

A PRELIMINARY STUDY OF STUDENTS AND INDUSTRIAL ACCEPTANCE OF THE WORK FROM HOME (WFH) METHOD DURING THE COVID-19 PANDEMIC IN MALAYSIA

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Abstract: This study is to identify the students and industrial acceptance and possible approach toward the implementing work from home (WFH) method during the third, fourth & conditional Movement Control Order (CMCO) phase and their level of readiness for this method. A preliminary survey of their acceptance of this method has been conducted focusing on students undergoing Industrial Training (IT) course (ECM377), Diploma in Civil Engineering UiTM, EC110, using a non-probability convenience sampling method. There were three campuses involved in this study which are FCE UiTM Cawangan Pahang, Cawangan Sarawak, and Cawangan Johor. The collected data were analyzed using the percentage value and results found that most of the industry and students do not agree to undergo IT with the WFH method. The main reason given by them is as they gain less experience if working from home. If students are not allowed to WFH, students must postpone their studies, which will result the extension of their study. Therefore, this preliminary study is needed to allow faculty to plan an action that can be taken to solve these issues so that students can complete the IT course and at the same time good relations with the industry continue to be established.

Keyword: Covid-19 pandemic, industrial training, movement control order, work from home, industrial acceptance

Introduction

A novel strain of coronavirus which is formally called as severe acute respiratory syndrome coronavirus or SAR-CoV-2 since 11th of February 2020. It was to begin in Wuhan, China in December 2019 and was spread to the entire world (Hajimin et. al., 2020). On 30th January 2020, Covid-19 was pronounced as a public health crisis of universal concern (PHEIC) and hence on 12th March 2020, it was pronounced as a worldwide widespread (pandemic) by the World Health Organization (WHO). As reported by WHO (2020), on 11th April 2020, world recorded 1,610,909 confirmed cases of Covid-19, including 99,690 total deaths have been reported to WHO globally, where at the same time Malaysia through Malaysia Ministry of Health (2020) reported that Malaysia had 4530 numbers Covid-19 cases including 73 deaths. This amount is related to a mass religious event in Malaysia, attended by around 16000 participants, including those from Brunei, Indonesia, and Singapore (Kuok, 2020).

To reduce and control the number of cases from being spiked again, Malaysia implemented a Movement Control Order (MCO) for the whole of Malaysia on 16th March 2020 by strictly following the methodology set by the WHO (Malaysia Ministry of Health, 2020). The specialists are appointed to manage and deal with preventing the disease from spreading widely. The first phase MCO started on 18th March until 31st March 2020 then it had been continued for an additional 2 weeks until 14th April 2020. All educational institutions, schools, religious centers, group meetings and mass gatherings are strictly prohibited during the MCO period (Salim et.al., 2020; Abdalqader et.al.,2020; Kuok, 2020).

District and state borders are closed to control the movements of people. The Malaysian military and police required to enforce order for people to stay at home during the MCO period and this caused the education sector including higher education to undergo a dramatic change where the learning process needs to be conducted online as mentioned by Sim et.al. (2021). Table 1 shows a Covid-19 containment measure in Malaysia from phase 1 to conditional MCO (CMCO).

Table 1 Covid-19 containment measure in Malaysia

Date	Measure
16 th March 2020	The Prime Minister of Malaysia announced the implementation of the MCO commencing on 18 March.
18 th March 2020	The first phase of the MCO came into effect until 31 st March
25 th March 2020	Announcement was made on the extension of the MCO from 1 st April to 14 th April, namely the second phase of the MCO
10 th April 2020	Announcement was made on the extension of the MCO from 15 th April to 28 th April, namely the third phase of the MCO
21 st April 2020	Announcement was made on the extension of the MCO from 29 th April to 12 th May, and this is called the fourth phase of the MCO
1 st May 2020	Conditional MCO which allowed conditional resumption of certain businesses to ease economic losses was announced. The businesses excluded those requiring close contacts and crowding such as cinemas, entertainment centers, exhibitions, and theme parks. States were given autonomy in their adoption of the conditional MCO.

