

RESEARCH NOTE

The Adult Learners' Perception of Online Learning Due to COVID-19

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Restricted Circulation

Introduction

Understanding the adult learners' online learning experience is critically important, as the rapidity with which governments worldwide mandated remote work and online learning in response to COVID-19 has led to profound changes to work and learning as we knew it. The push to fully remote and online experiences is without precedent, and little is known about the adult learner's experience with this sudden and transformational shift in learning and work.

An IAL mixed methods study (see Box 1) investigated adult learners' experience of online learning during COVID-19. Our findings can empower the Training and Adult Education (TAE) sector, EdTech industry, and policy-makers to develop strategies that optimize the design, implementation, and end-user experience for sustainable lifelong learning through online learning. This Research Note presents a first view of the key findings from this study.

Key Findings

Online learning is here to stay

Since the implementation of the Circuit Breaker on 7 April 2020, there has been a fourfold increase in the preference for 100% online learning from 5.6% to 26.4% (Figure 1). At the same time, the preference for programmes combining both classroom and online learning has risen from 56.9% to 66.6%. Notably, the preference for 100% classroom-based learning has decreased sharply from 37.4% to 7%.

The convenience of not having to travel and the relaxed feeling when undertaking learning in a familiar environment (Figure 2) are key reasons for these changes. Additionally, asynchronous delivery increased adult learners' flexibility in being able to re-watch lectures at any time.

Summary

- ▶ There is a significant increase in preference for 100% online learning or blended learning, as compared to 100% classroom-based learning, due to its convenience and flexibility.
- ▶ Respondents who participated in programmes with a hybrid mode of delivery generally reported a slightly higher level of satisfaction and effectiveness.
- ▶ There should be a balance between synchronous and asynchronous learning in an online learning programme, so that learners can enjoy both the flexibility and the element of social interaction in an online learning programme.
- ▶ The average reported durations for each session of synchronous and asynchronous learning are 4.7 hours and 3.6 hours respectively. However, one of the main concerns of online learning involves screen fatigue, suggesting that more breaks should be introduced to each session of an online learning programme.
- ▶ One major concern reported by respondents pertains to the trainers' lack of familiarity with the required technology, suggesting a need to train the trainers for online delivery.
- ▶ Strong technical support is required for adult learners with low digital proficiency. While the older age group (above 40) were most challenged in their use and comfort with technology, attention should be paid to all adult learners on their comfort level with the use of technology. Simple instructions and reminders on how to use platform functions can be built in prior to the beginning of synchronous sessions. Online learning platforms need to be easily navigable.
- ▶ Among respondents who did not enrol in online learning programmes during the Circuit Breaker period, the majority are involved in some form of informal learning.

Learners preferred online learning for its convenience and flexibility in learning:

“...the journey going there and coming back home is three hours, and actually that’s my three hours lesson. So, the good thing is I save the time, instead of travelling, I can relook at the lecture and then do my own self-study”

“our lives are quite busy now. At least if it’s asynchronous, I can choose when, where”

Synchronous and asynchronous online delivery

Over half of the online learners participated in online learning programmes that entail 100% synchronous interactions, with close to one third of the learners participating in online learning programmes that have a hybrid mode of delivery, while 15% attended fully asynchronous form of online delivery (Figure 3). Video conferencing is the most common mode of delivery for online learning with 72% of the online learners reporting such form of delivery (Figure 4). These results are consistent with the findings from the COVID-19 Educators Survey, in which 67% of the adult educators surveyed reported frequent use of synchronous video conferencing platforms (Chen, et. al., 2020:2).

Box 1. Methodology

This is a mixed-method research study consisting of two phases:

Phase One is a 20-minute online survey (n=1,354), which was conducted to investigate Singapore adult learners’ experiences with transitioning to full online learning as a result of the COVID-19 pandemic. The survey consists of a series of Likert-scaled items that ask respondents to reflect on their most recent online learning experience, their perspectives on online learning, as well as their learning strategies and motivation. Data collection period started on 9 September 2020 and ended on 23 September 2020.

