Data Article

Data set of the challenges and future preference for e-learning of Malaysian business undergraduates during the COVID-19 pandemic

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ABSTRACT

This data set contains data on the challenges and future preference for e-learning of Malaysian business undergraduates during the COVID-19 pandemic. The challenges for e-learning include ICT infrastructure, training, support and resources, discipline, advantages, disadvantages and learning outcomes. Data were collected by way of an online survey questionnaire using Google Docs in July 2020 (i.e., during the COVID-19 pandemic). The link to the online questionnaire was distributed via learning management system and email. A total of 251 valid responses were collected. Analyses performed included frequency distribution, mean, standard deviation and correlation. This data set provides valuable insights to understand the contextual challenges and future preference for e-learning of Malaysian business undergraduates during closure of institutions of higher learning. Moreover, upon further analysis, researchers and policy makers may unearth novel relationships among variables included in this data set. Finally, this data set will be useful for researchers and policy makers who want to conduct comparative studies or meta analyses on the challenges and future preference for e-learning of Malaysian business undergraduates during the COVID-19 pandemic.

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e-learning of business undergraduates during the COVID-19 pandemic to design future crises response plan.

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Specifications Table

| Subject                  | Social Sciences                        |
|--------------------------|----------------------------------------|
| Specific subject area    | Higher education                        |
| Type of data             | Raw data and tables.                   |
| How data were acquired   | Online survey questionnaire using Google Docs. |
| Data format              | Raw data in csv format.                 |
|                          | Analyzed data presented in tables.     |

Table 1 Cross-tabulation of gender, household income and location of residence.
Table 2 Descriptive statistics of challenges and future preference for e-learning.
Table 3 Correlations.

Parameters for data collection
The target participants of this survey were business undergraduates. The context was e-learning during closure of institutions of higher learning in Malaysia due to the COVID-19 pandemic.

Description of data collection
Data were collected in July 2020. The link to online questionnaire was distributed via learning management system and email. All participants were informed and consented to the survey by clicking the ‘Next’ button to answer the online questionnaire. A total of 251 valid responses were received.

Data source location      | Malaysia                                  |
Data accessibility        | Data set deposited in Mendeley Data.     |
                          | https://doi.org/10.17632/p8d75psxk4.2    |
                          | https://data.mendeley.com/datasets/p8d75psxk4/2 |

Value of the Data

• This data set provides valuable insights to understand the contextual challenges and future preference for e-learning of Malaysian business undergraduates during closure of institutions of higher learning.
• Upon further analysis, researchers and policy makers may unearth novel relationships among variables included in this data set.
• This data set will be useful for researchers and policy makers who want to conduct comparative studies or meta analyses on the challenges and future preference for e-learning of business undergraduates during the COVID-19 pandemic to design future crises response plan.

1. Data Description

The percentage of Malaysian individuals using internet increased by 5.4 percentage points from 84.2% in 2019 to 89.6% in 2020. The percentage of Malaysian individuals using computers increased by 7.9 percentage points from 72.1% in 2019 to 80.0% in 2020 [1]. The big jump in internet and computer usage in 2020 can be attributed to the lockdown (known as movement control order in Malaysia) imposed by the federal government since 18th March 2020 as part of a comprehensive strategy of infection prevention and control against the transmission of the coronavirus SARS-CoV-2. Consequently, many activities shifted to online, such as work-from-home, e-learning, e-commerce, entertainment and socializing. Because economic and ICT infrastructure development are not evenly distributed across the country, there is great disparity in fixed broadband penetration rates by state. The highest penetration rate is 63.3% in the capital city of Kuala Lumpur while the lowest penetration rate is only 13.8% in the state of Kelantan [2].
The closure of institutions of higher learning and digital divide created adverse consequences for learners from poor families or living in remote/rural areas (economically or socially disadvantaged learners) as they lack access to hardware, software and internet coverage necessary for effective e-learning. Hitherto, lack of demographics and socioeconomic status disaggregated data hampered identification of differential impacts of the COVID-19 pandemic [3]. As such, there is an urgent need for research to better understand the potentially differential impacts of the COVID-19 pandemic due to demographics and socioeconomic status to inform national strategic plans for COVID-19 pandemic preparedness [3], including addressing inequities related to e-learning.

Part One of the data set consists of background information such as household income (bottom 40% or B40, with monthly household income below RM4,850; middle 40% or M40, with monthly household income between RM4,850 and RM10,959; top 20% or T20, with monthly household income of RM10,960 or higher), location of residence and gender. Part Two of the data set consists of the challenges and future preference for e-learning of Malaysian business undergraduates. Three tables are appended below.

2. Experimental Design, Materials and Methods

2.1. Participants

Target participants were business undergraduates using one hundred percent e-learning due to closure of institutions of higher learning in Malaysia.