(Source: Kuok, 2020)

The implementation of MCO and conditional MCO, has caused the IT subject for UiTM EC110 Civil Engineering Diploma students to be slightly disrupted. This IT subject is a compulsory subject that must be taken by all UiTM Civil Engineering Diploma students at the end of semester which is semester 6 to ensure them to graduate on time. For the March-July 2020 semester, the first bolt of this subject was implemented for 18 weeks according to the Engineering Technology Accreditation Council (ETAC) 2020 manual ruling where previously it was implemented for only 8 weeks. During this MCO phases 1 and 2, UiTM has issued a circular that learning delivery sessions are postponed throughout the implementation of the MCO including all students who are undergoing IT (Pekeliling Naib Canselor Bilangan 05 Tahun 2020, UiTM).

After that the new circular (Pekeliling Akademik Bilangan 06 Tahun 2020, UiTM) has released where students are only allowed back to the company or construction site starting 4th June 2020. To ensure that students can graduate within the prescribed period, the method of WFH is tried to be presented to all students and the industry in the third, fourth & conditional MCO phase. As reported by Mubarak and Fathima (2020) the Covid-19 pandemic has caused many sectors to change the way and method of their work, by applying the WFH concept to foremost attempts to stop faster outbreak.

The aim of the study was to identify the students and industrial acceptance toward the implementing WFH method during the third, fourth & conditional MCO phase where the total number of weeks of WFH occurring is 7 weeks before the students can re-join or back to the company after 3rd of June 2020 and the methods of solution that the faculty can devise to solve these issues. Their level of readiness for this WFH method is a must then, a preliminary survey of their acceptance of this method has been conducted.

Industrial Training for Civil Engineering Students

According to the ETAC 2020 manual, the students required to undergo IT course with minimum 16 weeks. The main objective of IT course is to expose the student to the professional engineering or engineering technology practice environment. Generally, civil engineering field can be categorized into four main branches such as structural, geotechnical, water resources and construction project management. However, the students can conduct their IT program at the various industries related to the civil engineering field. There are various industries that the students can place themselves to undergo

IT program. For instance, constructions industries, oil and gas industries, manufacturing industries, transportation industries, laboratory testing services and many more related industries.

The design of the assessment for industrial training is based on Bloom Taxonomy, which comprises of 3 domains: Cognitive (C), psychomotor (P) and affective (A) within the specific criteria and standards. The purpose of Bloom's Taxonomy is to ensure the student achieved the educational objectives framework created by the instructor. Based on this framework, the results of the students can be expected from the teaching and learning process (Chung,1994). The measurement of these domain achievement is based on evaluation from industry supervisor, faculty supervisor, colloquium, logbook, and report. The cognitive domain is not the main concern because IT course has no examination.

The Course Outcome (COs) of this course is categorized under six main components which are the applications of modern techniques and information technology tools to solve the civil engineering problems, the scientific skill in engineering design, skills in task related to IT, communication skills, independents learning, and ethics and responsibilities. All the COs will be evaluated at the end of the semester to measure the students' achievement after taking the IT course.

Meanwhile, the determination Programme Outcomes (POs) of IT course has been made based on the 12 POs created by the Board of Engineer Malaysia (BEM) through ETAC Manual 2020. The selected POs for IT course are PO3, PO4, PO5, PO8, PO10 and PO12. The POs are as follows.

PO3: Students should occupy with the design of the solution for a specific problem by considering the health and safety, environment, and social aspect.

PO4: Students should be able to know how to conduct the investigation using the catalogues, standard test, and measurement on given problems.

PO5: Students should be able to use the appropriate modern techniques, resources, and information technology to solve the specific engineering problem.

PO8: Students should understand their role and should adhere the professional ethics as a civil technician.

PO10: Students should be able to have effective communication skill; thus, this leads them to communicate on the given problem, give and receive the instruction when involved with the engineering project.

PO12: Students should be able to have the skill to participate in independent learning and able to engage with the latest information or techniques in civil engineering.

The IT course was developed based on six COs and six POs as described above. All the COs and POs were assessed in five types of continuous assessment which are Industrial Supervisor (50%), Faculty Supervisor (15%), Student Placement Report (15%), Student Logbook (10%) and Colloquium (10%). The students must obtain minimum 50% each of the assessment component in order to pass this IT course. The grade will be given based on pass or fail basis. The highest evaluation marks were given to the industrial supervisor because of their responsibility to ensure that the student fulfill all the requirement set up by the faculty.