Phase Two is a combination of 60-minute interviews (n=15) and 90-minute focus group discussions (n= 4, with a total of 30 participants), which was conducted to gather information on the respondents’ experiences and their collective suggestions, including what could improve their potential participation in online learning. A purposive sample was drawn from Phase One. Data collection period started on 6 October 2020, and ended on 5 February 2021.

Among the 1,354 survey respondents, 983 have participated in online learning programmes¹ since the implementation of Circuit Breaker (hereafter referred to as *online learners*) and 371 have not done so (hereafter referred to as *non-online learners*). The respondents are a combination of Skills and Learning Study² participants (n=205), IAL learners (n=44), members of the Adult Education Network (n=1,053) and SUSS CET students (n=52).

Figure 1. Preferred mode of learning

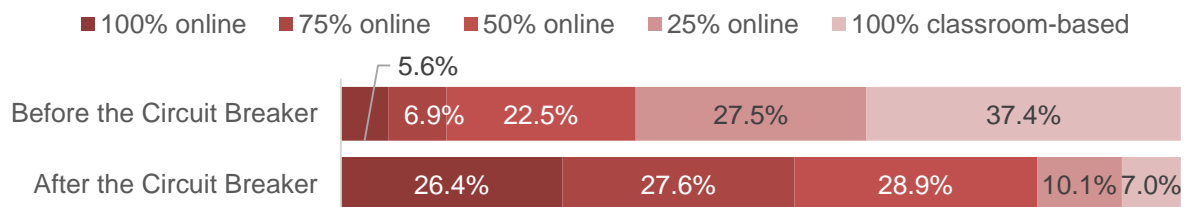
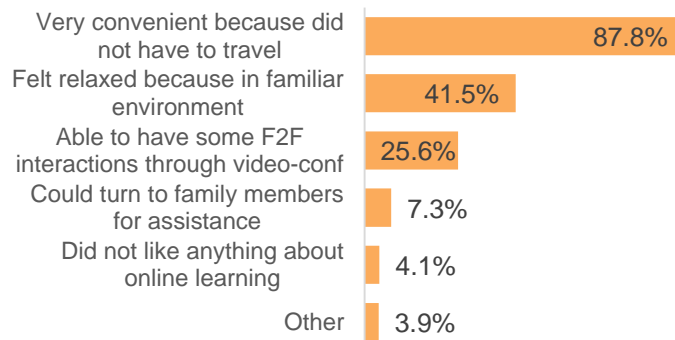


Figure 2. Benefits of online learning



1. For the purpose of the survey, responses are based on the last completed online learning programme.

2. The Skills and Learning Study (SLS) was conducted in 2017. The sample is representative of Singapore resident population aged 20- 70.

While learners are saying that they preferred online learning due to the flexibility of learning, more than half reported that the delivery mode for the online learning programmes they had participated in was 100% synchronous, which limited their ability to decide when they could learn. One possible reason for this could be due to the rush to switch to fully online learning during the circuit breaker, which had robbed the TAE sector of the time to properly convert their learning programmes online, especially for training providers that do not already offer online learning programmes. This implies

that asynchronous modes of delivery should be included whenever possible when designing an online learning programme, in order to allow the learners to enjoy the flexibility of online learning.

On average, it is reported that each session of synchronous learning was 4.7 hours long while asynchronous learning was 3.6 hours long, slightly longer than the reported “Just Right” duration of 4.5 hours and 3.5 hours respectively (Figure 5).

