

Perceptions of Entrepreneurship and Online Learning During the Coronavirus-2019 (COVID-19) Pandemic

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Abstract

Coronavirus-2019 (COVID-19) restrictions significantly influenced the learning and delivery of educational programs, especially traditionally hands-on educational programs. Entrepreneurship education and training (EET) studies on learners' perceptions have so far focused on formal EET in university settings or Massive Open Online Courses (MOOCs). This paper explores youth perceptions of a non-formal, online EET program conducted during the pandemic. Perceptions matter since they tend to translate into attitudes, which in turn potentially translate into achieving learning outcomes (or not). Using hermeneutic content analysis (HCA), transcripts from 35 youth participants were analyzed, where the participants were categorized into four groups based on completion of the program and household income. Individual motivations were very important for all and the lack of social support was a concern for low-income youth. Almost a third of the dropouts who were part of the study did so to actually start their own business during the pandemic versus only one out of 18 of non-dropouts. The pandemic was disruptive to livelihoods and to their families, which sometimes made learning more difficult. Future online EET programs should relate

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learners' motivations for learning entrepreneurship with learning outcomes by instilling social support structures and taking contextual influences into consideration.

Keywords

entrepreneurship education and training program, non-formal education, perceptions, online learning, Coronavirus-2019 (COVID-19) pandemic, Malaysia

Introduction

The COVID-19 pandemic forced many countries to institute lockdown measures that disrupted both their economic and social sectors, particularly at the beginning. Consequently, the global Malaysian economy experienced its deepest recession in the second quarter of 2020 since the Second World War (World Bank, 2020), leaving young job seekers and vulnerable individuals from low-income households at a greater risk of unemployment. This was particularly true in the Asia and Pacific region (International Labour Organization & Asian Development Bank, 2020). Entrepreneurial education and training (EET) programs have been touted as a possible solution to unemployment during the pandemic and have been championed for their positive effects on economic and youth development (Kasim et al., 2014; Shane, 2007). As jobs became scarce in developing countries, youth entrepreneurship became an important strategy for integrating youth into labor markets, thereby tackling unemployment issues (Dash & Kaur, 2012). With a higher ratio of unemployed young people relative to the general population, youth who face the pressure of globalization and liberalization do so by being competitive, developing skills and pursuing entrepreneurship. Youth entrepreneurship have significant positive consequences, including contributing to the creation of jobs for other young people; developing innovative economic opportunities and trends; contributing to the overall competitiveness of local economies; and potentially increasing job satisfaction among youth (Blanchflower & Oswald, 1998). It is likely that these individuals will be exposed to EET in some form or another, and in fact encouraged, as studies have shown that such exposure causes participants to be more likely to start a business, be gainfully self-employed, earn a higher annual income, own more assets, and be more satisfied with their jobs (Charney & Libecap, 2000; Gibb, 2002). Kassean et al. (2015) specifically emphasizes on the need to seek a deeper understanding of the desires and needs of students by identifying the skills they need and exposing them to the necessary learning to become entrepreneurs.

Given the pandemic's rapid emergence, educators and education providers had to quickly pivot to an online format (Banoo, 2020), resulting in a new cohort of learners who are now expected to keep up with digital learning environments (Ratten, 2020), such as EET programs. The pandemic has also demonstrated that online learning can potentially overcome space and time constraints on seeking learning

opportunities (Nadeak, 2021). For many countries faced with various waves of infection, it is expected that EETs programs remains fully or partially virtual for the foreseeable future. Since not all learners are able to access higher or formal education, online non-formal EET programs conducted by non-profit organizations or EET providers can tackle distance and travel costs advantageously while cultivating entrepreneurship among youth from varied education backgrounds. According to Debarliev et al. (2020), non-formal EET programs are described as education for all ages and usually offered in the form of short courses, workshops, or seminars, but lack recognition by national educational authorities. However, these programs have been positively associated with an increase in entrepreneurial mindsets, entrepreneurial knowledge and constructive entrepreneurial skills compared to formal EET programs.

We seek to explore learners' (i.e., youth who enrolled in an online non-formal EET program) perspectives of entrepreneurship and online learning during the pandemic. Perceptions may differ between individuals because they are mental representations of the external environment around individuals, which are important factors in the entrepreneurial process (Grilo & Thurik, 2008; Liñán et al., 2011; van der Zwan et al., 2010; 2016). We take an exploratory approach to describe their realities by studying different aspects of their lives, as suggested by Liguori and Winkler (2020). We do this by dividing our sample of participants into two categories – whether or not they dropped out of the training program, and by income status of their households. In doing so, we are able to analyze interesting income and background dynamics of students and how this funnels in to their learning during EETs. This is also a very crucial question to ask for a variety of countries as many prioritize reduction in income inequalities over other development goals, given that the persistence of socioeconomic vulnerabilities specifically threatens low-income households (Nair & Sagarán, 2015).

Since the implementation of such programs is relatively new, open-ended qualitative interviews with participants were analyzed using a thematic analysis variation of hermeneutic content analysis (HCA-T), similar to that employed by Berger et al. (2014). The descriptions of learner experiences and realities enable us to understand how to better deliver entrepreneurship and online learning programs amidst learning disruptions. Specifically, we aim to answer the following questions:

- (1) How did entrepreneurial learners view entrepreneurship during the pandemic?
- (2) What were their experiences with online learning in a non-formal EET program during the pandemic?
- (3) What has the impact of the pandemic been on learners' lives?
- (4) Do learners from low-income households face particularly different challenges than their peers?

Literature Review

Entrepreneurship Mindset Research. Over the course of 50 years, entrepreneurship research has developed a range of theoretical frameworks and intent-based models, such as the widely accepted theory of planned behavior in which venture creation is predicted through a deliberate process and entrepreneurial behavior is guided by personal beliefs (Ajzen, 1991). Another theory typically employed is social cognitive career theory, which aims to explain the motivational processes behind entrepreneurial behaviors (Lent et al., 1994). Extending on entrepreneurial behavior research, Pidduck et al. (2021) conceptualised how goal-oriented entrepreneurial behavior is formed and applied through entrepreneurial mindsets. Individuals think and act as entrepreneurs when they are informed by opportunities and dispositional beliefs (the information available to them about entrepreneurship, including feelings and intuition). One of the key influences are contextual and cultural influences but these are oft-ignored in entrepreneurship research because of the fast-changing and intercultural environment in which entrepreneurs are in. Dodd et al. (2021) suggest that entrepreneurship researchers should first seek to understanding of entrepreneurs' priorities and the values driving entrepreneurial motivation. Recent studies emphasised the explicit attention on entrepreneurial mindset, such as implicit beliefs (Mai & Dickel, 2021) and entrepreneurial alertness (Tang et al., 2021).

Influences of Entrepreneurship Education and Training (EET). According to Rauch and Hulsink (2015), EET programs can encourage positive attitudes towards entrepreneurship. It highlights how rewarding entrepreneurial behavior is and softening false beliefs about the negative consequences of business failure and forming new businesses. Exposing individuals to entrepreneurial knowledge could lead to them developing positive attitudes towards entrepreneurial careers (Moberg et al., 2014). In line with past studies, EET is advocated at an early stage because entrepreneurship is linked with positive societal influences, such as subsequent economic growth and reduced unemployment rates (Ahmad, 2013; Waldmann, 1997). Hence, formal government-introduced entrepreneurship education is commonly implemented in higher learning institutions (Agbonlahor, 2016; Naia et al., 2014). Recent research on entrepreneurial learning include self-motivational beliefs by self-regulated learners (Winkler et al., 2021), the role of an entrepreneurial mindset in encouraging nascent entrepreneurs (Lynch & Corbett, 2021) as well as entrepreneurial self-efficacy and entrepreneurial outcome expectations (Santos & Liguori, 2020).

