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## Digital adult education: The impact of transitioning from in-class to emergency remote learning

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### Abstract

The Directorate for Research, Lifelong Learning and Employability, which offers general education courses to people aged 16+, adapted to emergency remote learning during the COVID-19 pandemic. In this paper we explain the support structures that had to be put in place, requiring a quick and effective response from educators and learners. We also present ex-ante and ex-post data gathered from stakeholders through administrative data and a satisfaction survey. These serve as a snapshot of the adaptability and willingness of adult learners and educators to engage with e-learning. They are also a springboard for reflection and planning for the Directorate and other educational establishments concerned with andragogy.

### Keywords

Emergency remote learning, andragogy, adult education, adult learning, synchronous online learning

### Introduction

The Directorate for Research, Lifelong Learning and Employability (DRLLE), within the Ministry for Education, offers general education courses (ranging from Foundation to MQF 4), attracting an average of 13,300 applications annually between 2013 and 2018. 7148 applicants, of which 6198 unique individuals applied for academic year 2019/2020. Academic year 2019/2020 was unprecedented in that, after starting normally at the end of September 2019, premises serving an educational function were abruptly closed in mid-March 2020 to limit Coronavirus spread. In response to the closure, DRLLE switched 175 courses to emergency remote learning from the 16th of March

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2020 to the end of July 2020. This paper delves into the DRLLE's experience of rapidly shifting to emergency remote learning.

### Lifelong learning

Lifelong Learning (LL) is the pursuit of knowledge and skills needed for either personal or professional fulfilment through formal, non-formal and informal learning opportunities undertaken by adults after leaving initial education and training (Chitjiba, 2012). Based on this definition, this article will use Lifelong Learning and Adult Learning synonymously. Adult learning is self-directed; it must acknowledge and build on learners' existing knowledge and experiences; and it requires a readiness, orientation and motivation to learn (Knowles, 1980, 1984).

People need to be supported to learn (Yazıcı & Ayas, 2015). Adult learning is an interactive process through which the educator and the learner converse, acknowledge strengths, direct focus, provide feedback and care and support one another (Freire, 1972, cited in Smith, 1997, 2002). This process enables people to gain knowledge and develop 'conscientization' and empowers learners to be creative, transform reality, conquer challenges and acquire further knowledge (Freire, 1972, cited in Smith 1997, 2002).

The process of LL is based on the four pillars of education: learning to know, learning to do, learning to live together and with others, and learning to be (Chitjiba, 2012). This enhances one's self-concept, self-confidence and socio-economic standing, resulting in increased well-being and fulfilment, greater ability to cope with stress and change, and improved capacity to maintain mental and physical health (Ionela, 2012; Panitsidou et al., 2012). Individual gains translate into social returns in terms of improved social inclusion, civic participation, and decreased feelings of social isolation or exclusion (Panitsidou et al., 2012). Thus, a culture of LL brings real benefits to the society, the community and the nation. By enabling individuals to adapt to change, they become better equipped to adapt to labour market needs, thereby increasing competitiveness and employability, enabling nations to respond to demographic and labour market changes, and contributing to economic growth and development (Panitsidou et al., 2012; Ionela, 2012). LL contributes to individual and national success at all stages of life, implying that learning should be inclusive of all ages and communities (Bidokht & Assareh, 2011).

## Lifelong learning in Malta

In 2019, Malta's adult learning participation rate stood at 12%. This is above the European Union (EU) average of 10.8%, yet below the EU 15% benchmark (Eurostat, 2020). Moreover, in 2019, the participation rate for adult learning among women was higher (13.4%) than that for men (10.7%) (Eurostat, 2020). The number of persons participating in Informal Education (individual learning that occurs outside a structured curriculum) in Malta stood at 42% in 2016, significantly lower than the EU average of 59.9%, with the majority engaging in informal learning via a computer (online or offline) (NSO, 2018). In Malta, adults aged 35–54 are more likely to be engaged in learning than other age groups, with 48.7% from this cohort engaging in learning (NSO, 2018). Despite Malta's high proportion of adults aged 25–64 with low qualifications (46.7% in 2018, above the EU average of 21.9%) (European Commission, 2019), the education participation rate of this cohort was 4.3% in 2019, merely 0.9 percentage points higher than in 2010 (Eurostat, 2021). A possible explanation for the low participation in learning is Malta's high employment rate, which in 2019 stood at 66% among persons with low qualifications, above the EU-27 average of 55.8% (Eurostat, 2020).

