%
Online mode only	80%	59%	10%	41.5%

As for the duration of online teaching reported at the time of the survey in December 2020, most instructors (72%) reported using online teaching for two terms. On the other hand, while 15% used it for one term only and were still struggling with it when they took the survey, very few (5.5%) reported having used it for three terms. This shows that the majority only resorted to online teaching after the pandemic and lockdown in March 2020.

In terms of the platforms used in such online teaching, most respondents indicated that they used more than one online platform. Zoom has been the one mostly used in all three institution types (83%). This was followed by Blackboard (43.5%), Microsoft Teams (29.5%), and Google Classroom (28%). While most instructors in private universities (93.5%) and public universities (82%) leaned heavily on Zoom, adult education teachers used Moodle (84%), much more than their private and public education counterparts (37% and 22%, respectively). A host of other platforms were used by all three institution types, though to a much lesser degree (13% altogether); those included Facebook live, Gourmet, WhatsApp, Edmodo, Preply, Schoology, Jamboard, Webex, and Acadox. All in all, the numbers indicate that an average of two platforms was used by every respondent, reflecting an amount of experimentation in online teaching till they settled on the most convenient ones for themselves and their students.

Analysis

This section reports the results of the analysis of the survey responses by participants from all three institution types: adult education, private universities, and public universities. It includes both the challenges the instructors faced and the coping strategies they employed to deal with them.

Challenges

The challenges reported were found to fall into four main categories, namely technical, administrative, professional, and psychological ones.

Technical Challenges

Reporting on technical issues, a little less than half of all participants indicated they had internet connectivity problems, as shown in Table Two; almost half of those who worked at private and public universities (48.5% and 47.5%, respectively) had to face this challenge. In contrast, those who encountered problems in adult education institutions were fewer than those

who did not. An instructor from a private university complained of the "Internet pricing compared to the [quality of the] eervice [*sic*]," which probably explains why the option of purchasing adequate internet bundles was not common practice. Some explained that even when they did, the connectivity was still inadequate for the higher demands on synchronous audio-visual streaming, and uploads and downloads for all their classes.

Table 2. *Internet connectivity problems*

	Adult	Private	Public	Total
Disagree	40%	33%	23%	30%
Neutral	29%	18%	29%	25%
Agree	31%	48.5%	47.5%	44.5%
MEAN	2.88	3.16	3.38	3.2

When reporting on the technical support they received when transitioning to teaching online, as Table Three below illustrates, the instructors, in general, tended to be neutral (M = 3.07). However, more than half of those teaching in public universities (54.5%) reported they had no or minimal technical support. Conversely, more than half the educators teaching in private and adult institutions (60% and 51%, respectively) acknowledged having received adequate technical support. Interestingly, the comments by instructors in private institutions were somewhat contradictory. While one instructor stated that "They offered nothing that l found of use!", another commented that "Trainings [*sic*] and courses were conducted to keep us updated and unified." A third one still maintained that "I hardly needed any, so I can't judge." In contrast, the late introduction of technical support in many public institutions was indicated in the responses.

Table 3. *Enough technical support*

	Adult	Private	Public	Total
Disagree	22%	15%	54.5%	34%
Neutral	26.5%	24%	26%	25.5%
Agree	51%	60%	19%	40%
MEAN	3.48	3.68	2.41	3.07

As illustrated in Table Four below, the majority of all instructors who took part in the research (60%) indicated that they found online system tools easy to understand. There was greater agreement on such ease of use by instructors of adults (84%). Very few instructors in the three institution types, (12%), found online tools difficult to understand. One of the instructors in a private university replied, "Not all of them. However, the idea is how to merge them into your lessons and tasks to make the best use of them." Another instructor stated, "I don't need to understand more than the one/two I need to use. Yes, those are easy to understand."

Table 4. *Ease using online system tools*

	Adult	Private	Public	Total
Disagree	2%	9%	19%	12%
Neutral	13%	34.5%	29%	28%
Agree	84%	56.5%	51.5%	60%
MEAN	4.2	3.69	3.41	3.67

Administrative Challenges

In addition to the technical challenges in using online tools, participants commented on administrative challenges. As for administrative support received during the pandemic, Table Five below shows that support was reported to be received mostly by instructors in adult education (69%), followed by instructors in private universities (54%). In comparison, the instructors at public universities ranked third (only 27%). Adult education and private university educators complained of administrative issues unrelated to online teaching (e.g., job insecurity). On the other hand, a teacher from a public university complained of the lack of training or orientation during the transition to hybrid teaching and learning. This complaint is supported by the 41.5% public university educators who opined they did not receive adequate administrative support during the transition to online teaching.