Alternative Model of Industrial Training

The IT programme designed specifically to fulfill the requirement of the higher learning students to gain their first experience or industry exposure within the context of their field of studies (Petrla et al., 2015). Most of the programme offered at universities have IT course and students are compulsory to take IT course before graduate. Traditionally, the period of IT course offered by the higher learning institutions is between 3 months to 1 year depend on the type of program. The conventional model of IT also the student required to attend to the workstation or construction site every day and doing the task assigned until complete the IT period. Besides, the study has been done by Jaradat (2017), and they conclude that the improvement of traditional method of IT is crucial among the students as it is expected

to enrich their experience, knowledge and skill in the personal and professional life and increase their level of confidence.

Furthermore, various alternative IT model has been studied that can potentially be used to a various field of studies to enhance the quality of internship program. For instance, multi-stakeholders' model and knowledge – exchange model were introduced to enhance the communication between student, lecturers, and industry supervisors (Ruhanen et al., 2013).

Meanwhile, the internship satisfaction will be enhancing the employability of the future talent in hospitality industry (Chen et al., 2018). The employability rate is crucial to measure the relevancy of certain courses in the industries.

Sarlan et al., (2008) has developed the web portal namely Student Industrial Internship Web Portal (SIIWP) to increase the efficiency of the manual business process. This portal allowed internship eligibility checking, online registration, and online monitoring of student -lecturer assignment and online monitoring between student and industry supervisors. This finding also enhances the communication medium for all parties involved during the industrial training. (Jaafar et al., 2018) also developed a Web-Based System of Internship Management to computerize the whole process of industrial training starting from the students' registration phase until the assessment phase. This system is accessible online. Meanwhile, Internship and Capstone Design Integrated Program (ICIP) was developed to increase the efficiency in supervising of the students periodically without physically meet the students (Shin et al., 2013).

However, the mentioned alternative internship model is only focus on the improvement of the IT management process. But the students are still required to go to the office or construction site daily to meet the colleague and doing task assigned. There is no alternative method suggested by the researcher to conducting IT from home instead of attending the office or construction site.

Methodology

This study was conducted for IT course (ECM377) focusing on Diploma in Civil Engineering UiTM, EC110 by using non-probability convenience sampling method. There are four campuses in UiTM taken Diploma in Civil Engineering which are FCE UiTM Cawangan Pahang, Jengka campus, FCE UiTM Cawangan Sarawak, Samarahan 2 campus, FCE UiTM Cawangan Johor, Pasir Gudang campus and FCE UiTM Cawangan Pulau Pinang, Permatang Pauh campus. On March-July 2020 semester, only three campuses have students taking an IT course which are Jengka, Samarahan 2 and Pasir Gudang campuses.

Study tool is a self-administered online questionnaire that consists of Part A – sociodemographic such as name, matrix numbers and UiTM branch. Part B is about IT information such as name of company, district and state of the company and name of faculty supervisor whereas Part C consists of industrial feedback and Part D which consists of student feedback and comments from both parties. Ethical approval was taken from the university before the distribute the questionnaire to the targeted respondents. Consent of each respondent were required before answering the questionnaire.

Result and Discussion

The survey was made in Part D to obtain the respondent's feedback regarding to the WFH during pandemic Covid-19. There are few questions included in the form as follow:

Question 1: Did the company allow you to work from home?

Question 2: Did the company allow you to continue your industrial training starting on 4th June 2020?

Question 3: Are you okay working from home?

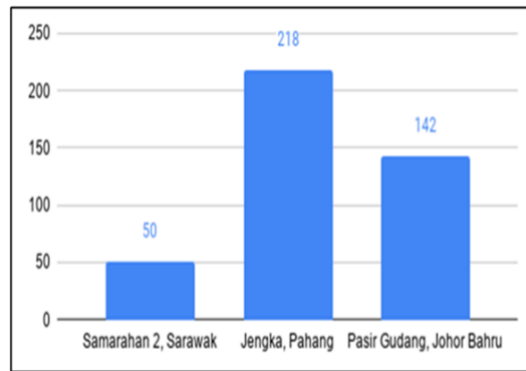


Figure 1 Number of students undergoing IT according to UiTM campus

Figure 1 show the numbers of total respondents which are 410 according to the UiTM branches and referring to Figure 2, 64.7% of companies which is about 265 respondents do not allow the students to undergo IT course by using WFH method. This large value of percentage is a sign to the faculty that most companies are still not ready to implement the WFH method on our students during these 7 weeks period.