DRLLE is one of 160 educational establishments that target adult learning (NCFHE, 2020). During 2019/2020, the Directorate offered courses in 77 different subjects ranging from academic to vocational subjects, including formal qualifications pegged between Foundation Level and MQF 4, informal courses and open classes. These were delivered in different settings, adding up to 408 different learning groups in 2019/2020, and taught by 150 educators.

## Lifelong learning in crisis situations

The COVID-19 crisis has been an enormous shock to the economy, society and labour markets, negatively affecting around 80% of workers' jobs and resulting in 305 million job losses (Association of Colleges, 2020; Boeren et al., 2020; International Labour Organisation, 2020). The most severely affected sectors have been tourism and the cultural and creative sectors (International Labour Organisation, 2020). Women have been more negatively impacted than men due to their over-representation in struggling economic sectors: accommodation, catering, retail and manufacturing (International Labour Organisation, 2020). Job cuts have increased competition for available jobs and the result is that

young people as well as unskilled and unqualified people are being pushed out of work while skilled and qualified people are having to settle for unskilled jobs (Association of Colleges, 2020; De Gregorio, 2020; Nicolosi, 2020; Mims, 2020). This reality has put a spotlight on the importance of learning through the life-course in order to adapt to the employment market.

Unlike any other crisis, COVID-19 meant the abrupt physical closure of educational institutions. This response brought about a boom in online learning, with many educational establishments shifting to emergency remote learning, inspiring people to learn new skills online (Comyn & Muñoz, 2020). Emergency remote learning falls within the first level of the SAMR model, the 'substitution' level, whereby the online interface replaces the physical classroom without any functional changes (Puentedura, 2006). Emergency online learning enabled educational establishments to step into the world of online learning, thus providing an opportunity for future enhancement.

In alignment with the theory of connectivism, technology enabled communication between educators and learners (Siemens & Downes, 2005), thus securing educators' livelihoods and ensuring that people already engaged in learning could continue with minimal disruption and delay. Additionally, those who were in lockdown could develop themselves, be productive and boost morale and self-concept. Furthermore, online learning enabled those who were furloughed, made redundant or had lost their jobs to develop skills which could help them re-enter the labour market once the crisis subsided (Boeren et al., 2020). Since about 75% of adult education is workplace-related, adult education should be at the forefront of the provision of an equitable possibility to develop adults' competences and put them to valuable use (Boeren et al., 2020). Although DRLLE had never previously engaged in online learning, between March and June 2020, the DRLLE substituted 175 general education courses with synchronous e-learning.

## **Methodology**

This paper uses a combination of ex-ante and ex-post data collected by the DRLLE to inform its decision-making on online learning. Ex-ante data was collected through short online questionnaires conducted by the DRLLE to inform its preparation for emergency online learning. This included:

- An initial online questionnaire with adult educators (N=85, 100% response rate) on subjective digital proficiency and willingness to shift to online learning, and their impression of their students' disposition in this regard, conducted in March 2020.
- An initial online questionnaire with learners (N=296) about their subjective digital proficiency and willingness to shift to online learning, conducted in 4 phases between March and April 2020.

Ex-post data was collected as part of the DRLLE's efforts for continual improvement. It was collected through:

- A reflection questionnaire which coordinators completed after each online lesson (N=920) between March and June 2020. This served to collate and analyse strengths and challenges experienced during the lesson as well as the support required for educators and learners.
- A satisfaction survey, conducted in Maltese and English, with learners of the service offered by the DRLLEs. The questionnaire covered questions regarding each aspect of the courses provided by DRLLE, of which this paper is concerned solely with engagement with online learning. Data was collected between the 11th of September and the 26th of October 2020, with 525 respondents engaging with the questions on online learning.