Table 5. *Adequate administrative support*

	Adult	Private	Public	Total
Disagree	6.5%	19%	41.5%	26.5%
Neutral	24.5%	27%	31%	28%
Agree	69%	54%	27%	45%
MEAN	4	3.55	2.7	3.26

In addition to administrative support received during the pandemic, participants were also asked about how far they felt appreciated by the administration. Table Six shows that approximately half of all the participants (48%) generally felt appreciated by the administration of their institution. The highest percentage was in those teaching adults (62%), followed by teachers at private universities (57.5%), while educators at public universities (35%) were in the minority. Conversely, the complaint of not feeling appreciated by the administration was made by 30% of public university educators, but by much fewer of their counterparts. One instructor teaching adults stated, "Certificates of appreciation and many signs of recognition are always offered by the organization to support their faculty." Another from a private institution maintained that "The administration keeps sending emails that they appreciate teachers' patience and perseverance during the pandemic." In contrast, an instructor at a public university stated, "the administration rarely considers the efforts we exert in facilitating online teaching."

Table 6. *Administrative appreciation*

	Adult	Private	Public	Total
Disagree	11%	7.5%	30%	20%
Neutral	24.5%	29.5%	34%	31%
Agree	62%	57.5%	35%	48%
MEAN	3.82	3.7	3.05	3.43

Professional Challenges

Respondents to the survey also commented on the professional challenges they faced during the pandemic. As clear from Table Seven below, most respondents felt equally motivated to learn something new (65.5%). About two-thirds of those teaching in private institutions (70.5%) and slightly smaller percentages in the other two institution types reacted in the same way. However, one teacher in adult education stated, "I want to master what I know to do it well first.". On the other hand, an instructor in a private institution stated, "The key is to motivate the learners and make them interact," while another explained, "I do my best to learn …, but at the same time, I don't want to be distracted with too many things."

Table 7. *Motivation to learn more about online teaching*

	Adult	Private	Public	Total
Disagree	9%	6.5%	8%	7.5%
Neutral	29%	23%	28%	26.5%
Agree	62%	70.5%	63.5%	65.5%
MEAN	3.93	3.93	3.84	3.89

Respondents also rated how far they felt appreciated by students when teaching online. Table Eight below indicates that the number of teachers who felt appreciated (49%) was much higher than those who did not (15%). While most of those who felt appreciated were instructors who teach adults (60%), teachers in private and public universities also felt appreciated, though at a lower rate (47.5% and 45.5%, respectively). One adult education instructor commented, "I receive many positive comments complementing [sic] my dedication and efforts. The students really appreciate that."

Table 8. *Appreciation by students*

	Adult	Private	Public	Total
Disagree	11%	14%	17%	15%
Neutral	29%	38.5%	37.5%	36%
Agree	60%	47.5%	45.5%	49%

MEAN	3.62	3.44	3.39	3.46

As for how confident instructors felt regarding teaching online, Table Nine below indicates that more than half of the participants (63.5%) felt confident teaching online. While the majority of instructors in adult education and private universities (89% and 70.5% respectively) felt this way, slightly less than half the teachers in public universities (46.5%) experienced the same feeling. Conversely, about one-fifth of public university educators (21%) indicated they were not confident using online tools. One of those public university instructors commented by stating, "I am still learning and discovering new things, but those tools I know are fine with me.", while another explained by saying, "I like to experiment and try new tools; the more I practice, the more confident I become," thus indicating gradually increasing confidence, expected to match that of their peers with more use of online teaching.

Table 9. *Confidence using online teaching tools*

	Adult	Private	Public	Total
Disagree	0%	6.5%	21%	11.5%
Neutral	11%	23%	32%	24.5%
Agree	89%	70.5%	46.5%	63.5%
MEAN	4.2	3.89	3.33	3.7

In responding to a question regarding their ability to relax when teaching online, as Table 10 below shows, the teachers were divided. Both adult education and public university instructors were more inclined to have a hard time relaxing than not, while the reverse was true for private university teachers. In their comments, many instructors attributed this to their failure at work-life balance. One instructor in adult education stated, "Online teaching is very demanding and can sometimes become very overwhelming. Many times, the fact that we have many other responsibilities is forgotten and it becomes very hard to draw lines between work and personal life." In contrast, an instructor teaching in a private university stated, "l am totally in my comfort zone." Another respondent, who had trouble feeling relaxed, said, "I feel anxious because I cannot guarantee the stability of the connection, especially for my students." Responses to this question thus indicated varied attitudes in all three institution types alike.