Figure 3. Mode of delivery for online learning programme

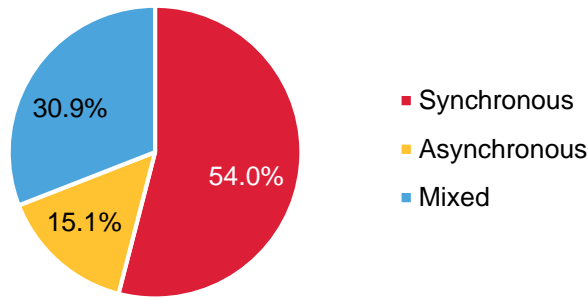


Figure 4. Top 3 most common mode of delivery for online learning programme

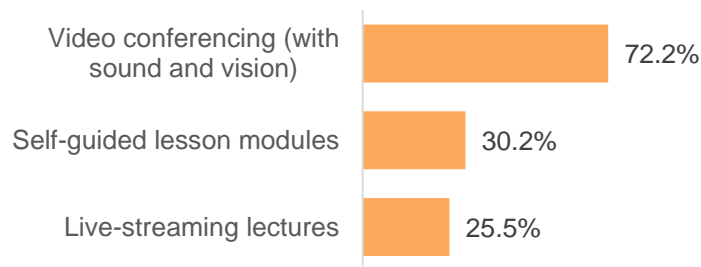
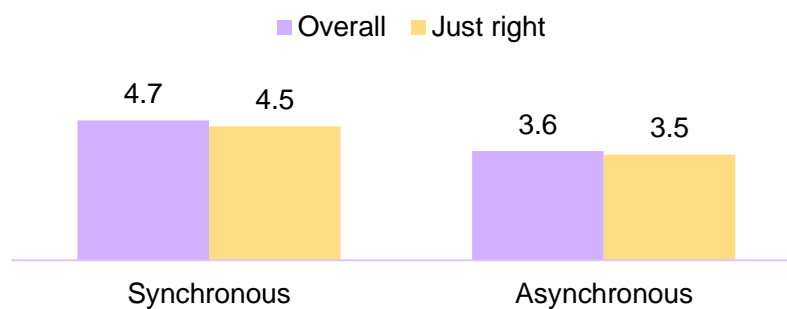


Figure 5. Average duration (hours) per session



Effectiveness of online learning

The majority of online learners were satisfied with the programme they attended and with the main facilitator (Figure 6), and found the online learning programmes that they had attended effective to some extent, in terms of improving their skills or knowledge, as well as making use of what they have learned during the online learning programme in their current jobs (Figure 7).

It also is observed that a higher level of satisfaction and effectiveness was reported among respondents that attended programmes that were delivered in a hybrid mode of delivery i.e. synchronous and asynchronous, thus providing evidence that there should be a balance between synchronous and asynchronous mode of delivery for an online learning programme.

Box 2. Measuring effectiveness

In this study, the effectiveness of online learning is measured by:

- (i) the learner's level of satisfaction with the main facilitator, trainer or lecturer of the online learning programme;
- (ii) their general level of satisfaction with the online learning programme;
- (iii) the extent to which their participation in the online learning programme improved their skills and knowledge;
- (iv) the extent to which they are able to make use of what they have learned during the online learning programme in their current jobs.

Value of online learning

It is interesting to note that about half (44.7%) of the online learners indicated that they would pay less for the online learning programme if they had to pay for it themselves, based on their experience of attending the programme (Figure 8). This is consistent with the findings from the COVID-19 Educators Survey, in which the adult educators surveyed predicted that the learners will demand for lower course fees when the learning programmes are moved online (Tan, et. al., 2020:4). Some of the reasons include the reduced accessibility of the trainer, and savings from rental and catering.

Some learners feel that they should be paying less for online learning programmes:

"...firstly, we're not using the school facilities at all, so why are we paying so much? Secondly, is I feel that the experience that we have with our lecturers has already dropped a lot, so why are we paying so much for—I mean, like, I would say, straightforwardly, I would say that we are being short-changed because we can't even get that kind of quality of learning already from the lecturers. I mean, some lecturers at least... At least my questions will be answered, and I don't have to teach the lecturer how to use. I mean, the fact that I'm already paying him or her already, and then yet I'm still having to solve his or her own problems, I think it very uncalled for."