The above-mentioned questionnaires were distributed, completed and submitted online, through Microsoft Forms. This increased efficiency of time and financial resources by eliminating the need for data inputting, stationery and postage (Kabir, 2016; Sutherland, 2019). While enabling the entire learner, educator and coordinator population to be invited to participate (Ward et al., 2014; Evans & Mathur, 2015), online questionnaires allowed potential participants to think about their participation and to participate at their convenience and take as much time as they needed to answer the questions (Evans & Mathur, 2015). Another important advantage is that online questionnaires provided respondent anonymity, increasing the likelihood of providing open and honest feedback. Moreover, online questionnaires limited contact between individuals at a time of social distancing due to the COVID-19 pandemic.

In the case of the satisfaction survey, in order to improve participation of learners with basic skills who did not have an email address, telephone interviews

were carried out from the Ministry for Education's (MFED) Research Unit offices between 8:00 and 17:00 on weekdays, where three attempts, on different days and at different times of the day, were made to engage participants.

In congruence with all other communication that takes place between DRLLE and its learners, all potential participants were invited to participate in the surveys via email. The email contained information about the questionnaire, the role of the participants, the extent of confidentiality, the voluntary nature of participating, the lack of negative consequences should the individual decline participation, the contact details for support purposes and the details on how the information will be used. The email contained a link to the relevant online survey. Since the satisfaction survey was designed as a study, filling up the questionnaire constituted consent to participating in the study. Conversely, since the other surveys were carried out for administrative purposes, consent to use the data for research purposes was sought via email in February 2021.

With online research, data protection and privacy exist beyond the traditional methods. The online survey was configured in Microsoft Forms so that the IP addresses of devices used to access the survey were not recorded. In the case of ex-ante data, respondents had the option to provide their name and contact details so that they could be supported individually, if necessary, to continue their learning online. In the case of the satisfaction survey, no data was requested that could identify a respondent and the questions were designed in a way that no personal information was revealed unless respondents opted to reveal their identity while answering one of the open-ended questions. Access to the survey was restricted to the members of the MFED Research Unit working on this survey.

### Limitations

While the data which has informed the writing of this paper provided valuable information that enabled DRLLE management to take decisions at a time where these were needed to be taken expeditiously, and will continue to guide DRLLE's policy and practice in the field of online learning provision, this paper contains numerous limitations.

To begin with, the DRLLE comprises the Lifelong Learning Unit and the Research Unit. Two of the authors of this paper were also involved in taking

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decisions and implementing change in the face of COVID-19, one of whom is involved in the long-term implementation of online learning within the Lifelong Learning Unit.

Another limitation concerns learners who did not have access to a computing device, the internet and/or to an email account and could not take part in any of the online surveys. Furthermore, some learners had basic literary and/or digital skills, which made it difficult for them to read, understand and fill in the online questionnaires. These issues not only reduced the response rate, but also potentially excluded a cohort with a unique and valuable opinion about LL course provision.

Participants who followed more than one course were invited to complete a questionnaire for each course enrolled. However, they may have been less likely to complete multiple iterations of the questionnaire, further reducing the response rate.

The timing of data collection for the ex-ante questionnaires in March–April 2020 coincided with a period of high anxiety for individuals and the country, with rapid changes being experienced as COVID mitigation measures were implemented, affecting lives and livelihoods. Since the satisfaction survey was carried out two months after the courses had finished, it is possible that more learners would have engaged in the survey had it been administered closer to the end of the course.

As in any survey, respondents who were lukewarm about courses may have been less likely to participate in any of the online surveys, thus respondents were most likely to be those passionate about learning or who have strong (positive or negative) opinions about DRLLE's service provision.

## Results

DRLLE needed to move rapidly from the physical classroom into the first level of e-learning, known as 'substitution' (Puentedura, 2006). The Results chapter will start by looking at the adaptations to DRLLE's provision and operations necessary to be able to offer e-learning. The second part of the Results chapter will consider stakeholder feedback on the e-learning delivered.