2.2. Method

To minimize response and measurement bias, standard survey approaches were followed [4], that is, no social pressure to influence responses, no questions that would provoke defensiveness or threaten esteem and no payoff or cost for particular responses. The Introduction section of the online questionnaire explained purpose of this survey, provided estimated time to complete this survey, assured voluntary nature of participation, anonymity of participants, confidentiality of all their responses and obtained their informed consent.

2.3. Data collection

Data were collected by way of an online survey questionnaire using Google Docs in July 2020. The link to the online questionnaire was distributed via learning management system and email. A total of 251 valid responses were received.

2.4. Data analysis

Data in csv format were downloaded from Google Docs and unqualified responses were eliminated. Subsequently, data were analyzed with Statistical Package for Social Sciences (SPSS) version 26 to generate Tables 1, 2 and 3.
Table 1
Cross-tabulation of gender, household income and location of residence.

| Household income | Location of residence | Male | Female | Total |
|------------------|-----------------------|------|--------|-------|
| B40              | Rural area            | 0    | 6      | 6     |
|                  | Semi-urban area       | 3    | 13     | 16    |
|                  | Urban area            | 5    | 10     | 15    |
|                  | Sub-total             | 8    | 29     | 37    |
| M40              | Rural area            | 5    | 8      | 13    |
|                  | Semi-urban area       | 31   | 40     | 71    |
|                  | Urban area            | 20   | 33     | 53    |
|                  | Sub-total             | 56   | 81     | 137   |
| T20              | Rural area            | 1    | 1      | 2     |
|                  | Semi-urban area       | 12   | 27     | 39    |
|                  | Urban area            | 12   | 24     | 36    |
|                  | Sub-total             | 25   | 52     | 77    |
|                  | Total                 | 89   | 162    | 251   |

Table 2
Descriptive statistics of challenges and future preference for e-learning.

| Variable                              | N  | Minimum | Maximum | Mean | Standard deviation |
|---------------------------------------|----|---------|---------|------|--------------------|
| ICT infrastructure                    | 251| 1       | 5       | 4.0  | .7                 |
| Training, support and resources       | 251| 1       | 5       | 3.4  | .7                 |
| Discipline                            | 251| 1       | 5       | 3.3  | .9                 |
| Advantages                            | 251| 1       | 5       | 3.5  | .8                 |
| Disadvantages                         | 251| 1       | 5       | 3.3  | .8                 |
| Learning outcomes                     | 251| 1       | 5       | 3.0  | .8                 |
| Future preference for e-learning      | 251| 1       | 5       | 2.7  | 1.2                |

Table 3
Correlations.

|                        | 1  | 2    | 3    | 4    | 5    | 6    | 7    | 8    | 9    | 10   |
|------------------------|----|------|------|------|------|------|------|------|------|------|
| 1. Household income    | 1  |      |      |      |      |      |      |      |      |      |
| 2. Location of residence| .12| 1    |      |      |      |      |      |      |      |      |
| 3. Gender              | -.04| -.02| 1    |      |      |      |      |      |      |      |
| 4. ICT infrastructure  | .18**| .09  | -0.09| 1    |      |      |      |      |      |      |
| 5. Training, support & resources | .06 | .06  | -.10 | .45**| 1    |      |      |      |      |      |
| 6. Discipline          | .02 | .08  | -.01 | .41**| .46**| 1    |      |      |      |      |
| 7. Advantages          | -.04| .05  | .03  | .42**| .45**| .64**| 1    |      |      |      |
| 8. Disadvantages       | -.03| -.13*| -.02 | -.26**| -.28**| -.33**| -.38**| 1    |      |      |
| 9. Learning outcomes   | -.04| .05  | -.04 | .30**| .41**| .59**| .71**| -.38**| 1    |      |
| 10. Future preference for e-learning | .01 | .02  | -.05 | .32**| .28**| .46**| .52**| -.55**| .58**| 1    |

Notes: ** correlation is significant at the .01 level (2-tailed). * correlation is significant at the .05 level (2-tailed).

Ethics Statement

This study conformed to the guidelines of the Declaration of Helsinki and was approved by the Research Ethics Committee of Xiamen University Malaysia, Malaysia (REC-2005.02). Informed consent was obtained from all participants.

Declaration of Competing Interest

The author declares no known competing financial interests or personal relationships which have or could be perceived to have influenced the work reported in this article.
CRediT Author Statement

Kim Hoe Looi: Conceptualization, Methodology, Resources, Supervision, Validation, Data curation, Formal analysis, Investigation, Project administration, Visualization, Writing – original draft, Writing – review & editing.

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Supplementary Materials

Supplementary material associated with this article can be found in the online version at doi:10.1016/j.dib.2021.107450.

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