Online Learning during Coronavirus-2019 (COVID-19) Pandemic. The rapid pandemic-induced switch to online learning has prompted studies on how educators offered experiential learning while facilitating an inclusive digital learning environment (He & Harris, 2020). Previously, online learning has been stigmatized by learners as being of

lower quality (Hodges et al., 2020), and suffering high attrition rates due to the absence of a sense of connection and community (Dueber & Misanchuk, 2001; Hodges et al., 2020; Moore, 2016). For instance, university students experienced “a lack of motivation, anxiety, stress, and isolation” during the pandemic (Browning et al., 2021). As the job outlook is deemed not favourable in Malaysia, learners from low-income households were most likely to prioritise any means of securing livelihoods for themselves instead of spending time in online learning or getting digital devices needed for it (Malaysian Institute of Economic Research, 2019). The sudden switch also pushes learners to be independent and employ resource management strategies in order to find it better to self-regulate their learning, to experience better academic performance and to adapt better to online learning environments (Biber et al., 2021)

Ratten (2020) suggests contrasting positive and negative online learning experiences during crises would help in understanding how context has influenced teaching methods. Since perceptions are determinants of behavior, Lizzio et al. (2002) demonstrate that positive perceptions of learners lead to achieving positive learning outcomes. Thus, it is significant to understand learners’ narratives about online learning and their effect on learning outcomes.

Methods

Background

To adapt to Malaysia’s lockdown restrictions, an online EET program was provided by a local university from May to October 2020. It was designed to be asynchronous provide opportunities for vulnerable individuals who may lack the necessary Internet infrastructure for synchronous learning (Hamid & Khalidi, 2020; Nadeak, 2021), targeting youth aged between 18 and 40 years old using computer or smartphone access. We focused on Malaysian youth for the following reasons. Firstly, Malaysia, as a high-growth, emerging country in Southeast Asia, relies heavily on extensive entrepreneurship ecosystem – more than 97% of business establishments are classified as small-medium enterprises.¹ Secondly, similar to other developing countries, there have been strong governmental efforts to promote entrepreneurship as a viable career choice amongst youth. Thus, Malaysia provides a rich context to study the issue of delivering EET programs with consequences that may be applicable to similar developing countries, such as Indonesia, Bangladesh, Mexico, and Brazil.

This program was delivered through short videos on 17 topics on the basics of entrepreneurship, case studies, resource lists and short optional assignments. Participants had to complete a session reflection survey after each topic. To address the need for interaction (Groves & O’Donoghue, 2009), participants were given the option to interact with others through online discussion boards or to book personal appointments with the instructor. Incentives for completing the program included certificates, prize money and an opportunity to be selected for a business incubation phase with seed funding.

To encourage registrations, the registration survey (pre-course survey) was distributed through social media advertisements, local university and college student portals and mass email invitations. Compared to MOOCs and their average retention rate of 6.5% (Jordan, 2014), this program fared slightly better at 8.5%, with 32 out of 375 participants completing the course, i.e., watching all videos as well as completing all session reflection surveys and the post-course survey.

Sample Selection

Other than participants who completed the EET program, those who were unable to finish (labelled as “dropouts” in this study) were also invited to participate. The sample were selected and divided into groups based on course completion and household income to reflect varied experiences (see Figure 1). Due to logical inconsistencies, three interviews were eventually removed from the analysis, which resulted in 35 interviews.

The participants’ general demographic information were obtained through the pre-course survey (See Table 1). Participants with household income less than RM3,999 per month (approximately USD950) were identified as low-income given that the lowest state-level median income in Malaysia was RM3,166 (Department of Statistics Malaysia, 2019).

Data Collection

We chose a semi-structured interview approach to allow participants to share their perspectives on topics related to our focus and to create space to probe further discussions for clarification, meaning-making and critical reflection (Galletta, 2013). Participants were introduced to the research topics and asked for their consent to be included in this study. The interviewers asked participants about their perceptions of entrepreneurship, their online learning experience and the impact of COVID-19 on their lives (see Appendix A). Interviews were conducted in the English, Mandarin or Malay languages. Malaysia is a multicultural nation and many languages are used, so other language options are provided to overcome communication issues and build rapport (Yeong et al., 2018). Upon completion, all participants received financial compensation, except for seven who received prize money for their business plans and video pitch submissions instead. In total, 35 interviews were conducted through telephone calls and transcribed verbatim. The excerpts below have been lightly edited where necessary.

Data Analysis

The interviews were analyzed using the thematic analysis variation of HCA (HCA-T), enabling culture- and context-specific analyses (Berger et al., 2014). In general, HCA has the benefit of being a mixed-method analysis that accommodates richness and variety in data and has been employed in various academic disciplines (Bergman et al.,

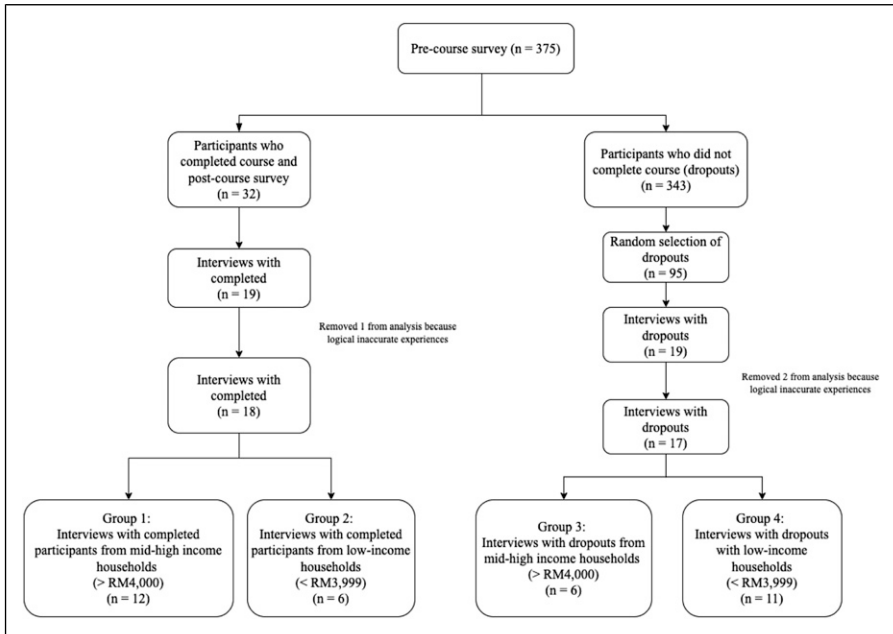


Figure 1. Sample selection framework.

2018; Ekomes, 2015; Sun et al., 2015). It is particularly suited for research topics that have not been extensively qualitatively explored. A visual depiction of our three-step analysis can be found in Figure 2. It begins with conducting a thematic analysis, visualizing the relationships between the themes using multidimensional scaling, and validating the visualizations by recontextualizing them from the qualitative primary data.