## Adaptations necessary for shifting to e-learning

This section outlines the digital, procedural and human developments that took place to enable e-learning during the COVID-19 pandemic.

### *Digital infrastructure*

Since DRLLE had no digital infrastructure for e-learning, DRLLE chose readily available software which eliminated the need to conduct market research and procurement procedures during the COVID-19 crisis. DRLLE focused on usability so that educators and learners would be more likely to conduct and join an online lesson.

Online learning needs to be inclusive for those who have limited access to technology (OECD, 2020). DRLLE provided laptops to 8 educators who did not have the technical means to teach online. However, DRLLE could not provide hardware or internet to its learners during the COVID-19 pandemic.

### *Educators' initial disposition to teach online*

Educators varied widely in their digital proficiency: 27% (N=23) of educators self-assessed their digital proficiency as low, while 21% (N=18) rated themselves as 'very proficient', and 52% (N=44) claimed to be 'quite comfortable and proficient'. Despite this mixed level of digital proficiency, 93% of educators were interested in delivering lessons online during the COVID-19 pandemic.

### *Learners' disposition to e-learning*

Educators' impressions of their learners' digital proficiency was that 78% of learners were proficient while 22% were not. This was similar to learners' self-declared proficiency, wherein 18.2% (T=296) claimed to be 'not very comfortable and proficient', while 53.4% claimed to be 'quite' and 28.4% claimed to be 'very digitally comfortable and proficient'. Despite this variation in self-declared digital proficiency, 98% of learners claimed to use the internet on a daily or almost daily basis.

Furthermore, while 72% of learners claimed to have had no prior experience of online learning, 98% expressed their interest in learning online. Learners



expressed concern about whether they would be able to engage in online learning, mainly because they lacked confidence in using the internet (N=43) or in using the learning platform (N=14). Others lacked, or were unsure whether they had, the necessary technology (N=33), did not have a strong enough internet connection (N=10), or had security concerns about the learning platform (N=67). Some learners expressed their doubts concerning how successful online learning would be since it was their first time engaging in online learning (N=3), fearing that online lessons would be less interactive (N=8) or less effective (N=4) than those held in the classroom. Some were concerned that the online medium would hinder their ability to focus throughout the lesson (N=1) and understand the teacher (N=2). Others felt that childcare responsibilities (N=4), other distractions at home (N=3) or work commitments (N=3) would prevent them from attending. Two learners expressed concerns about how the switch to online learning would impact their chances of exam success.

### *Training in online andragogy*

Responding to the self-assessments and concerns described in the two sections above, DRLLE organised training for educators and learners. Engaging in such learning required a readiness on the educators' part to take on the role of learners, and on the learners' part to broaden their desire to learn beyond their chosen subject in order to encompass learning new digital skills. Training was oriented towards gaining familiarity with the online learning platform, including using interaction tools, such as the digital whiteboard and annotation buttons. It was necessary to extend training to include the improvement of more basic digital skills and digital confidence in order to be able to effectively engage in online teaching and learning.

Training was organised in groups of up to twenty educators and on an individual basis, thus enabling the tailoring of content according to the individuals' needs. Learning was self-directed in that learners and educators could access as much support as they needed. Learners and educators were initially offered training online, but educators who needed more basic digital literacy support were also offered individual in-class training at the Msida LL Centre. When necessary, support for educators was conducted during the online lesson, and lasted until the educators felt confident enough to lead an online class independently.

Such support was offered to 528 learners, 40% of whom attended training, and to 85 educators, 96.5% of whom attended training. Approximately 150 tutorials, training and support sessions were held. Apart from increasing the digital literacy of all educators, this support was effective enough to reverse the opinion of 2 of the 6 educators who initially claimed to not be interested in online learning. This resulted in 95% of the educators shifting to online learning, a 2% increase from 93% who initially expressed interest in doing so.