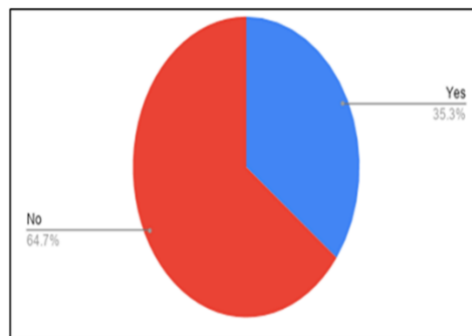


Figure 2 Percentage of companies that allow students to undergo IT from home

However, by referring to Figure 3, most companies (85%) allow students to continue IT course at their company starting on 4th June 2020. This result shows that, companies are accepting the condition given by the faculty where the students are only allowed to go to the office or site, maximum 3 days a week and the remaining two days, students have to continue IT course by WFH approach. With this figure 3 too, however, there are 15% of companies that do not allow students to pursue IT in their company after this date which are 4th of June 2020. This indicates that 62 students will be terminated immediately from their IT course at these respective company.

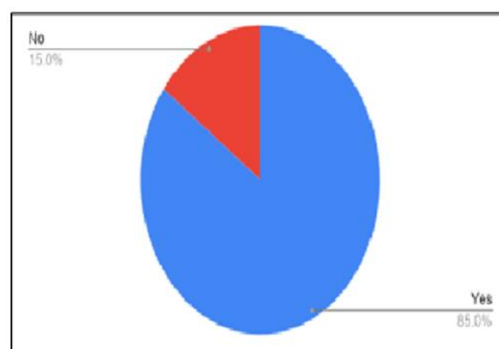


Figure 3 Percentage of companies that allow students to continue IT from home on 4th June 2020 until completion date

This preliminary survey has also obtained a feedback from the students if the WFH method is carried out. Based on Figure 4, 55.7% of students disagreed to undergo IT from home, 20.8% of students agreed and 23.5% of students expressed uncertainty. On the other hand, Figure 5 shows the reasons given by students why they did not agree to undergo IT using the WFH method. Based on the Figure 5, one of the main reasons given by students is they will gain less experience if WFH. The second and third most common reasons given are their work area is at construction sites and they will lack supervision from their supervisor if they choose to WFH. Other reasons given by students are poor internet connection, no allowed by their company, no system to record attendance, due to company regulation and others.

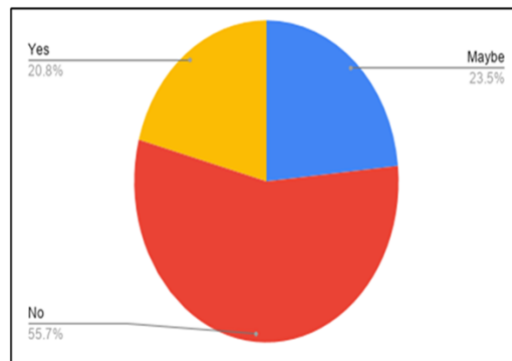


Figure 4 Percentage of students agree to work from home during IT

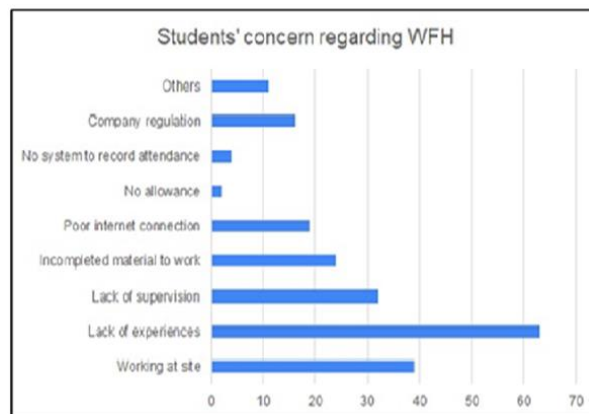


Figure 5 Reasons students do not agree to undergo IT

In order to solve the problem in Figure 2 where 64.7% of companies do not allow or are not willing to carry out the WFH method, the faculty with the advice and guidance from the outcomes-based education (OBE) and Engineering Technician Accreditation Council (ETAC) coordinator of the faculty, have decided that the faculty supervisor have to take over the responsibility of the industry supervisor where they have to assign tasks to students within these 7 weeks. While for the problem in Figure 3 where 15% of students are terminated IT course immediately, students need to seek a new placement within these 7 weeks or the faculty with the permission of UiTM has placed these students in the appropriate department in UiTM. During this period too, the faculty supervisor needs to assign WFH tasks to the students under their supervision. Figures 6, 7 and 8 show the faculty approach to solve all these issues in order to make sure the students can complete their IT course within the schedule.