Two coders familiarized themselves with the initial transcripts. One coder is familiar with all the languages used in the interviews whereas another is familiar with English and Malay. Six out of 35 transcripts were in Mandarin and analyzed by one coder. The initial codes were created before they coded blind non-overlapping transcripts in an iterative process. Through an inductive coding approach of the thematic analysis (Braun & Clarke, 2006), codes were clustered together according to similarity and regularity, patterns were created and connections between them were thematically analyzed. Frequent discussions and reflexive journaling were implemented to ensure consistent applications of codes and to assure trustworthiness (Nowell et al., 2017).

The next step was a quantitative dimensional analysis to identify patterns among domains, which enabled us to explore the structures underlying the dimensions identified. Multidimensional scaling (MDS) was applied to visualize: (1) the configuration of points in a space; and (2) the distances and the dissimilarities between pairs (Cox & Cox, 2008). Using the “thectar” and “smacof” packages in R, we

Table 1. Sample Demographic Information ($n = 35$).

Characteristics	Group 1: Completed $n = 12$		Group 2: Completed from Low-Income Households $n = 6$		Group 3: Dropouts $n = 6$		Group 4: Dropouts from Low-Income Households $n = 11$	
	Frequency	Percentage (%)	Frequency	Percentage (%)	Frequency	Percentage (%)	Frequency	Percentage (%)
Gender	—							
Male	3	25	1	17	2	33	2	18
Female	9	75	5	83	4	67	9	82
Age	—							
18–20	2	17	2	33	3	50	1	9
21–24	8	67	3	50	2	33	7	64
25–28	2	17	1	17	0	0	3	27
31	0	0	0	0	1	17	0	0
Currently studying	—							
Yes	8	67	5	83	5	83	7	64
No	4	33	1	17	1	17	4	36
Currently working	—							
Yes	1	8	1	17	2	33	1	9
No	11	93	5	83	4	67	10	91
Household income	—							
<RM2,000	0	0	3	50	0	0	5	45
RM2,000–3,999	0	0	3	50	0	0	6	55
RM4,000–5,999	4	33	0	0	2	33	0	0
RM6,000–7,999	2	17	0	0	2	33	0	0
>RM8,000	6	50	0	0	2	33	0	0

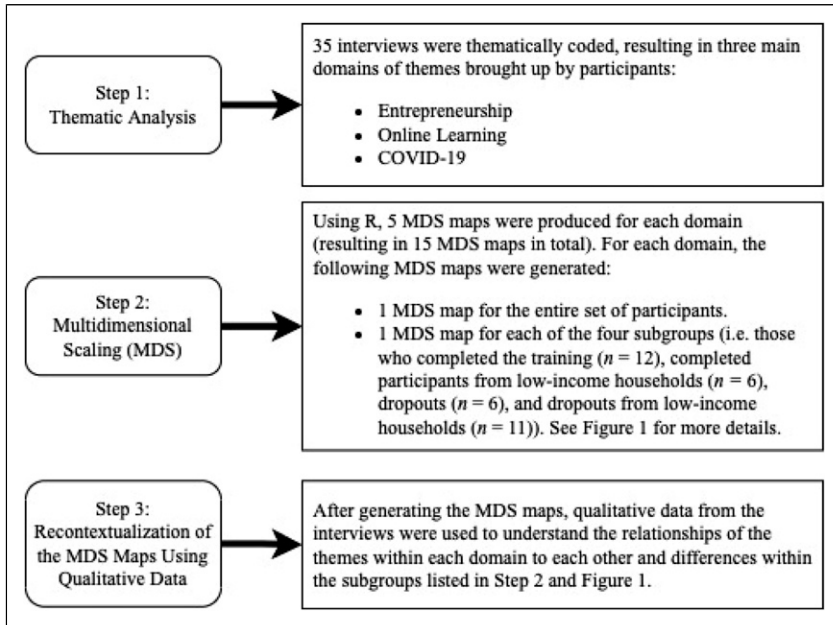


Figure 2. A summary of the HCA-T conducted in this study.

generated maps that provided additional insights into the structures embedded in non-numerical data. A non-metric procedure was used, and the comparison was done at the participant level ($n = 35$). The stress value of each map was calculated to indicate the fitness of the results – stress values range between 0 and 1, where numbers closer to 0 indicate a better fit.²

Lastly, the data were recontextualized by connecting them with interview excerpts for additional exploratory analyses through the identification of clusters, and to better interpret the relationships between MDS dimensions, further elaborated through comparisons with literature.

Results

Thematic Analysis

In no particular order 35 interviews yielded three domains of discovery, which are: (1) entrepreneurship; (2) online learning; and (3) COVID-19. Domain 1 is associated with participants' general outlooks and individual pursuits of entrepreneurship, which are categorized into four general themes and sub-themes in Table 2: (1) individual factors – age, finance, attitude and emotion, motivation for pursuing entrepreneurship, language proficiency, prior experience and time; (2) social factors – key partners and social

circles (family, peers, mentors); (3) environmental factors – macroenvironment (economic recession, governmental support and licensing), microenvironment (customer acceptance, customer feedback, competition to business), safety risk and organizational influences; and (4) perceived business essentials – entrepreneurial skills, knowledge or mindsets, logistics and access to technology.

Domain 2 is related to the factors that influenced the learning experience of online EET programs, with several themes and sub-themes listed in [Table 3](#): (1) learner-dependent factors – commitments, motivation to learn, attitude and emotion; (2) the online learning experience – technological challenges and benefits, online course curriculum, operations of online courses, and entrepreneurial skill, knowledge or mindset, i.e., what participants attained or perceived as necessary during their learning journey; (3) environmental factors – organizational influences and availability of other online courses; and (4) social factors, i.e., responses of other individuals who encouraged or hindered their online learning.

Domain 3 is the impact of the pandemic on learners' lives, categorized into two themes and sub-themes in [Table 4](#): (1) learner-specific impacts, – housing, employability, health, communication, job structure, finance, time, psychological, family, university or college, and reliance on the Internet; and (2) any entrepreneurial intentions and actions during the pandemic.

Multidimensional Scaling and Recontextualization

The next step of analysis is the quantitative dimensional analysis based on the sub-themes identified for each domain (henceforth called “dimensions”). The MDS map plots the relations between the dimensions in each domain, whereby closer proximity correlates positively with the frequency of their co-occurrence in the narratives, and vice versa. Thus, the resulting maps enable us to visually explore the realities of participants by identifying and interpreting visual clustering.

Domain 1: Entrepreneurship. Several dimensions are clustered in [Figure 3](#), i.e., “motivations for pursuing entrepreneurship”, “social circles” and “microenvironment”. The close proximity of these dimensions describes how learners frequently incorporate personal desires, social circles, entrepreneurial skills and immediate environment together in the narratives about entrepreneurship. Their narratives mainly focus on personal factors or their immediate environment instead of macroenvironment or things presumably outside their control, like the economy recession. For instance, a participant mentioned the need for “consistency ... and very good budgeting skills” to run a business as well as “mental [strength] to face any challenge” with the support from friends in budgeting [p. 1, completed from low-income households].

Now, we determine whether or not there are systemic differences or similarities between the four groups of participants for Domain 1. According to [Figure 4](#), there are relatively similar clusters in all four maps, reflecting the interdependence of several

Table 2. Themes, Sub-themes and Examples Relating to Domain I (Entrepreneurship).