#### Feedback on the online learning provided by DRLL

In total, 175 courses switched to online learning. A total of 525 of the learners replying to the satisfaction survey claimed that their course switched online, with 54% of these (N=285) sharing their opinions on the online learning provided. Of the respondents, 67.7% (N=193) did not experience any difficulties in accessing online learning. On the other hand, 18.2% (N=52) claimed to have encountered difficulties while learning online, although these difficulties did not stop them from completing the course. There was also 14% (N=40) of survey respondents who felt unable to adequately engage with online learning and, consequently, dropped out.

#### *Digital infrastructure*

Most learners who continued their learning online faced difficulties relating to their technical infrastructure. Many did not have access to a good internet connection (N=50), while others lacked access to a device, either because they did not have a computer (N=3) or because they had to share a device with others (N=9). This was also a problem among dropouts, who did not have a suitable device on which to follow online learning (N=5), lacked internet (N=1), or an adequate internet connection (N=6).

Coordinators observed various technical difficulties faced by both learners and educators. These included lack of appropriate devices (N=3 respectively for learners and educators), poor audio (N=16 learners; 17 educators) and video/image freezing (N=3 learners; 7 educators). Lessons were sometimes disrupted by poor internet connection (N=15 learners; 12 educators). In this respect, learners stressed the need for a better connection (N=9).

### *Learners' disposition to e-learning*

After having experienced e-learning, 84% agreed or strongly agreed with the statement 'I found it easy to follow online learning.' Learners appreciated some of the comforts of online learning, such as the comfortable home environment (N=55), the convenience and time-saving advantages of not travelling (N=63), and improved ease of attendance (N=18). Some learners claimed that e-learning was the best option in a pandemic since it ensured the safety of learners and educators (N=15) and was a better alternative to cancelling the course (N=18).

Despite this, several participants felt that in-person lessons were more fruitful in terms of learning. The statement 'I learnt as much online as I did in class' received the lowest proportion of agreement, with 30.3% strongly agreeing and 37% agreeing with the statement. Likewise, this statement received the largest proportion of disagreement, with 28% disagreeing and 4.7% strongly disagreeing with the statement. Asked to choose their preferred learning method, 42% (N=89; T=213) expressed preference for face-to-face teaching, while 22% preferred blended learning and a further 22% expressed no preference. Only 14% chose online exclusively. Nonetheless, over 75% claimed that they 'would be interested in continuing learning online'.

Learners found it difficult to adapt to the self-motivation and independence necessary for successfully engaging in online learning. Staying organised and focused while learning online was challenging for those who completed the course (N=20 and 38 respectively). Furthermore, more than half the dropouts found online learning difficult (N=19) or boring (N=7), got easily distracted at home (N=10) or expressed dislike for learning with technology (N=4).

### *Supporting learners' difficulties*

Learners claimed that they had found support from DRLLE staff when they had difficulties with the online learning platform. This statement received a satisfying level of agreement from learners with 40.3% strongly agreeing and 52.4% agreeing with the statement. Likewise, the statement received one of the lowest proportions of disagreement, with 6.8% disagreeing and 0.5% strongly disagreeing. DRLLE staff and educators needed to carve out remote channels and patterns of communication to replace the in-person communication that is normally the preferred means of communication. To this end, DRLLE provided