Figure 6. Level of satisfaction

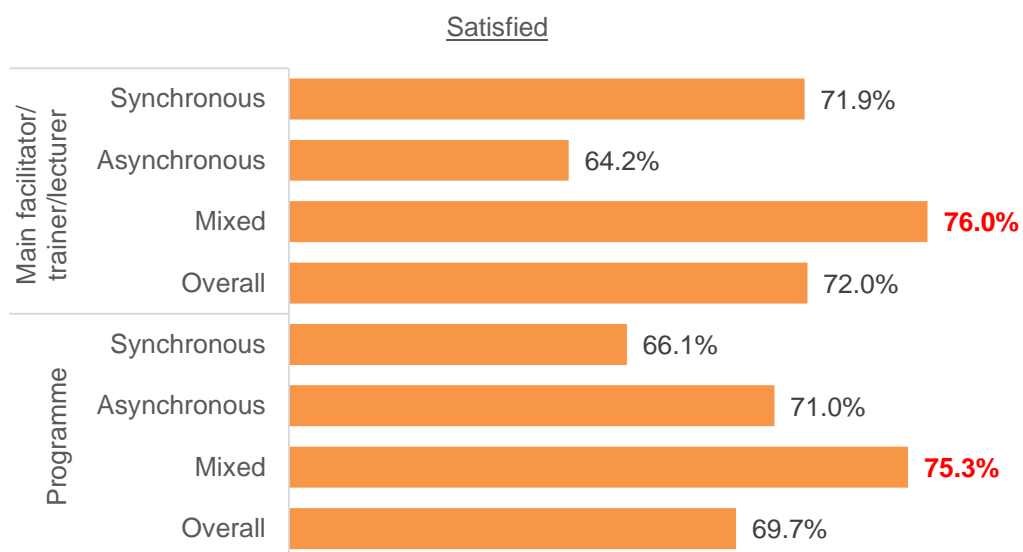


Figure 7. Level of effectiveness of online learning programme

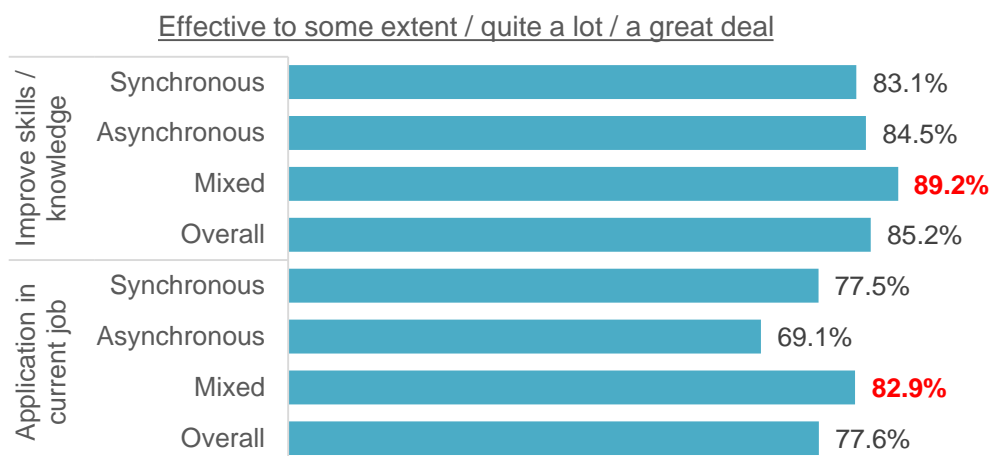
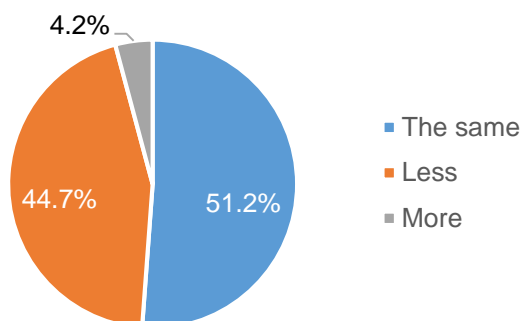


Figure 8. Payment amount based on experience from the course attended



Challenges and concerns

The top 3 challenges and concerns reported by the online learners are presented in Figures 11-13. Across all age groups, one main concern highlighted pertains to the lack of interaction with other learners or the trainer (Figure 9). This suggests a need to study the design of online learning programmes in order to foster an environment that satisfies learners' need for social interaction.