Theme and Sub-theme	Example [Participant Number, Group number]
Individual factors	—
Age	“I’m young and able to do it.” [p. 33, G4]
Finance	“Because it can help me to earn some extra income.” [p. 8, G1]
Attitude and emotion	“As an entrepreneur, being optimistic is what keeps you going.” [p. 6, G1]
Motivation for pursuing entrepreneurship	“... so that I’m more financially stable.” [p. 38, G3]
Language proficiency	“If we know Chinese, I think it’s a big advantage.” [p. 29, G4]
Prior experience	“I’ll go to this one store, in my campus, and sell pastries.” [p. 8, G1]
Time	“I was unemployed and I wanted to do something to bring in ... income and to fill my time.” [p. 33, G4]
Social factors	—
Key partners	“I still need a partner ... they will have different experiences or ideas that can contribute to you.” [p. 4, G1 – translated]
Social circles	“What is important is we have a mentor, that supports us, having similar service or product ...” [p. 7, G2 – translated]
Environmental factors	—
Macroenvironment	“Government have many resources ... if we get to know them and collaborate, things will be easier when we do things.” [p. 22, G4]
Microenvironment	“The challenge is finding customers because they might not have much knowledge about our product so it will be hard to engage with them.” [p. 3, G1]
Safety risk	“The villagers are not doing well with livestock rearing because [they are] scared people will steal.” [P31, G4 – translated]
Organizational influences	“My university’s portal for students who are looking for jobs ... there was an email about this program. I was interested in entrepreneurship and marketing.” [p. 27, G4 – translated]
Perceived business essentials	—
Entrepreneurial skill, knowledge or mindset	“Good budgeting and financial [skills] are very important to run a business.” [p. 1, G2 – translated]
Logistics	“The challenges is those ingredients. Like, cream cheese couldn’t [be] store [d] for long.” [p. 20, G4]
Access to technology	“I just have to search on the Internet how to market my product on platforms like Shopee and Lazada.” [p. 27, G4 – translated]

Table 3. Themes, Sub-themes and Examples Relating to Domain 2 (Online Learning).

Theme and Sub-theme	Example [Participant Number, Group number]
Learner-dependent factors	—
Commitments	“I was working on my business and, in fact I follow[ed] other classes. So I couldn’t.” [p. 27, G4 – translated]
Motivation to learn	“many young people are starting up their own business online ... but I think it would be better to learn about it first before rushing into it.” [p. 13, G2]
Attitude and emotion	“I feel confident to show my opinion or mindset on the product I sell to my customers.” [p. 22, G4 – translated]
Online learning experience	—
Technological challenges and benefits	“I prefer physical classes but seeing the COVID-19 pandemic and the lockdown, I think it will be better online.” [p. 25, G4]
Online course curriculum	“The course overall used a very simple and clear way to structure the content.” [p. 23, G1]
Operations of online courses	“If different background or different person, it will be more interesting.” [p. 7, G2 – translated]
Entrepreneurial skill, knowledge or mindset	“Like what the online course taught me – how to interact with customers.” [p. 27, G4– translated]
Environmental factors	—
Organizational influences	“I sign up when I was interning ... I underestimated my workload so I wasn’t able to complete the course.” [p. 28, G4]
Availability of other online courses	“I also registered for other courses like Python coding. So that’s why I learn those stuff first.” [p. 26, G3]
Social factors	“I have a friend, who send me the details and introduced me to the online course.” [p. 11, G1]

dimensions identified in [Figure 3](#) – particularly, “social circles”, “finance”, “entrepreneurial skill, knowledge or mindset”, and “motivations for pursuing entrepreneurship”.

Based on the excerpts related to these dimensions, two completed participants shared their desire to pursue entrepreneurship but faced hindrance from their social circles. a participant shared his parents did not agree “to put money into the business” [p. 35, completed] whereas another described his parents as not agreeing with “uncertain income” because of their “mindset of entrepreneurs having to cut cost and facing uncertainties” [p. 7, completed from low-income households]. These excerpts indicate the influences of family and finances on their perceptions, despite the participants’ desire to pursue entrepreneurship.

Another participant perceived “entrepreneurial skill, knowledge or mindset” as essential, specifically how their (in)ability to recognize opportunities influenced their entrepreneurship journeys, as seen below:

Table 4. Themes, Sub-themes and Examples Relating to Domain 3 (COVID-19).

Themes and Sub-theme	Example [Participant Number, Group number]
Learner-specific impact	—
Housing	"I still haven't paid my hostel rental ... there is a penalty if late payment. It's been so long and I have to pay." [p. 29, G4]
Employability	"Because of the pandemic ... I couldn't find any job opportunities in Malaysia. I tried finding [job] overseas." [p. 12, G1 – translated]
Health	"I don't want to put my family's health at risk." [p. 10, G1]
Communication	"The difficulty might be that Internet connection and then a lot of misunderstanding and miscommunications." [p. 25, G4]
Job structure	"During the MCO, I took unpaid leave. My company closed because it was a development company." [p. 22, G4]
Finance	"Right now I live on my own. I feel that money is very difficult to earn." [p. 32, G3]
Time	"I can have more time for myself to stay at home ... Explore more via the Internet." [p. 24, G4]
Psychological	"I had to be alone most of the time and that's quite stressful." [p. 6, G1]
Family	"They spend less because my father is working as technician ... the number of jobs actually reduced sharply." [p. 21, G3]
University or college	"Only impacted my education ... There's online exams and online classes." [p. 8, G1]
Reliance on the Internet	"Bills are a big difficulty. Everyone's on the Internet and the computers so it all adds up." [p. 9, G2]
Entrepreneurial intention or action during the pandemic	—
Entrepreneurial action	"I actually did start my own online business on Instagram in May." [p. 20, G4]
Entrepreneurial intention	"I will say the MCO period showed me many ways that you can be an entrepreneur ... it showed us opportunities." [p. 8, G1]

Bread is a basic necessity ... So, I thought it would bring in more consistent orders, because I had a friend who did a butter cake business and I saw how the demand dropped after the first influx of friends trying to support her. [p. 33, completed]

In **Figure 4**, several dimensions were not mentioned: in Group 1 (completed), "safety risk" and "language proficiency"; in Group 2 (completed from low-income households), "age", "safety risk" and "macroenvironment"; in Group 3 (dropouts), "time" and "language proficiency". Although both age and language proficiency are

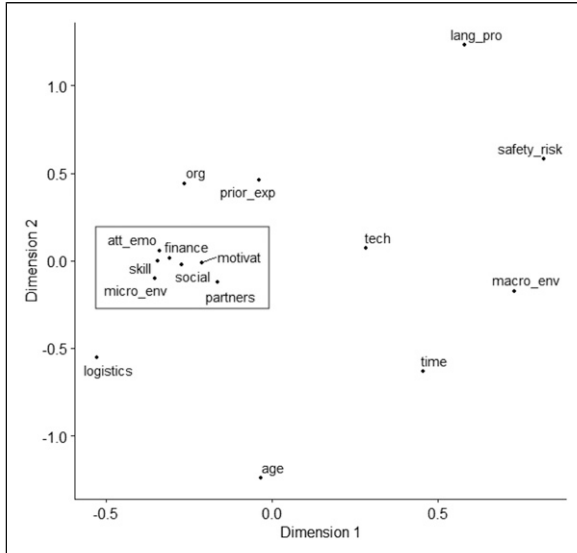


Figure 3. Non-metric MDS map of Domain I (Entrepreneurship) Note. stress level = 0.135. See Appendix A (Table A1) for the legend.

significant in past research (Zhang & Acs, 2018), we discovered only participants from low-income households (Groups 2 and 4) share similar perspective about language proficiency as an influencing factor. Meanwhile all participants except completed participants from low-income households (Group 2) share the same sentiment towards age as an influencing factor. Safety risk is only a concern to dropouts as it was not mentioned among the completed participants (Groups 1 and 2). For example, a Group 4 participant (dropouts from low-income households) mentioned men would extort money and damage the premise if refused.