Table 10. *Having a hard time feeling relaxed when teaching online*

	Adult	Private	Public	Total
Disagree	42%	43.5%	30%	37%
Neutral	11%	23%	31%	24%
Agree	46.5%	33%	38.5%	38%
MEAN	3	2.78	3.05	2.94

Concerning the teachers' productivity, Table 11 below illustrates that 40.5% of all instructors who responded to the survey had an increased level of productivity when teaching online. A large number of those come from private universities and adult education (52.5% and 44.5%, respectively). In their comments, adult education and private university instructors agreed that online teaching saved commute time and effort, which helped increase productivity. An instructor from a private university commented that the time wasted on commuting was reallocated to more productive activities. On the other hand, one instructor in a public university stated, "In terms of preparing for classes, yes. But in terms of doing research, a resounding no. I hardly have the time, let alone the desire and clarity of mind." It is interesting how the public university educators' accountability for continuous research was highly jeopardized by the extra duties of learning how to use the new platforms.

Table 11. *Increase in work productivity when teaching online*

	Adult	Private	Public	Total
Disagree	33.5%	19%	32%	28%
Neutral	22%	28%	39%	31.5%
Agree	44.5%	52.5%	29%	40.5%
MEAN	3.31	3.51	2.92	3.21

Psychological Challenges

As for psychological challenges, one question in the survey addressed how anxious teachers felt when teaching online. Table 12 below indicates that instructors in the three institution types, on the whole, were not anxious (M = 2.81). While educators at private institutions seemed to be the least anxious (43.5%), those teaching adults and teaching at public universities seemed to be divided; almost one-third of each group reported they did not feel anxious while another third reported feeling anxious, and the rest were neutral. One instructor teaching adults indicated that "Good preparation and familiarity with the platform features reduce the stress levels dramatically." Another teaching at a private university stated, "I feel anxious at the beginning of the session and as the class progresses my students and I generally get over the anxiety." Backup plans helped some teachers avoid anxiety, as clear from the comment by an instructor at a public university, who said, "I feel comfortable and have a couple of back up plans for power cut[s] or bad internet connection."

Table 12. *Anxiety when teaching online*

	Adult	Private	Public	Total
Disagree	34%	43.5%	37%	38.5%
Neutral	29%	32%	30%	30.5%
Agree	37.5%	24.5%	32%	30.5%
MEAN	2.93	2.61	2.9	2.81

Another survey item related to instructors' level of frustration while teaching online. Table 13 below illustrates that one quarter of all the respondents experienced frustration (25.5%). Slightly fewer educators at public universities and adult education institutions seemed to experience frustration (22% and 24.5%, respectively) than their counterparts in private universities (30.5%). Of those who explained their causes of frustration, a teacher from a public university said, "I feel like begging for students to participate, answer my questions or even respond to my comprehension checks!" Similarly, one instructor teaching adults indicated, "It can be overwhelming when not prepared appropriately." At the same time, a teacher from a private university stated, "Sometimes I do [feel frustrated], when I feel students are not doing what they are supposed to do."

Table 13. *Frustration while teaching online*

	Adult	Private	Public	Total
Disagree	40%	39.5%	48.5%	43.5%
Neutral	35.5%	29.5%	29%	30.5%
Agree	24.5%	30.5%	22%	25.5%
MEAN	2.68	2.78	2.59	2.68

Concerning the level of exhaustion instructors experienced when teaching online, Table 14 indicates that, on average, more than half of all the participants (57.5%) reported feeling exhausted. Interestingly, the same percentage from the three institution types reported the same level of exhaustion. One instructor teaching adults indicated that "It requires more time and effort for the preparation and the online performance to keep the students engaged and motivated through a screen," while another from a private university opined that "I sometimes feel exhausted because I believe the workload is just more than ordinary. Students' conferences would take hours instead of 15 to 20 minutes if they were face to face." Another source of exhaustion was identified by an instructor from a public university who said, "blue light is an issue" due to the strain on eyes caused by screen overuse.