Difficulty focusing or paying attention to on-screen or online instruction or activities, and screen fatigue is consistently the top challenge faced by learners across all age groups (Figure 10 & 11). Hence, although the reported "Just Right" duration for each session of synchronous and asynchronous learning was 4.5 and 3.5 hours respectively, breaks should be introduced to each session if these sessions are not made shorter.

Discomfort or lack of familiarity with the required technology is a major challenge among middle-aged and senior learners:

"I will look silly... do something wrong and then you miss out on the learning and people get frustrated"

One major concern reported by the online learners pertains to the trainers' discomfort or lack of familiarity with the required technology (25.8%) as illustrated in Figure 10. This is consistent with the findings from the COVID-19 Educators Survey, in which digital skills was one of the top challenges experienced during the transition to online learning by the adult educators surveyed (Tan, et. al., 2020:5).

The learners' own discomfort or lack of familiarity with the required technology is also a major challenge for those aged above 40 years old (Figure 10). In addition, more than a quarter of those aged 55 and above indicated that there were unclear expectations around which technologies and applications they are required to use (26.2%). This suggests that more support should be given to learners in the familiarisation of the navigation around the online learning system used.

On the other hand, unclear expectations around the course or assignment requirements is a major personal challenge faced by learners with post-secondary or below education (Figure 11). This suggests that clear instructions on the course and assignments need to be communicated to the learners, in order to ensure effective facilitation of an online programme.

Figure 9. General concerns with online learning

| Top 3 General Concerns (Overall) | |
|----------------------------------|---|
| 1. | Lack of interaction among classmates (51.0%) |
| 2. | Lack of interaction among learners and facilitator / trainer / lecturer (43.0%) |
| 3. | Many distractions from familial environments (33.7%) |

| Age | Top 3 General Concerns (by Age Group) |
|------------|--|
| Below 30 | <ol style="list-style-type: none"> Lack of interaction among classmates (44.3%) Many distractions from familial environments (36.8%) Lack of interaction among learners and facilitator / trainer / lecturer (34.9%) |
| 30-39 | <ol style="list-style-type: none"> Lack of interaction among classmates (50.6%) Many distractions from familial environments (39.9%) Lack of interaction among learners and facilitator / trainer / lecturer (39.1%) |
| 40-54 | <ol style="list-style-type: none"> Lack of interaction among classmates (48.7%) Lack of interaction among learners and facilitator / trainer / lecturer (44.9%) Many distractions from familial environments (33.4%) |
| 55 & above | <ol style="list-style-type: none"> Lack of interaction among classmates (62.2%) Lack of interaction among learners and facilitator / trainer / lecturer (48.8%) Not able to get the required attention from the facilitator / trainer / lecturer (27.4%) |

Figure 10. Technological challenges in online learning

| Top 3 Technological Challenges (Overall) | |
|--|---|
| 1. | Screen fatigue (68.1%) |
| 2. | Adequate digital replacements for face-to-face collaboration tools (26.7%) |
| 3. | Instructor's discomfort or lack of familiarity with required technologies or applications (25.8%) |

| Age | Top 3 Technological Challenges (by Age Group) |
|------------|--|
| Below 30 | <ol style="list-style-type: none"> Screen fatigue (68.9%) Instructor's discomfort or lack of familiarity with required technologies or applications (32.1%) Adequate digital replacements for face-to-face collaboration tools (31.1%) |
| 30-39 | <ol style="list-style-type: none"> Screen fatigue (70.8%) Adequate digital replacements for face-to-face collaboration tools (32.9%) Instructor's discomfort or lack of familiarity with required technologies or applications (24.7%) |
| 40-54 | <ol style="list-style-type: none"> Screen fatigue (67.9%) Instructor's discomfort or lack of familiarity with required technologies or applications (26.0%) Own discomfort or lack of familiarity with required technologies or applications (25.7%) |
| 55 & above | <ol style="list-style-type: none"> Screen fatigue (64.0%) Own discomfort or lack of familiarity with required technologies or applications (39.0%) Unclear expectations around which technologies and applications I am required to use (26.2%) |