Overall, all four groups are similar in how they relate their motivations to pursue entrepreneurship with their finances, social circles and entrepreneurial skills in their narratives of entrepreneurship. Besides these dimensions, we found Groups 2 and 4 maps (low-income participants) have close relationships between “microenvironment” and “attitude and emotion” compared to Groups 1 and 3 (participants who are not from low-income households). Another interesting finding in the dimension “social circles” is dropouts in this study mainly mentioned their family while the participants who completed the program mainly mentioned networking, peers and mentors.

Domain 2: Online Learning. Based on Figure 5, there is a cluster consisting the dimensions: “motivation to learn”, “online course curriculum”, “organizational structures” and “entrepreneurial skill, knowledge or mindset”. These dimensions indicates their perceptions of online learning are influenced by inner motivations, curriculum of

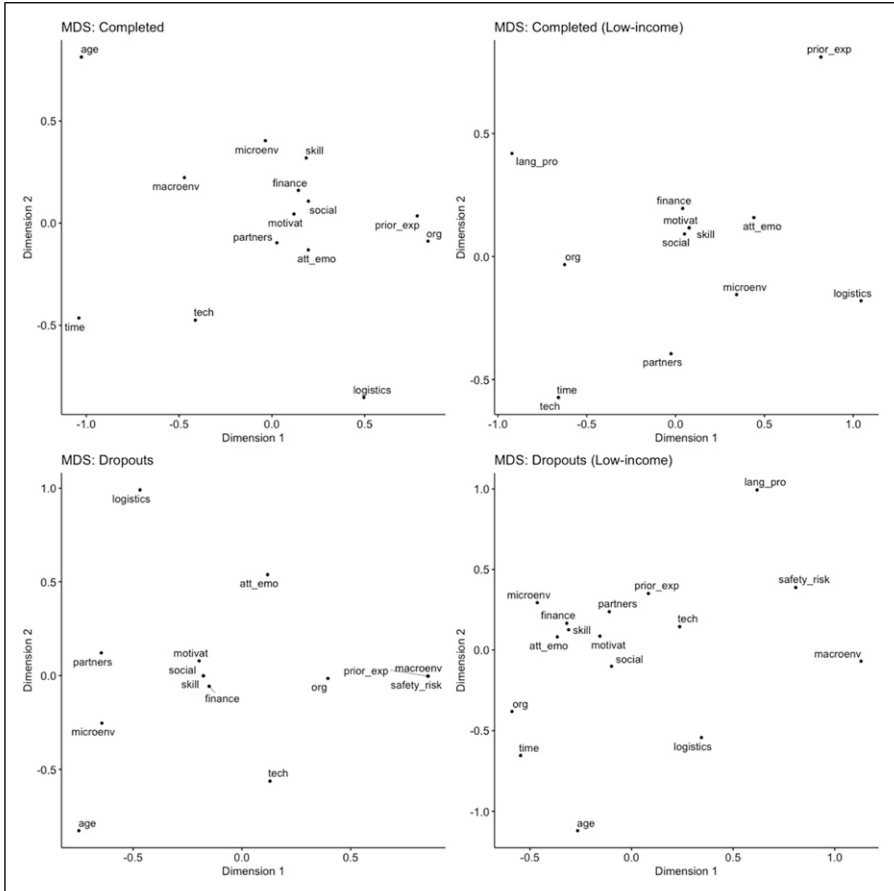


Figure 4. MDS of Four Participant Groups of Domain I (Entrepreneurship). *Note:* Stress levels = for Group 1 (completed), 0.081; Group 2 (completed from low-income households), 0.026; Group 3 (dropouts), 0.053; Group 4 (dropouts from low-income households), 0.103.

the EET program, organizational influences and the entrepreneurial skills or topics. For instance, a Group 1 participant (completed) related her motivation to learn with her prior experience at her university (organization structure) and an entrepreneurial framework taught in the EET program:

I joined this program ... because I joined programs like these before at my polytechnic [college] ... In this program, Design Thinking is new knowledge for me and I think it can help my business to grow more, think outside the box [on] what will happen and decide what I want in the future. [P3, completed – translated]

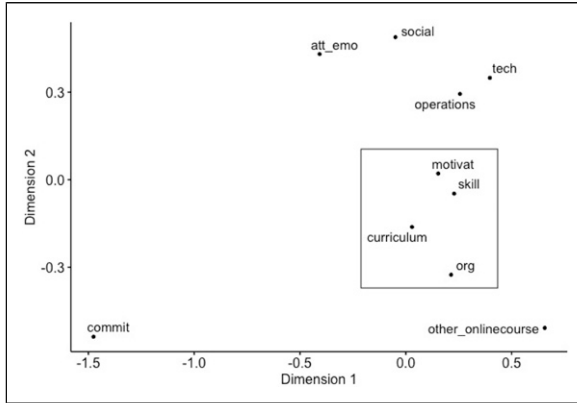


Figure 5. Non-metric MDS map of Domain 2 (Online Learning). Note. Stress level = 0.118. See Appendix A (Table A2) for the legend.

Participants also reflected on whether the EET program’s structure and learning components were aligned with their expectations of online entrepreneurial learning or their current circumstances. Both positive and negative views were mentioned, with a focus on the learning platform and its accessibility:

The assessments are quite an appealing part for me because you have feedback to learn how you did ... There is a forum but I didn’t really fill it up because I would spend a lot of time to write it up. So, I just give up. [p. 11, completed]

In comparing the different groups through Figure 6, only the Group 1 map (completed) has a cluster located closely to others, i.e., “online course curriculum”, “motivation to learn”, “entrepreneurial skill, knowledge or mindset”. Few of these dimensions are also located closely in Group 2 map (completed from low-income households).

In comparison, the dimensions in Groups 3 and 4 maps (dropouts and dropouts from low-income households) are plotted far from others. The dimension “motivation to learn” is relatively close to “entrepreneurial skill, knowledge or mindset” in Group 3 map (dropouts) whereas “motivation to learn” is located close to “organizational influences” (i.e., workplace, university) in Group 4 map (dropouts from low-income households). Group 3 participants (dropouts) were able to relate their motivations to learn (i.e., desire to start a business, desire for self development) with the entrepreneurial skill, knowledge or mindset (i.e., marketing strategy, opportunity recognition). An excerpt from a Group 3 participant (dropouts) is shown below:

I was searching online for digital marketing free courses. So, I registered [in this program] but sadly I couldn’t finish it ... I wanted the extra skills and knowledge because digital

entrepreneurship and marketing is quite important, especially when we are all going digital. [p. 26, dropouts]

The Group 1 map (completed) also indicates that the dimension “social factors” is in close proximity with other dimensions in the center (i.e., family, peers, role models). However, this is not the case for Groups 2, 3 and 4 (completed from low-income; dropouts; dropouts from low-income households). In the interviews, a Group 1 participant (completed) described how a peer shared the registration details of the online course and how they discussed what they learned.

In Group 2 (completed from low-income households), the dimension “commitments” is not mentioned. Observing how the same dimension is relatively far apart from other dimensions in other maps, this suggest commitments is not a priority among the participants in the study.