Table 14. *Exhaustion when teaching online*

	Adult	Private	Public	Total
Disagree	29%	27%	23%	25.5%
Neutral	13.5%	15.5%	19%	16.5%
Agree	57.5%	57.5%	57.5%	57.5%
MEAN	3.33	3.41	3.55	3.45

This section on the challenges educators have encountered during the pandemic covered four main types: technical, administrative, professional, and psychological. There were differences in the levels of agreement and disagreement among the teachers belonging to the three institution types, not only in the types of challenges, but in the strategies used to cope with these challenges, as discussed in the following section.

Coping Strategies

   Having established the challenges faced by teachers from the three institution types, the study also investigated the coping strategies they reported employing while teaching online. These fall into two main groups, namely technical/professional and social coping strategies. However, the distinctions can be fuzzy at times, and some strategies may fall into more than one category.

Technical and Professional Coping Strategies

   Participants from the different institution types reported trying to boost their online teaching skills through employing the following strategies: enhancing internet connectivity, looking for relevant online tutorials, and seeking help from peers. Although many internet users in Egypt complain of internet connectivity as relatively limited and unstable, when asked about internet connectivity in online teaching, a few instructors teaching adults explained that they coped with the wired DSL internet problems through the help of extra internet bundles, higher speed subscriptions, and supplementary Wi-Fi devices.

   As for the skills involved in using the new platforms, the majority (69%) said they watched online tutorials on using technology in teaching. Instructors of adults demonstrated the highest percentage (75.5%), followed by educators at public universities (70.5%), then by those teaching at private institutions (63%). Commenting on how effective such tutorials were, one instructor at an adult education institution said they were "very effective, always accessible and varied." In the same vein, another from a public university commented that "tutorials are a teacher's best friend! I would not survive without them because I am always curious, and I like to master the online tools I am using."

   Similarly, one of the coping strategies observed informally before the study and investigated in the survey was how far instructors formed communities of practice and resorted to colleagues for help with technical problems. The survey responses indicated that, on average, more than half of the participants (62%) resorted to colleagues to help them deal with IT problems. This was true of educators in all three institution types (55.5% adult education, 60% private institutions, and 66.5% public universities). For instance, one instructor in an adult education institution commented, "It saves time and effort especially when you need an instant help [*sic.*]", and another in a private university stated, "Sharing information and troubleshooting is always very useful." Another educator at a public university maintained that "it's helpful sometimes to share our tricks for resolving technical issues or managing online classes," while another stated that it - restoring to colleagues for technical help - is "quicker and more effective than watching videos."

Social Coping Strategies

   Social coping strategies were also investigated with a special focus on the use of social media. When asked about their use of social media as a coping strategy, the majority of the respondents (73% - with an overall mean of 4.06) said they socialized with family and friends during lockdown on different social media platforms (e.g., WhatsApp, Facebook, and/or Instagram). As for socializing with friends using audio and/or video tools (like Zoom, and FaceTime), respondents from the three institution types reported that socializing with friends using audio and/or video tools was not as common (M = 2.89).

   The study also investigated the different purposes of using social media; more than half of the

survey participants used social media for "**sharing**" (54%). This mostly applied to instructors of adults (57.5%), followed by instructors in public universities (55.5%), and to a lesser degree by those in private universities (50%). Respondents were also queried about using social media for "**caring**." Almost two-thirds of the respondents reported using social media for caring (63%). Instructors teaching adults and those teaching at public universities were almost identical (69% and 68.5%, respectively), while those teaching in private institutions ranked third (52.5%). Among the positive comments on such social media use by instructors from public universities, one explained, "It brings people together. It helps in sharing one's experience." In contrast, another educator said, "Sometimes they work and sometimes they are not enough.", while another one deemed them "Not effective! We only share jokes and memes about failed online tesching [*sic*]."

Discussion

This study aimed to gain a better understanding of the impact of online teaching on Egyptian university teachers and the strategies they used to cope with the challenges associated with the situation. Some areas proved to be quite challenging, while others were much less so. Interestingly, in the middle of this demanding transition to online teaching, some resultant positive emotions were identified, like being motivated, feeling more productive, being able to relax, and feeling appreciated by the students and/or administration. These positive effects would hopefully help reduce the negative impact of the challenges experienced and would help teachers see alternative coping mechanisms to develop a healthier lifestyle.