Figure 11. Personal challenges in online learning

| Top 3 Personal Challenges (Overall) | |
|-------------------------------------|---|
| | <ol style="list-style-type: none"> 1. Difficulty focusing or paying attention to on-screen / online instruction or activities (41.3%) 2. Course lessons or activities that haven't translated well to a virtual environment (39.4%) 3. Personal preference for face-to-face learning (37.8%) |
| Education | Top 3 Personal Challenges (by Highest Education Attained) |
| Secondary & below | <ol style="list-style-type: none"> 1. Unclear expectations around course / assignment requirements (38.1%) 2. Personal preference for face-to-face learning (57.1%) 3. Personal motivation / desire to complete coursework (19.1%) |
| Post-Secondary | <ol style="list-style-type: none"> 1. Difficulty focusing or paying attention to on-screen / online instruction or activities (40.0%) 2. Unclear expectations around course / assignment requirements (36.8%) 3. Personal preference for face-to-face learning (36.8%) |
| Degree & above | <ol style="list-style-type: none"> 1. Difficulty focusing or paying attention to on-screen / online instruction or activities (42.3%) 2. Course lessons or activities that haven't translated well to a virtual environment (41.0%) 3. Personal preference for face-to-face learning (37.6%) |

Screen fatigue and difficulty focusing is consistently the top challenge faced by learners across all age groups:

"...online lecture is three-hours long. I feel, like, a good time would be when — one hour of lecture and maybe, one hour of discussion, and then maybe back to lecture because if you — it's very hard to concentrate a full three hours. It's really very, very draining"

Participation in informal learning³

About two thirds (66%) of the respondents who did not participate in any online learning programmes during the implementation of the Circuit Breaker i.e. non-online learners, expressed that they do not know which programme to sign up for (Figure 12). Other common reasons for non-participation include a preference for being with other learners physically (17%), and that they did not think that online learning is effective (12.9%).

Nonetheless, the majority (75.7%) of these respondents were still continuously learning through other online means. It is noted that the rate of participation in informal learning (Figure 13) is similar among online learners (75%) and non-online learners

(75.6%). The majority from both groups of respondents participated in informal learning for professional development (over 80%) and about half did so for personal development (Figure 14). This is a reminder that there are many layers in continuous learning, and that being comfortable in the online environment as well as its richness in resources enable adult learners to readily and continuously learn.

It is further noted that online learners tended to spend a longer amount of time on informal learning over the span of 5 months i.e. since the implementation of the Circuit Breaker on 7 April until September 2020, with over 30% spending more than 16 hours on informal learning as compared to only 20.3% of the non-online learners doing so (Figure 15). This seems to indicate the difference in the level of comfort that the online learners had in the online environment as compared to that of the non-online learners.

Informal learning is a viable alternative:

"There's a lot of information online. There's always videos out there, so rather than struggling to find a course, go onto YouTube and see what they can learn."

3. This refers to the use of any social media platform or other online platform like YouTube, TikTok, mobile apps etc. to learn something new (e.g. to play a musical instrument, learn a new language, cook or code etc.).