In summary, the similarity across the four groups is the factors of their motivations to learn, the online course curriculum structure, organizational structures and the entrepreneurial skill or knowledge on the perceptions of online learning. In Groups 2 and 4 maps, we noticed a distance between the dimension “social factors” from other dimensions compared to Groups 1 and 3 maps. Interestingly, there is a lack of social factors in the narratives of low-income participants. We also found the dimensions “availability of other online courses” and “online course curriculum” were plotted nearer to “motivations to learn” and “entrepreneurial skill, knowledge or mindset” in Groups 3 and 4 maps. Contrasting the maps between the participants who completed the program and the dropouts, the dropouts were relating their prior online learning experiences with their motivations to learn and the skills mentioned whereas the participants who completed the program were able to relate it with the curriculum.

Domain 3: COVID-19. Based on [Figure 7](#), Domain 3 has a cluster of closely related dimensions, i.e., “employability”, “family”, “entrepreneurial intention”, “entrepreneurial action”. The pandemic has influenced their job-hunting process and the livelihoods of their immediate family members. Several participants, who were still students then, did not witness drastic changes but noticed reduced household spending.

For some, however, the pandemic caused positive changes in one’s entrepreneurship intentions or actions. Several participants recounted how the lockdown made them discover their interest in starting a business:

During this pandemic, it is a great way for me to come up with something new ... I actually did start my own online business on Instagram in May. [p. 20, dropouts from low-income households].

I decided to explore starting a business on my own, which is something I otherwise would never have done. So, if I didn’t have that time, being unemployed, during the pandemic when vacancies were scarce, I would not have even considered starting a business. [p. 33, dropouts from low-income households].

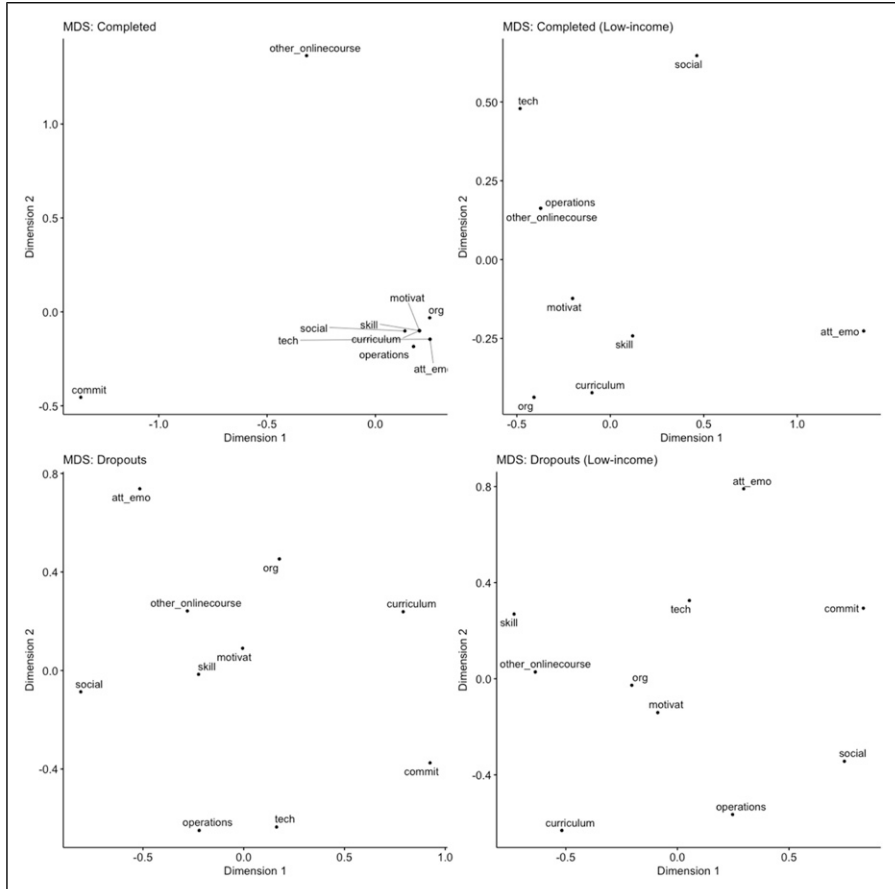


Figure 6. MDS of Four Participant Groups of Domain 2 (Online Learning). Note. Stress levels = in Group 1 (completed), 0.007; Group 2 (completed from low-income households), 0.056; Group 3 (dropouts), 0.061; Group 4 (dropouts from low-income households), 0.014.

In [Figure 8](#), the dimensions were scattered with several pairs co-occurring across the four groups. “Finance” is plotted close with other dimensions, such as “entrepreneurial action” in Group 1 map (completed) and “family” in Group 2 map (completed from low-income households). Several dimensions overlap one another in Groups 3 and 4 maps. For instance, “housing – communication”, “entrepreneurial action – entrepreneurial intention” can be seen in Group 3 map. The different pairs of dimensions across these four maps represents the varied impact of COVID-19 on the participant lives.

Several dimensions were not mentioned in [Figure 8](#): “communication” is not mentioned in Group 1 (completed); in Group 2 (completed from low-income

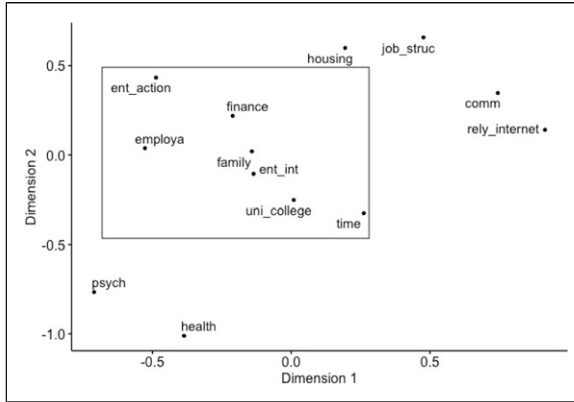


Figure 7. Non-metric MDS map of Domain 3 (COVID-19). *Note.* Stress level = 0.101. See [Appendix A \(Table A3\)](#) for the legend.

households), “reliance on Internet” and “health”, in Group 3 (dropouts), “job structure”, “housing”, “health”, “communication”, “entrepreneurial action”, “reliance on Internet” and “health”; in Group 4 (dropouts from low-income households), “psychological” and “health”. Interestingly, only Group 1 (completed participants) mentioned health as an influencing factor.

The results regarding this domain indicate that participants’ employability, family, entrepreneurial intention and entrepreneurial action were impacted by the pandemic. Based on Groups 3 and 4 (dropouts and dropouts from low-income households), the dropouts mainly discuss the impact of the pandemic on their finances and experienced changes in their job structure. In comparison, participants who completed the program mentioned the impact of the pandemic on their finances and their family. Additionally, participants from low-income households (Groups 2 and 4) share a similar concern on their employability. For instance, a Group 2 participant (completed from low-income households) mentioned “due to the pandemic, part-time jobs are not available anymore” which was how she funded her own university tuition fees [p. 13].

Discussion

We determined several factors influencing learners’ priorities across three domains (entrepreneurship, online learning and COVID-19) and how the pandemic has affected these youth above (completed, completed from low-income households, dropouts, dropouts from low-income households) participants (completed, dropouts, dropouts from low-income households). Despite having different levels of course completion and household income, participants shared similar concerns about their livelihoods and families, which influenced their priorities and their outlooks on entrepreneurship.