**Table 1: Characteristics of Online Learning**

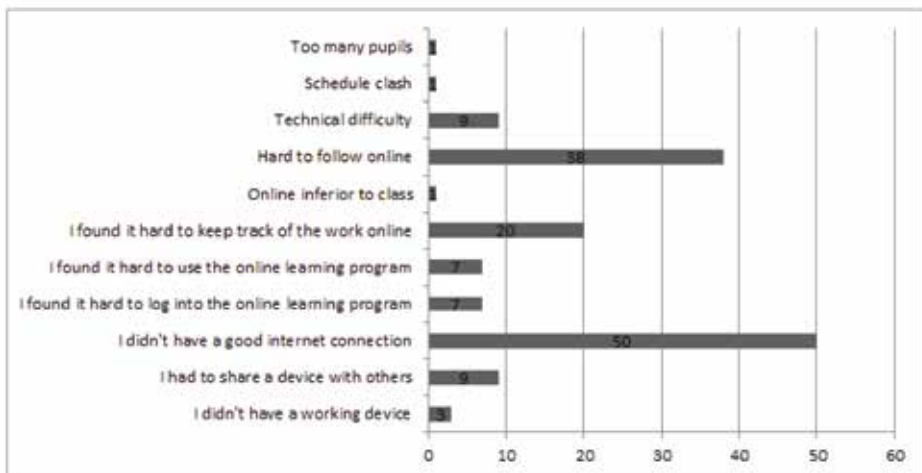
		Strongly agree	Agree	Disagree	Strongly Disagree	Total
The material shared online encouraged me to participate in online learning.	N	106.0	112.0	22.0	2.0	242
	%	43.8	46.3	9.1	0.8	100
I found it easy to follow online learning.	N	81.0	98.0	25.0	8.0	212
	%	38.2	46.2	11.8	3.8	100
The online tasks provided helped me practice what I had learned.	N	85.0	109.0	14.0	3.0	211
	%	40.3	51.7	6.6	1.4	100
When learning online, the educator answered my questions in a way that I could understand.	N	110.0	95.0	8.0	0.0	213
	%	51.6	44.6	3.8	0.0	100
When learning online, I got feedback on my work.	N	105.0	93.0	13.0	0.0	211
	%	49.8	44.1	6.2	0.0	100
LL staff helped me when I had difficulties with the online learning platform.	N	83.0	108.0	14.0	1.0	206
	%	40.3	52.4	6.8	0.5	100
I learnt as much online as I did in class.	N	64.0	78.0	59.0	10.0	211
	%	30.3	37.0	28.0	4.7	100
I would be interested in continuing learning online.	N	75.0	84.0	37.0	14.0	210
	%	35.7	40.0	17.6	6.7	100

a two-tier communication structure – coordinators supported both learners and educators during the online classes, troubleshooted digital and technical difficulties, supported learners in joining the lesson and observing educator–learner communication – while the purposely-setup helpdesk was available 12 hours a day for learners and educators to direct their queries and complaints within and outside learning hours.

### *Training in online andragogy*

Although DRLLE offered training, some learners experienced difficulties stemming from limited digital competence, such as problems logging in or using the e-learning platform (N=7 each). Four persons who dropped out claimed that they needed more support with the online learning program. Likewise, coordinators observed difficulties related to using the digital educational platform, such as trouble logging in (N=11 learners; 7 educators) or using the platform (N=12 learner; 13 educator). Learners recommended further technical support (N=3) and developing a guide to e-learning (N=5).