Figure 12. Reasons for not participating in online learning

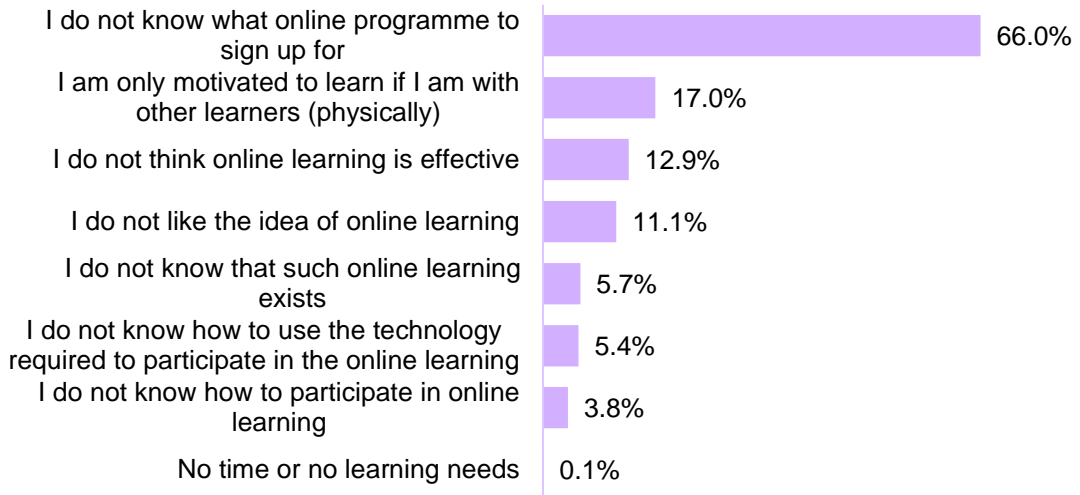


Figure 13. Participation rate for informal learning

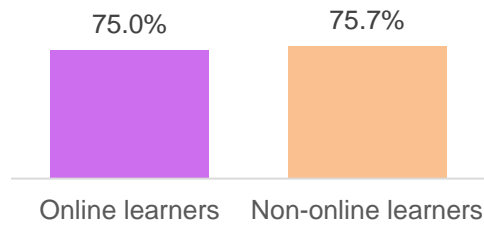


Figure 14. Benefits of informal learning

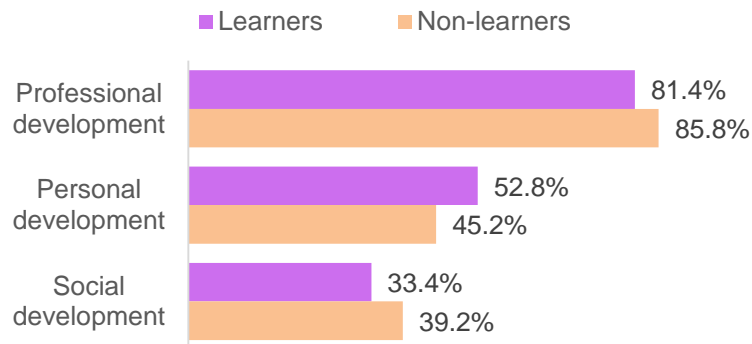
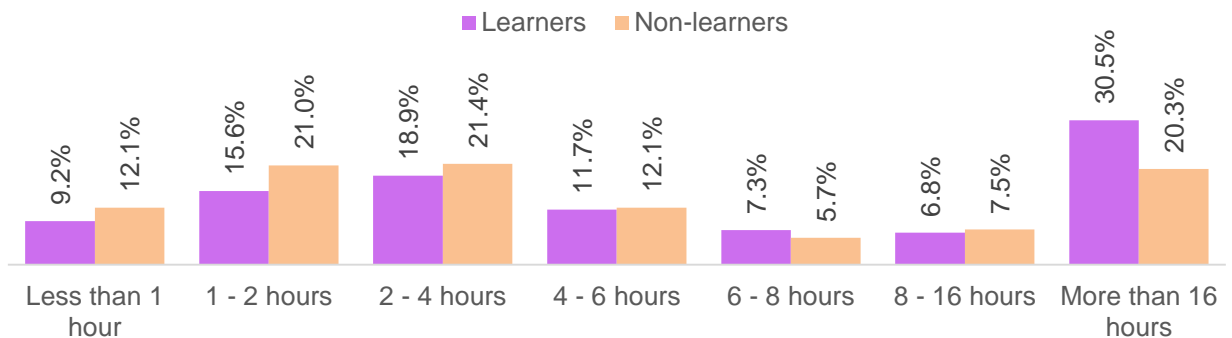


Figure 15. Total time spent on informal learning



Conclusion

Evidently, adult learners in Singapore are embracing the fact that online learning is becoming a norm, as illustrated by the fourfold increase in the preference for 100% online learning after the Circuit Breaker, while the preference for 100% classroom-based learning has decreased sharply. Nevertheless, there is still 7% that display discomfort with online learning and therefore still prefer 100% classroom-based learning.