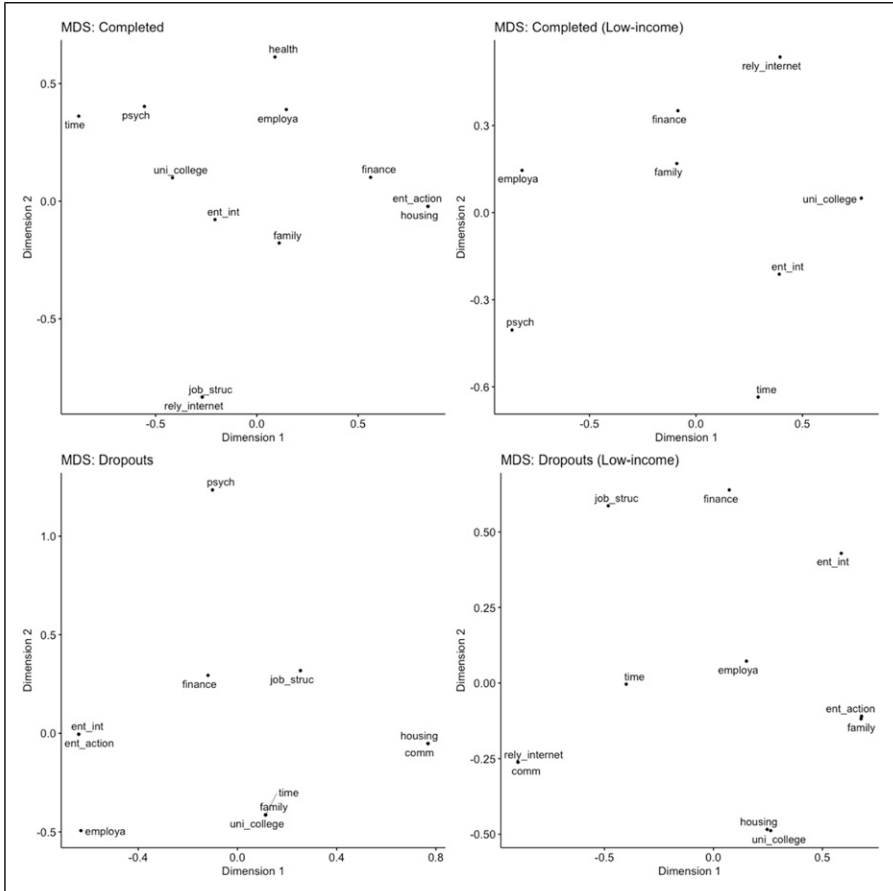


Figure 8. MDS of Four Participant Groups of Domain 3 (COVID-19). Note. Stress levels = in Group 1 (completed), 0.026; Group 2 (completed from low-income households), 0.007; Group 3 (dropouts), 0.001; Group 4 (dropouts from low-income households), 0.003.

Entrepreneurship

Using MDS and recontextualisation, we mapped the factors influencing perceptions of entrepreneurship from participants who completed and dropouts based on socioeconomic status to determine any similarities and difference in their narratives. The participants' narratives of entrepreneurship were influenced by their motivation for pursuing entrepreneurship, social circles, finances, and entrepreneurial skills or knowledge. Our findings revealed there were more individual influencing factors for all four groups of participants.

Motivation is an emergent factor among the individual factors, as reflected in the close relationships between the motivational-related dimension and other dimensions. In the excerpts, their motivations include starting a business of their own, addressing social issues through their business, seeking employment for themselves or developing their skills and knowledge. These motivations does seem to be affected by the impact of the pandemic, as seen in the challenges described in Domain 3 findings. The findings ties well with previous studies wherein goal-oriented entrepreneurial behavior is affected by contextual and cultural influences (Pidduck et al., 2021), as seen by their motivation for pursuing entrepreneurship that seeks to address their employment issues influenced by the pandemic or pandemic-inflicted social issues faced by their community. These findings are also in line with Hessels et al. (2008), where it identified motivation as an individual psychological determinant of entrepreneurship. The step of identifying motivations develop a better understanding on what drives learners in an emerging economy to entrepreneurship. Entrepreneurship educators and policymakers should seek to understand these motivations in order to promote entrepreneurship as a viable career choice.

In addition, it appears that youth who expressed their intention to start a business are not only self-motivated but they also highly value the opinions of their social circles and tend to reflect on their current financial standing in their narratives. Specifically regarding social circles, dropouts tend to mention their family whereas participants who completed the program mainly mentioned peers, mentors and networking with like-minded individuals.

Other than these factors, we determined that participants from low-income households were taking in account their community or environment (“microenvironment”) along with their own feelings and attitudes toward entrepreneurship (“attitude and emotion”). Since individuals from low-income households are more likely to start small and become a micro-entrepreneur (Chandy & Narasimhan, 2011), the focus on their immediate environment and attitudes shows they tend to assess the entrepreneurship ecosystem they are in, the local market’s potential as well as their own attitudes in such matters. This also aligns with the findings by Moberg et al. (2014) that mentioned the importance of attitudes in considering entrepreneurship as a career choice.

It is also notable that participants mentioned the pandemic’s influence on their entrepreneurial intentions and actions. Although the topic of starting a business during the pandemic was not explicitly prompted, four dropouts and one participant who completed the program reported that they did. Participants who experienced changes in entrepreneurial intention and actually started businesses were mostly dropouts, and not the participants who completed the program. Under certain assumptions, this could be construed that dropouts are an intriguing group of learners to explore in further EET studies since they may not complete an EET program yet were able to take the first step toward starting a business.

Online Learning Experiences

With the aim of understanding the perceptions among EET program learners, we investigated the influencing factors on the perceptions of online learning during the pandemic. The MDS maps and recontextualisation reveals several influencing factors, which are their motivations to learn, the online course curriculum, organizational structures and entrepreneurial skills or knowledge. Similarly with Domain 1 results, we discovered most participants are able to identify their own motivations to learn. This begs the question, if learners recognise their motivation to learn, what influenced learners to take an extra step to complete the program?

The difference between completed participants and dropouts can be attributed to the individual's (in)ability to connect their own motivation to learn with the curriculum, as reflected by the close relationship between motivation and curriculum-related dimensions. We noticed how the completed participants were able to self-regulate their own learning and complete an asynchronous EET program by describing how they relate their motivation with the curriculum. The results matches entrepreneurship education research on innate motivation, which is identified as an essential instrument of knowledge construction that affects attrition and performance positively – so long as it fulfils one's psychological needs (Van Gelderen, 2010). In line with the findings of Biwer et al. (2021), the participants' ability to self regulate enabled better adaptability with online learning through resource management strategies. As an addition to entrepreneurship mindset research, this study depicts learner's perception of online learning is influenced by the identification of their motivation to learn while relating with the program's learning outcomes. Based on this finding, a suggestion for online learning educators or entrepreneurship program providers is to identify learners' motivations as well as facilitate the connection with the topics or learning outcomes.

Comparing the findings from participants who completed the program and dropouts based on household income, the difference is their social support. Participants who completed the program noted a substantial need for a social support system (i.e., peers, networking with other like-minded individuals). In contrast, the completed participants from low-income households and dropouts mentioned difficulties in attaining social support due to pandemic-related restrictions and the lack of interaction in the asynchronous EET program. We also discovered participants from low-income households barely mentioned social factors with other factors in their perspectives, as seen by the distance between "social factors" and the other dimensions. When participants from these four groups described these social factors, they mainly shared about their peers and the desire to meet other like-minded individuals. This differs slightly from Moore's (2016) findings with the focus on peers and instructors, which is a strong predictor of learning satisfaction. We believe the difference in findings is justifiable since the EET program was structured asynchronously, so their interactions with instructors or similar level of relationships were minimal. Based on Cuervo (2005), relationships with others were also identified as non-psychological individual determinant of entrepreneurial intention.