Challenges Faced during Online Teaching

The study investigated several challenges experienced by the teachers of the three institution types (adult education, and private and public universities) in relation to the pandemic-related transition to online teaching. These included internet connectivity issues, as reported by almost half of the educators teaching in private and public universities. This is obviously a factor that merits consideration since it is a common challenge during online teaching. This finding agrees with Hyseni-Duraku and Hoxha (2020) and Hassan et al. (2021). Both studies identified internet issues as one of the sources of stress, though with students only, rather than instructors as the case is with Egyptian teachers in the present study. The main plausible reason for this anxiety is that internet connection instability, even for a few minutes, makes teachers concerned that students may miss out on important class content. Alvi et al. (2021) relate such recurrent connection problems to technophobia as another emotional challenge experienced by teachers and students alike.

Another challenge the present study investigated had to do with technical resources. Because of the availability of online platforms and technical support to adult education and private university teachers prior to the pandemic, the challenges they faced when migrating to full online teaching were not as severe as those encountered by their public university counterparts. Understandably, because of the late provision of online platforms and the somewhat limited opportunities for the required training at the time of the survey, public university instructors were the ones who applied hybrid teaching the most.

Some of the sources of stress identified by the university educators from the three institution types in the present study were similar to those expressed by schoolteachers from different US

school boards in Ferguson, Frost and Hall (2012) study, namely workload, student behavior, and employment conditions. Ferguson et al. related those to negative occupational stress, depression, and anxiety. Even though student behavior was not among the challenges included by the participants of the present study, it was alluded to by several teachers in relation to students' lack of motivation, especially when closing the camera and not interacting with the teacher. This is an interesting similarity despite the different contexts of the two studies.

The differences in the challenges faced by teachers from the three institution types in the present study could be explained in terms of context as a factor significantly impacting how they reacted to the same predicament. In public universities, teachers' higher sense of challenge and lower levels of confidence and satisfaction could be explained in terms of the later introduction of full-fledged online teaching after securing a unified online platform (only at the end of the Fall term 2020-2021) due to the limited government funds required for securing institutional platforms for online teaching and providing the needed training and support. Add their worry about the time needed to learn how to use online platforms when they are equally accountable for teaching and research. This is because research in public universities is considered a priority as their promotion and job security depend highly on their research achievements along pre-assigned deadlines. This may explain their heightened sense of challenge when faced with the unforeseen acute need to transition to a new teaching mode with all the required training and the demands on their time.

In contrast, private university instructors already had online tools in place and received the necessary initial training in Spring 2019-2020. This led to a growing sense of confidence in general, which could explain their diminishing anxiety and increasing experience with online teaching tools, which seems to agree with Schaffhauser's (2020) study of online teaching, although with a sample of schoolteachers. Therefore, they showed more satisfaction due to receiving early support and training. Further, most of them already had an online platform in place to supplement face-to-face teaching, and only had to rely on it entirely as they transitioned to full online teaching. Additionally, many appreciated saving the daily hours wasted otherwise on commuting to their campuses (especially as most Egyptian private universities are located in the outskirts of Cairo). On the other hand, they were highly challenged with the work-life balance due to longer student conferences and the sense of entitlement private university students had regarding the time they required of their teachers in return for the high fees they paid when they were only studying at home.

As for adult education teachers, mainly part-timers, they also had access to an online platform early on, in spring 2019/2020, and were offered online training at lockdown onset. They reportedly received more substantial administrative support and appreciation and, therefore, showed stronger motivation and resourcefulness in coping with the new situation. Those who relied solely on this part-time job probably faced the threat of job insecurity at a time when the job market may have been affected by prospects of economic stagnation. On the other hand, other adult education teachers had more than one teaching job at various institutions simultaneously. Those teachers indicated receiving more training from multiple workplaces, thus accumulating experience, and coping better and faster.

Teachers' Coping Strategies

The present study has implications on the different types of coping strategies (namely, technical/professional, and social) used by teachers from different institution types. For instance, to cope with the internet connectivity challenges experienced by teachers of the three institution types, respondents teaching in adult education reported using extra bundles and devices. Maybe this strategy should be suggested to teachers in private and public universities who probably did not consider this option, coming from work environments with more stable internet connectivity. This would help them cope with the recent demands of streaming, downloading, and uploading, all of which require higher internet speed, larger bandwidth, and unlimited packages.

Among the professional coping strategies highly commended by the participants were watching online tutorials and forming communities of practice. Whenever using a new feature such as polls, discussion groups, breakout rooms, or online journals, many teachers reported seeking online tutorials to assist with the institutional training provided initially. Similarly, whenever they lacked adequate resources, teachers sought technical and professional help from friends and colleagues. The availability of audio-visual platforms facilitated the formation of such support groups who met regularly, exchanged tips and tricks on using the new media and/or on troubleshooting recurrent glitches.