Our findings also demonstrate that there is an immediate challenge of supporting the learners and adult educators to cope with the transition to fully online learning. A major concern raised by online learners pertains to the trainers' discomfort or lack of familiarity with the required technology, while their own discomfort or lack of familiarity with the required technology is a reported challenge among learners aged above 40.

Ensuring that both the learners and trainers in Singapore possess the relevant digital skills should thus be a key focus, in order for Singapore's TAE sector to move ahead. Appropriate Continuing Professional Development (CPD) arrangements should be made in order to train the trainers for online delivery, while there should be more effort and initiatives by the government to help seniors in Singapore take the digital leap and gain basic digital skills.

The Infocomm Media Development Authority (IMDA) and SG Digital Office (SDO) had launched the Seniors Go Digital programme back in May 2020 to strengthen the digital literacy among seniors, and has already helped 16,000 seniors by September 2020 (Government of Singapore, 2020). Their target was to reach out to 100,000 seniors by March 2021, and hopefully with this programme, more seniors will be able to make the digital leap and cope with the transition to online learning. However, this programme only supports seniors aged 60 and above, and those in the 41-60 age group seem to be slipping through the cracks in government initiatives aimed at helping seniors to make the digital leap.

On the other hand, the Institute for Adult Learning has been galvanizing the Adult Educator community in Singapore through various platforms during the period of transition to fully online learning due to COVID-19, to reinforce their capacity for online learning design and delivery. These include the provision of online resources for the TAE community with self-help capacity (IAL, 2020-a), various activities by the iN.LAB to empower TAE professionals to take learning beyond the traditional face-to-face classroom delivery (IAL, 2020-b), as well as various CPD programmes for adult educators (IAL, 2020-c).

When designing an online learning programme, there are also a few aspects that adult educators and training providers should pay attention to: (i) there should be a balance between synchronous and asynchronous modes of delivery in an online learning programme, so that learners can enjoy both the flexibility and the element of social interaction in an online learning programme; (ii) adult educators should be providing for shorter online learning sessions or introduce more breaks during each online learning session in order to reduce screen fatigue and maintain the attention of their learners; (iii) support needs to be provided to learners prior to the online learning programmes for them to familiarise themselves with the functions and use of learning platforms; and online learning systems should be intuitive i.e. simple to understand, use and navigate.

Lastly, it is observed that the majority of the adults who did not enrol in online learning programmes since the implementation of the Circuit Breaker on 7 April, are still engaging in some form of informal learning. In fact, their participation rate in informal learning is comparable to that among adults who enrolled in online learning programmes during the Circuit Breaker. This illustrates that there are many layers in continuous learning and that informal learning should not be overlooked in the digital age. This is especially significant since the majority of respondents participated in informal learning for professional development.

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Appendix A

Breakdown of sample collected in Phase One

| | Proportion |
|------------------------------|------------|
| Gender | |
| Male | 57.1% |
| Female | 42.9% |
| Age | |
| Below 30 | 9.8% |
| 30-39 | 25.8% |
| 40-54 | 45.9% |
| 55 and above | 18.6% |
| Highest Qualification | |
| Secondary and below | 2.9% |
| Post-secondary | 20.5% |
| Degree and above | 76.6% |
| Employment Status | |
| Employee | 65.4% |
| Self-employed / Freelancer | 21.3% |
| Unemployed | 6.9% |
| Out of labour force | 6.4% |

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champions applied and innovative research grounded in academic rigour to provide a strong knowledge base for the development of practice in CET, sustainable economic and workforce performance, and informed policies and practices. Using interdisciplinary approaches employing both quantitative and qualitative techniques, the research covers CET system design and practices, adult education, lifelong learning, jobs, skills, careers, labour market issues, pedagogy, andragogy, and praxis, among others.

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