By comparing perspectives across different groups, it emphasized the need for social support from their inner circles, as seen on how low-income participants are unable to attain social support during the pandemic while completed participants could list several relationships that supported them. As depicted by [Rauch and Hulsink \(2015\)](#), EET programs should provide opportunities of creating relationships with peers to encourage positive attitudes toward learning entrepreneurship. Learners from low-income households would benefit from such opportunities to gain social capital which can foster employment and self-sufficiency ([Gee et al., 2017](#)).

Impact of COVID-19

The MDS and recontextualization also indicated how the pandemic impacted the participants' employability, family and entrepreneurship intentions or actions. The challenges they faced includes job losses, competitive job market, the changes in job structure or family business-related challenges. This is further supported by [Rahman et al. \(2020\)](#) that 64.5% of jobs in Malaysia could not be performed from home during the pandemic, which affects the income of numerous households. With these concerns, this may explains the impact on their online learning experiences and their motivations to start a business, which we earlier discovered the positive changes in their entrepreneurial intention. This corresponds with [Lungu et al. \(2021\)](#) on how the pandemic has created new entrepreneurial opportunities and encouraged the adaptability of current entrepreneurs.

Although the impact of the pandemic were primarily on participants' livelihoods and their families, it differs since there were disparities found across the four groups. Specifically, dropouts were impacted by their finances and the changes in their job structure whereas participants who completed the program were impacted by their finances and family. Due to the lockdown restrictions and the following economic recession, the dropouts shared how their finances were affected and how the lockdown forced them to comply to new working processes such as finding new clients online or teaching online classes. For participants who completed the program, their finances were also affected but they emphasized the changes within their family, i.e., job losses, poor demand of their parents' business. The concern of participants from low-income households to secure enough income were consistent with that of [Rahman et al. \(2020\)](#), who stated that individuals who are economically at risk prior to the pandemic tend to have unprotected informal jobs and more prone to losing their jobs during the pandemic. This is said to result in "lower levels of self-acceptance, goal and meaning in life, and morale" ([Brand, 2015](#)).

Conclusion

The pandemic-mediated switch to online learning has made it essential to learner's experiences, as perceptions determine behavior. This study enriches the existing literature using a mixed-method analysis, HCA-T in the context of an online, non-formal

EET program: The findings on the perceptions of entrepreneurship and online learning are predominantly influenced by individual motivations and impacted by the pandemic. In addition, participants who experienced positive changes in their entrepreneurial intention during the pandemic and actually started businesses were mostly dropouts instead of participants who completed the program. This has deep implications in entrepreneurship education and other “hands-on” programs: in times of crisis, do and can educational programs still even make a difference?

The lack of social support amongst participants from low-income households influenced their perceptions of online learning. Other than social support, the findings also revealed the importance of relating learners’ motivations with the online curriculum to self-regulate their learning. We also found the pandemic primarily impacted learners’ livelihoods and families but differ according to individual circumstances, with low-income learners facing more difficulties, which in turn disrupted learning and their motivations to pursue entrepreneurship.

Implications

Based on these domains, understanding the contextual interplay of youth entrepreneurship brings us a step closer to fostering a sustainable entrepreneurial ecosystem for young entrepreneurs. Government institutions or policymakers can make informed decisions by identifying learners’ priorities and evaluating current implementation of nationwide initiatives, such as non-formal EETs programs. We suggest educators should identify and formatively link pandemic-mediated motivations with entrepreneurial career prospects. Online EET programs must also address their need for social support through innovative learning components, especially in asynchronous online learning. We suggest educators should formatively link their pandemic-mediated motivations with entrepreneurial career prospects. Online EET programs must also address their need for social support through innovative learning components, especially in asynchronous online learning.

Future research should investigate the diverse inner motivations and priorities of entrepreneurial learners in other countries. Since individual-specific circumstances may differ, additional exploratory research may reveal cross-national dissimilarities and uncover other avenues for improving the transition to independent online learning. Therefore, stakeholders in economic and youth development should be cognizant of youth who may lack formal education by listening to their perceptions and conducting localized research, accounting for contextual influences. Finally, the value, existence, and length of EET courses should also be thoroughly debated, as our findings suggests that those who dropped out of the program (i.e. did not complete) were able to achieve the stated eventual goal of such courses, which is to start a business.

Appendix A

Before we begin the interview, please allow me to gently remind you that you may withdraw from the interview and research without giving any reason, that your responses will be confidential, and that your identity will not be published in any of our reporting. Do you agree to participate in the interview?

1. How did you hear about the program?
2. Why did you join?
3. Did the COVID-19 pandemic play any role in making you to join? How?
4. How did the pandemic impact you?
5. How did you get through this period?
6. In the post-course survey, you “agree/disagree” that it’s hard for you to establish a business. Why is that?
7. What would be the challenges to start a business?
8. What would help you to get you through the barriers?
9. What else do you think you need to succeed starting or running a business?
10. How do you feel about our program? How has it helped you?

Table AI. Figure 3 (Non-metric MDS Map of Domain I) Legend

Label	Sub-theme/dimension	Theme
macroenv	Macroenvironment	Environmental factors
microenv	Microenvironment	—
org	Organizational influences	—
safety_risk	Safety risk	—
age	Age	Individual factors
att_emo	Attitude and emotion	—
finance	Finance	—
lang_pro	Language proficiency	—
motivat	Motivation for pursuing entrepreneurship	—
prior_exp	Prior experience	—
time	Time	—
tech	Access to technology	Perceived business essentials
skill	Entrepreneurial skill, knowledge or mindset	—
logistics	Logistics	—
partners	Key partners	Social factors
social	Social circles	—

Table A2. Figure 5 (Non-metric MDS Map of Domain 2) Legend.

Label	Sub-theme/dimension	Theme
other_onlinecourse	Availability of other online courses	Environmental factors
org	Organizational influences	—
att_emo	Attitude and emotion	Learner-dependent factors
commit	Commitments	—
motivatt	Motivation to learn	—
skill	Entrepreneurial skill, knowledge or mindset	Online learning experience
curriculum	Online course curriculum	—
operations	Operations of online courses	—
tech	Technological challenges and benefits	—
social	—	Social factors

Table A3. Figure 7 (Non-metric MDS Map of Domain 3) Legend.

Label	Sub-theme/dimension	Theme
ent_action	Entrepreneurial action	Entrepreneurial intention or action during the pandemic
ent_int	Entrepreneurial intention	—
family	Family	Learner-specific impact
psych	Psychological	—
rely_internet	Reliance on the Internet	—
uni_college	University or college	—
comm	Communication	—
employa	Employability	—
finance	Finance	—
health	Health	—
housing	Housing	—
time	Time	—
job_struc	Job structure	—

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Notes

1. More detailed statistics can be seen at the following Web site: <https://www.smecorp.gov.my/index.php/en/policies/2020-02-11-08-01-24/profile-and-importance-to-the-economy>
2. http://cda.psych.uiuc.edu/mds_509_2013/readings/systat_scaling_manual.pdf

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