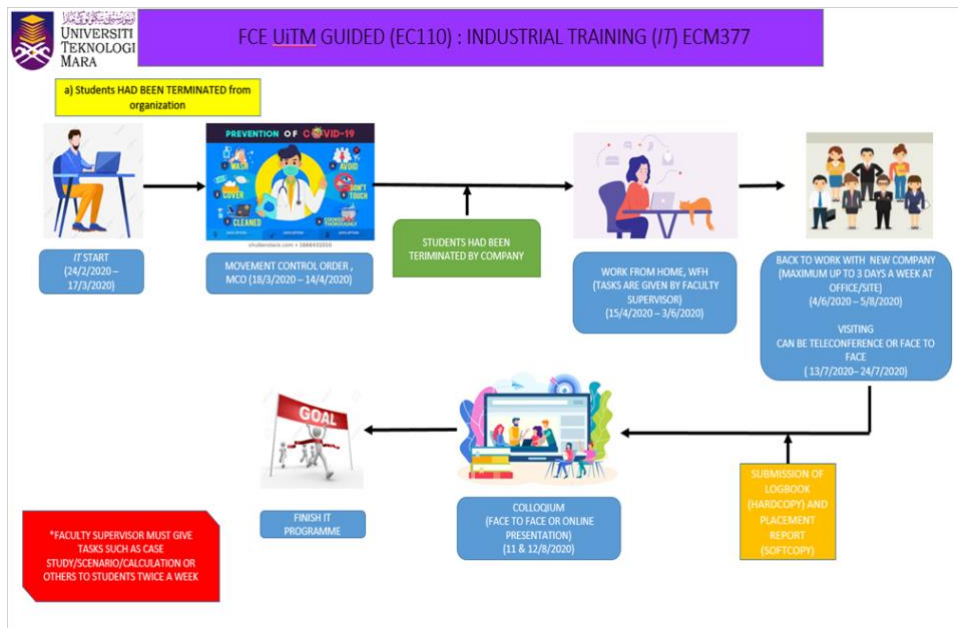


Figure 6 Faculty approach for those terminated IT immediately

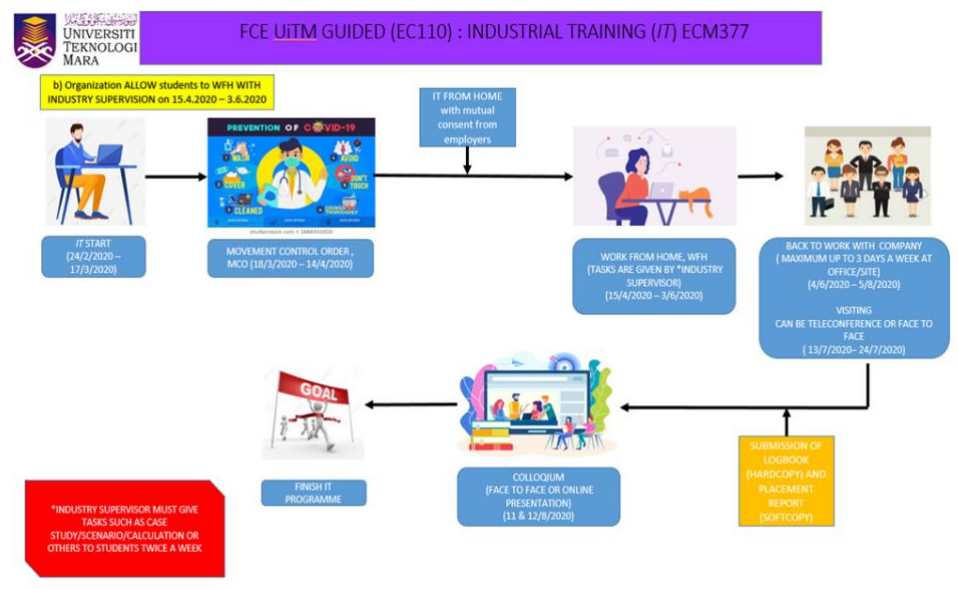


Figure 7 Work from Home (WFH) supervise by industry supervisor

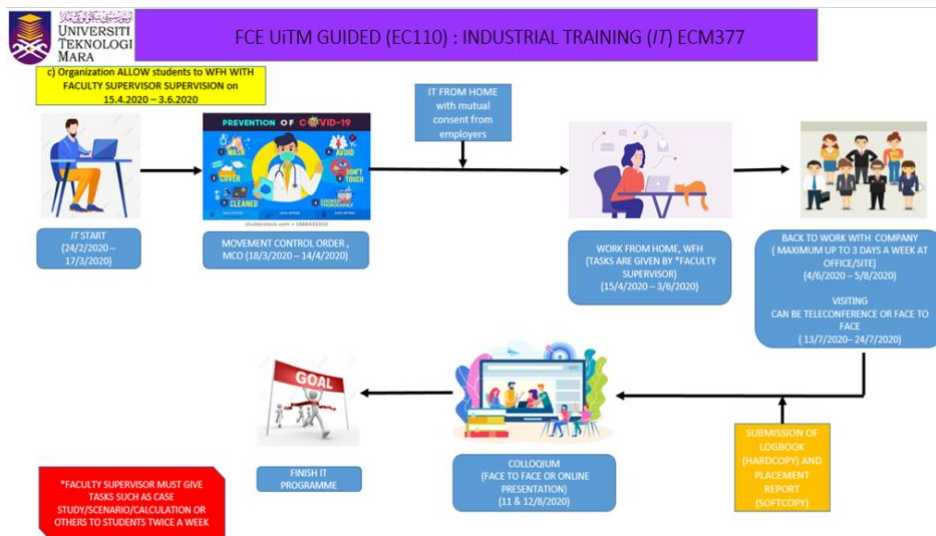


Figure 8 Work from Home (WFH) supervise by faculty supervisor

Conclusion

Implementation of WFH method during the third, fourth & conditional MCO phase is a very good initiative as this will allow students to undergo their industrial training and graduate on time without any constraint. However, the supervision from industrial and faculty supervisors needs to be enhanced to ensure students are well supervised to achieve the program outcome that has been stated in the syllabus. The WFH concept used is like the concept scaffolding. Rahmat et al., (2021) clarified that this scaffolding concept is a method in which teachers' or supervisor model or illustrate how to solve a problem, and then step back, providing help where appropriate. This will lead students to have a greater chance of successfully utilizing that experience need when learning something new. Other than that internet network coverage facilities need to be improved as this is the main important element in the online distance learning method. More things need to be taken into consideration to fulfill the requirements of the WFH method especially when it involves various companies' backgrounds and students' demographics.

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Conflict of interests

The authors have no conflict of interest to declare. All co-authors have seen and agree with the contents of the manuscript and there is no financial interest to report. We certified that the submission is original work and is not under review at any other publication.

References

- Aldalqader, M.A., Baobaid, M.F., Ghazi, H.F., Hasan, T.N., Mohammed, M.F., Abdalrazak, H.A., ... Jun, H.C.W. (2020). The Malaysia movement control order (MCO) impact and its relationship with practices towards coronavirus disease 2019 (COVID-19) among a private University student in Selangor. *Malaysia Journal of Public Health Medicine*, 20(2): 49-55. doi: <https://doi.org/10.37268/mjphm/vol.20/no.2/art.523>
- Board of Engineer Malaysia (BEM). (2020). Engineering Technology Accreditation Council Manual 2020. Electronic source:<http://bem.org.my/engineering-technology- accreditation-council> [18 April 2021].
- Chen, T. L., Shen, C. C., & Gosling, M. (2018). Does employability increase with internship satisfaction? Enhanced employability and internship satisfaction in a hospitality program. *Journal of Hospitality, Leisure, Sport and Tourism Education*. <https://doi.org/10.1016/j.jhlste.2018.04.001>.