**Figure 1: Distribution of learners engaged in online learning by the difficulties that they faced**

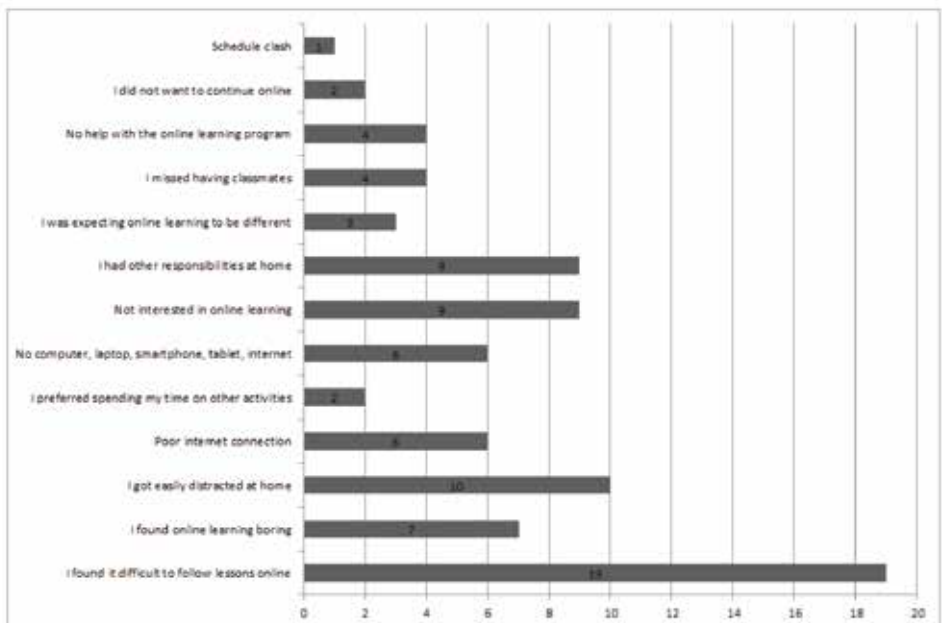


### *Preparedness for e-learning*

Most issues identified by both learners and coordinators related to inexperience in managing an online classroom. Coordinators observed educators sending

double invitations, invitations containing erroneous information or sending out invitations late (N=15) and opening multiple sessions simultaneously (N=3). Lessons were sometimes disturbed by poor microphone management leading to microphone feedback loops which made lessons hard to follow. This issue was observed 32 times by coordinators. Other technical difficulties observed by coordinators which impeded the smooth delivery of lessons were screen-sharing (N=6) or poor use of educational software and hardware (such as not sharing material; inadvertently covering camera with papers; not communicating enough for online learning) (N=37). Learners corroborated this, calling for better use of e-learning software (N=12). Another issue observed by coordinators was that of ensuring, prior to the lesson, adequate software capacity to record and save (N=20). Learners suggested that online classroom management could be improved if the number of learners in the virtual classroom were reduced (N=12).

**Figure 2: Distribution of learners who stopped attending classes when courses went online, by reason**



### *Online communication*

The most positively perceived aspect of online learning surrounded the communication between learners and educators. Over 50% of respondents 'strongly agree[d]', and less than 7% disagreed with the sentences 'When learning online, the educator answered my questions in a way that I could understand' and 'When learning online, I got feedback on my work.' Over 90% of respondents agreed or strongly agreed with the statements regarding the tasks given by the educator ('The material shared online encouraged me to participate in online learning' and 'The online tasks provided helped me practice what I had learned.'). Participants also rated administrative support positively, with almost 93% agreeing or strongly agreeing with the statement 'LL staff helped me when I had difficulties with the online learning platform'.

Both coordinators and learners recommended making the online lesson more interactive. Coordinators advised educators to increase student interaction (to ask more questions, allow discussion, give students more time to answer questions and to work at their own pace) (N=37); to make better use of the interaction tools available on the online learning platform such as the chat box, polling, games and pairwork; and to better visuals through onscreen sharing and learning apps software (N= 93). Learners also felt the need for better online learning dynamics (N=34).

Coordinators promoted class correction to generate discussion and exchange feedback on the subject matter (N=9), thus encouraging learners to reflect upon their own and each other's work with a greater degree of autonomy, increasing motivation and improving the likelihood of achievement. Coordinators also advised educators to organise tasks such that those which could be carried out independently are not done during class time (N=9), thus freeing up class time for more learner–educator collaboration. This suggestion was echoed by 14 learners, who recommended the provision of asynchronous learning material and/or blended learning.

### **Discussion**

DRLLE provided substitution e-learning in response to the closure of educational establishments as a measure to reduce Coronavirus contagion. DRLLE had never ventured into e-learning, as was the case for most educators and learners. In fact, learners and educators had applied for learning and teaching

courses taught in class and had little time to consider whether they had the skills, means or aptitude for e-learning. Moreover, all stakeholders needed to adapt rapidly, at a time when the country and, at times, people's employment and health, were also undergoing significant changes in quick succession.