As for the social coping strategies identified in the study, those included chatting with family and friends and using social media for caring and sharing, which shows compassion for self and others. This finding agrees with Talidong and Toquero (2020). They found using social media and spending time with family to be vital coping strategies practiced by Philippino teachers during the pandemic-related challenges, including the transition to online teaching. Our participants' caring and sharing on social media as well as participating in professional communities of practice reportedly proved to be a robust support system the participants relied on to share concerns and seek advice.

Conclusion

The present study has compared teachers' challenges and coping strategies in three institution types, aiming to enhance the teaching context in a changing world. Based on this comparison, the study could function as a means of awareness-raising to teachers, administrators, and policymakers.

Individual teachers probably need to anticipate that online instruction, whether fully or partially, may be the new norm that all involved in the field of education have to accept and be ready to engage in. By sharing experiences, teachers would learn useful tips that would help enhance their online performance. It is also hoped that teachers would adopt some coping strategies that have been reported to be effective by fellow teachers. The ultimate goal is to help make the "new normal" normal in the true sense of the word. Additionally, it is hoped that teachers seriously consider the gains they achieved from the new situation. One of these was the reported motivation to learn new skills related to online teaching. Another was a sense of increased productivity. It is predicted that, as time goes by, teachers will gain more experience

with online teaching, which will help diminish the challenges they face and equip them to cope more easily with the new reality.

Demands on administrators can also be suggested. Technical support of online platforms is evidently of paramount importance to help teachers operate and manage their day-to-day activities. Ongoing training is also needed to give them an edge in making the new reality work as smoothly as traditional teaching tools. Additionally, administrative support and appreciation of teachers are required to maintain teachers' confidence and motivation while facing the demands of the changing situation. By demonstrating enough care and empathy, administrators would help enhance teachers' well-being, and consequently, teaching and learning would take place in a more supportive environment.

The research also sheds light on the role of policymakers in planning, not only in Egypt where the study was conducted but in different parts of the world that have faced similar challenges. A contingency plan should be put in place in the event that a situation similar to that of Covid-19 should afflict the world. Short-term and long-term planning should include adequate internet services, reliable platforms suitable to each work environment, as well as round-the-clock technical support. Additionally, ongoing teacher-training programs on online tools (like Hassan et al.'s 2021 suggestion of providing training and orientation programs, through the collaborative efforts of educational institutions and relevant authorities) can help guarantee an effective learning process throughout the online experience with as few problems as possible.

Naturally, the present study suffered from a number of limitations that may restrict the generalizability of the findings reached. First, the sample size was limited due to having to run the survey twice. It was run first when piloting the survey (whose results were discarded), as explained in the methodology section above. When the same workplaces were approached to respond once again, some participants in the pilot may have declined, reluctant to spend more time on a voluntary task like this. Additionally, as with all surveys, the possibility of sampling error is always relevant when participation is voluntary. For instance, using predominantly female participants may have impacted the nature of the challenges and coping strategies reported. Including more Egyptian male teachers' perceptions would have added value to the results, making them more representative of the population of Egyptian university teachers at large. Furthermore, when analyzing the survey results, it was discovered that some of the survey quantitative and commentary responses obtained from teachers could have benefited from further clarification and elaboration if interviews had been held with selected participants. However, any interview responses requested weeks after the survey would have reflected a different psychological reality when participants were probably coping better with online teaching due to familiarity, experience, training, and platform improvement.

The study, being based on a time-bound survey, functions as a snapshot, representing the reality at the time of the survey in an ever-changing situation. By the time this research is published, public universities have dedicated sufficient funds to subscribe to online platforms and provided the necessary training and technical support. Teachers have also developed a better grip on the use of online tools, are appreciated by students and the administration, and are said to be coping much better with a situation that was more challenging at the time of the survey. Such

changes are outside the scope of the present study and would merit further investigation.

Future research is suggested to seek more in-depth discussion of teachers' attitudes through interviews and/or focus groups. This could explore the impact of the long duration of online teaching, especially after the situation has stabilized or even after the virus has mutated, which has pushed some academic institutions to resort to extending the online mode, and others to go back to face-to-face teaching. Such studies could use a larger sample size, including teachers from different geographical areas, demographic groups, and institution types. Further research could also study the correlation between instruction mode and level of stress, or the correlation between student-related variables like interaction, motivation and achievement, and teacher stress. It could also explore the impact of online teaching on students of different age groups. Such studies can help better understand the evolving integration of online learning and teaching as the new normal.

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