- Hajimin, M.N.H.H., Omar, P.M.F.F.A., Ibrahim, I.A., Nawawi, M.A.A.M., & Marinsah, S.A. (2020). Movement restriction confronting COVID-19 in Malaysia: An Overview from Islamic perspective. *AL-MAQASID Journal*, 1(2), 1-17. doi: 10.17605/OSF.IO/TQ8KC.
- Jaafar, A.N., Rohafauzi, S., Enzai, N.I.M., Fauzi, F.D.H., Dzulkefli, N.N.S., & Amron, M.T. (2018). Development of internship monitoring and supervising web-based system. *IEEE Student Conference on Research and Development: Inspiring Technology for Humanity, SCORed 2017 - Proceedings*.
<https://doi.org/10.1109/SCORED.2017.8305395>.
- Jaradat, G. M. (2017). Internship training in computer science: Exploring student satisfaction levels. *Evaluation and Program Planning*, 63, 109-115. <https://doi.org/10.1016/j.evalprogplan.2017.04.004>.
- Kuok, H.D.T. (2020). Movement control as an effective measure against Covid-19 spread in Malaysia: an overview. *Journal of Public Health: From Theory to Practice*, 1-4. doi: 10.1007/s10389-020-01316-w
- Lam, T., & Ching, L. (2007). An exploratory study of an internship program: The case of Hong Kong students. *International Journal of Hospitality Management*. <https://doi.org/10.1016/j.ijhm.2006.01.001>.
- Malaysia Ministry of Health (2020, April 13). "COVID-19 (Maklumat Terkini)." Electronic source: <http://www.moh.gov.my/index.php/pages/view/2019-ncov-wuhan> [9th January 2020].
- Pekeliling Naib Canselor Bilangan 05 Tahun 2020, Universiti Teknologi MARA. Electronic source: https://kedah.uitm.edu.my/images/circular/Pekeliling_Naib_Canselor_Bilangan_05_Tahun_2020.pdf [8th January 2020].
- Pekeliling Akademik Bilangan 06 Tahun 2020, Universiti Teknologi MARA. Electronic source: https://kedah.uitm.edu.my/images/circular/Pekeliling_Akademik_Bilangan_06_Tahun_2020.pdf [8th January 2020].
- Petrila, A., Fireman, O., Fitzpatrick, L. S., Hodas, R. W., & Taussig, H. N. (2015). Student satisfaction with an innovative internship. *Journal of Social Work Education*.
<https://doi.org/10.1080/10437797.2015.977175>.
- Rahmat, H., Leng, C.O., & Mashudi, R. (2021). Innovative Educational Practice for Impactful Teaching Strategies through Scaffolding Method. *Asian Journal of University Education (AJUE)*, 16(4), 53-60.
<https://doi.org/10.24191/ajue.v16i4.1195>
- Ruhanen, L., Robinson, R., & Breakey, N. (2013). A tourism immersion internship: Student expectations, experiences and satisfaction. *Journal of Hospitality, Leisure, Sport and Tourism Education*.
<https://doi.org/10.1016/j.jhlste.2013.02.001>.
- Salim, N., Chan, W.H., Mansor, S., Bazin, N.E.N., Amaran, S., Faudzi, A.A.M., ... Shithil, S.M. (2020). COVID-19 epidemic in Malaysia: Impact of lockdown on infection dynamics. *medRxiv article*, 1-27. doi: <https://doi.org/10.1101/2020.04.08.20057463>.
- Sarlan, A. B., Ahmad, W. F. B. W., & Bismo, D. (2008). Student Industrial Internship Web Portal. *Proceedings in International Symposium on Information Technology 2008, ITSIM*.
<https://doi.org/10.1109/ITSIM.2008.4631542>.
- Shin, Y.S., Lee, K.W., Ahn, J.S., & Jung, J.W. (2013). Development of Internship & Capstone Design Integrated Program for University-industry Collaboration. *Procedia - Social and Behavioral Sciences*, 102, 389-391. <https://doi.org/10.1016/j.sbspro.2013.10.753>
- Sim, S.P.L., Sim, H.P.K., & Quah, C.s. (2021). Online Learning: A Post Covid-19 Alternative Pedagogy For University Students. *Asian Journal of University Education (AJUE)*, 16(4), 137-151.
<https://doi.org/10.24191/ajue.v16i4.11963>.
- World Health Organization (2020). "Naming the coronavirus disease (COVID-19) and the virus that causes it." Electronic source: [https://www.who.int/emergencies/diseases/novel-coronavirus-2019/technical-guidance/naming-the-coronavirus-disease-\(covid-2019\)-and-the-virus-that-causes-it](https://www.who.int/emergencies/diseases/novel-coronavirus-2019/technical-guidance/naming-the-coronavirus-disease-(covid-2019)-and-the-virus-that-causes-it) [9th January 2020].