Substituting in-class with e-learning was an act of transformative learning for learners, educators, DRLLE staff and DRLLE as an institution (Arr-Chellman, 2016). This involved adopting a digital infrastructure; fostering disposition for e-learning and developing digital competencies; preparing software, hardware and home-offices for e-learning; and adapting teaching resources and communication strategies for the online interface. For DRLLE staff, transformational learning took place in the collaboration and self-development necessary for planning and implementing e-learning. All staff members needed to first adopt a learner role before being able to continue carrying out their roles as educators, coordinators or administrators. Furthermore, learners needed not only to challenge themselves in terms of learning new subject matter offered by the course of their choice, but also to increase their digital proficiency, learn a new method of teaching, a new online education platform, and to change their learning style to accommodate the online teaching method. Individuals self-directed their learning to build on existing knowledge by asking for as much training and support as they felt they needed and specifying the content they wished to cover. In providing training and support to staff and learners, DRLLE showed care and support in developing its stakeholders and a true interest in minimising the negative impact of the pandemic on its learners' prospects.

## Recommendations

While DRLLE experienced a transformational switch since Coronavirus triggered its first experience of stepping into e-learning, this offered an opportunity to reflect upon provision and to look towards making e-learning a permanent part of DRLLE's prospectus. The feedback obtained from learners and coordinators, presented in this paper, has taught DRLLE that:

- e-learning requires a robust digital infrastructure specifically tailored for education;
- the minimum bandwidth, devices and digital competences required for learners to effectively engage in e-learning needs to be defined;



- educators teaching online must not view the online interface as a barrier, but should be open to and excited about the learning possibilities that e-learning offers, and must be digitally competent, proficient and independent users of the chosen e-learning platform and various online education apps;
- educators need support to improve their digital and e-teaching competences through the provision of regular training and feedback on how to effectively use ever-changing online tools and how to manage an online classroom environment;
- policies and procedures need to be in place to offer increased transparency surrounding DRLLE's expectations of learners and educators, including punctuality, communication, interaction, tasks and independent study required within and between lessons; educators and learners deserve regular access to a helpdesk from which general and technical support is given;
- for online learning to be successful, it must be equitable in terms of reaching learners with limited digital skills or infrastructure, adults with less self-motivation and those requiring blue-collar training (OECD, 2020). Therefore, given DRLLE's social mission, DRLLE must be creative in coming up with ways to enable these cohorts to engage in e-learning.

## Conclusion

The COVID-19 pandemic presented various hurdles to the continued provision of adult learning. In a bid to minimise disruption to learning, DRLLE engaged in an institutional development process to substitute in-class lessons with e-learning. This study delved into the process and outcomes of this institutional development, based on administrative data and a learner satisfaction survey. It serves as a tool for assessing and improving the DRLLE's online learning provision, and for informing other educational establishments wishing to delve into e-learning.

Digital education, in its various forms, is here to stay and the e-learning necessitated by the COVID-19 pandemic has shown that e-learning can be implemented rapidly with the right resources, and has given the DRLLE the necessary impetus to venture into e-learning. This learning process will not only enable DRLLE to expand the quantity of provision but will enable DRLLE to move from the enhancement levels (substitution and augmentation) to

the transformation levels (modification and redefinition) of the SAMR model. DRLLE will continue with the provision of synchronous courses and with improvements, and it is planning to provide asynchronous learning with the aim of encapsulating the SAMR model in its entirety. This will enable technology to act not only as a substitute for traditional learning, but as a means for providing learners with a choice of learning mediums including in-class learning and synchronous and asynchronous courses targeted at learners with different needs. This ensures the move of online learning from being just an emergency response to becoming a valid and sustained method for learning and teaching.

DRLLE has been and will continue exploring opportunities to harness the e-learning potential to create meaningful learning experiences whilst also finding equitable solutions to improve the quality of e-learning provision and bridge the digital gap for learners. Following the crisis, this has meant establishing a peer-to-peer mentor initiative amongst educators; upskilling staff and educators; and using Msida Lifelong Learning Centre as an internet hub for learners and educators who do not have the digital infrastructure, a home-office conducive to learning, or who need technical support to be able to access e-learning. Additionally, following the success of the synchronous learning provided, DRLLE is seeking ways to facilitate e-learning among various cohorts. This includes developing the instructional design for asynchronous e-learning, which would give learners time-flexibility when accessing online learning. In line with connectivism and andragogic theory, DRLLE will strive to use technology to support, inspire, and engage adult learners to embark and fulfil their learning needs.

## Notes on contributors

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