

PRE-COMMERCE STUDENTS PERCEPTION TOWARDS ONLINE MATHEMATIC COURSES

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ABSTRACT

Online classes are the new trends in all our education system due to Pandemic COVID-19. To ensure that our education system does not lag behind, the ministry proposes to continue studies or schooling online. The student from pre university programme also are required to join the online classes although they are new to higher education center or university system. Pre-Commerce is one programme in PPT, UiTM that offers courses for those who did not perform well in SPM. Most of the student who joined these programme do not get good results in subjects like Mathematic and English. This research will study about the student perception towards online learning for mathematic course. An online survey has been conducted to study the student perspective and adaption for online classes especially for matmematic subject. The sample of this study are taken from Pre - Commerce student expecially from UiTM Cawangan Pulau Pinang. In this study, we also elobrate the teaching methods used by the lecturer for teaching the mathematic course.

Keywords : *online classes, mathematic teaching, distance learning, mathematics education*

Introductions

Since early of 2020, all over the world are lock with Pandemic COVID -19. The routine of our lives seems to have come to a standstill due to the existence of COVID 19. Malaysia also faces the lockdown situation due to these pandemics. The Malaysian government has taken action to implement Movement Control Order (MCO) as these COVID cases continues to spread. However, activities such as business, enterprise and education need to be continued after several months of the total lockdown in the country. The ministry of education has taken steps to operate an online learning system to continue school sessions and higher education sessions.

All the public and private universities and colleges start their online classes around Mac 2020. UiTM Cawangan Pulau Pinang also plans their execution of online classes. Trainings are given to the lecturers to help them conduct the online classes. The lecturers are given freedom to use any approaches and platform to conduct their classes.

UiTM offers a special programme named Pre-Higher Education Program (PPT) to help SPM graduates through academic strengthening programmes at the Pre -Diploma level and able to continue to higher level. Before the name of PPT, these programmes are known as “Mengubah Destini Anak Bangsa (MDAB)”. PPT is one of the programmes offered to the student who obtained Sijil Pelajaran Malaysia (SPM) results that do not meet the requirements of UPU. Besides that, this PPT programme is intended to provide education to poor Malay and Bumiputera children in rural and urban incomes (gross salary) mother and

father less than RM 4,000 PER MONTH. All the UiTM branches offer two programmes under this PPT course named Pre -Diploma in Commerce (Pre-Commerce) and Pre -Diploma in Science (Pre-Science). In these programmes, the students are offered only five (5) to six (6) subjects per semester and they only have one (1) semester to complete this Pre-Commerce and Pre-Science programme.

Pre-Commerce student are offered course name Intensive Mathematics (MAT 037) as their approach to improvise the student knowledge and understanding in basic mathematics as they did not score well in it. The teaching hours for this course are 10 hours per week. The lecturers have to spend five (5) hours for lecturing and another five (5) hours for tutorial slot.

Literature Review

Education that is 100% virtual is the definition for online learning from Wikipedia. Meanwhile, distance learning is the process whereby students who may not always be physically present at a school or higher education institutions (Kaplan, Andreas, Haenlein, 2016; Honeyman, Miller, 1993). Terms like distributed learning, e-learning, m-learning, online learning, virtual classroom are interrelated and used generally synonymously with distance education (Hodges, C., Moore, S., Lockee, & ect,2020). All the terms above will refer and support the process of virtual learning.

To conduct online classes, all the readiness from the student side has to be considered. The requirement and readiness for online learning is not only from the student side but it is also importance on the side of the educators (Wan Anisha, Azlina, & Rafizah, 2020). The readiness's are check by the preparation including their devices, network connection, their materials and notes.

In teaching mathematics via online class, teachers should choose teaching methods that suit best their teaching, what with to keep students able to grasp the mathematical concepts and able to solve the related mathematical problem statement. (Siti, Mahanim., & Siti, 2020). Select an approach that student likes will enhance and makes they student easy to understand the subject.

Mathematics teaching in higher education has long embraced traditional methods like non-interactive ways of teaching mathematics in which the student is the receiver of delivery from the teacher with minimally of participant. It is worth mentioning that methods for implementing innovative teaching and learning in mathematics are highly heterogeneous and widely varied as other methods including games. Innovative approaches have been appealing for educators interested in improving mathematics instruction (Abdul Wahed, Jaworski & Crawford, 2012).

Methodology

Data Collection

An online survey has been distributed among the Pre-Commerce student from campus UiTM Cawangan Pulau Pinang. Three (3) groups of students are involved in answering the questionnaire. Those students are from semester September 2020 to February 2021. There are three (3) parts in the questionnaire, whereby the first part is about the student background and readiness, second part is about the Sijil Pelajaran Malaysia (SPM) result particularly for subject Mathematic and the last part is based on their perception and experience in learning mathematics thru online.

Analysis and Discussions

Below are the analyses for the data collected thru the survey. The analysis focus on the respondent's preference and acceptance for the online classes especially for MAT 037 course, as they are new to the higher-level institutions.

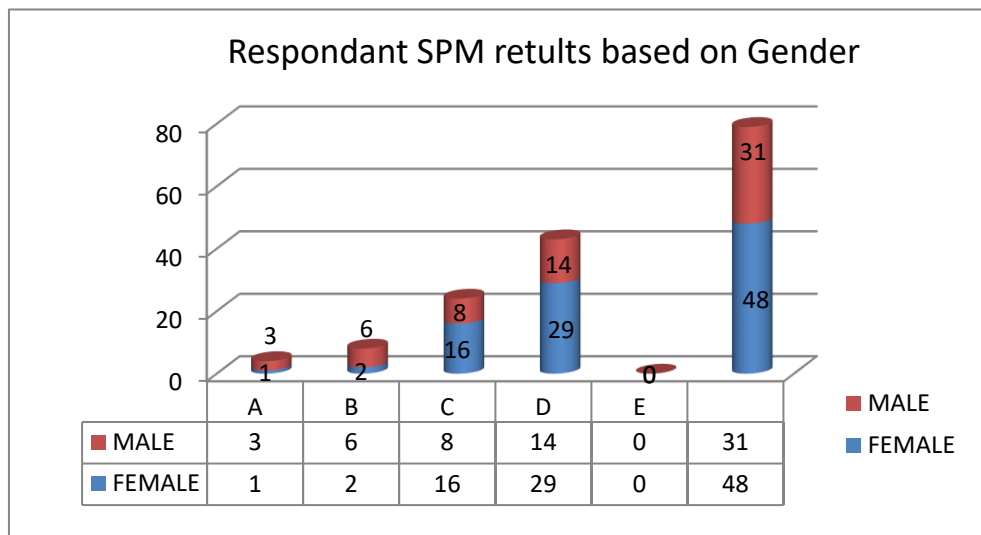


Figure 1: Respondents Gender and Mathematics' result in SPM

Figure 1 above shows the total number of students involve based on their gender and their SPM results. There are total of 79 respondents from three groups. 48 from them are female respondents and 31 of them are male respondents. From the figure above, most of the students got result grade D for their Mathematics subject. Only four (4) of them score grade A, 8 of them score grade B and 24 of them score grade C.

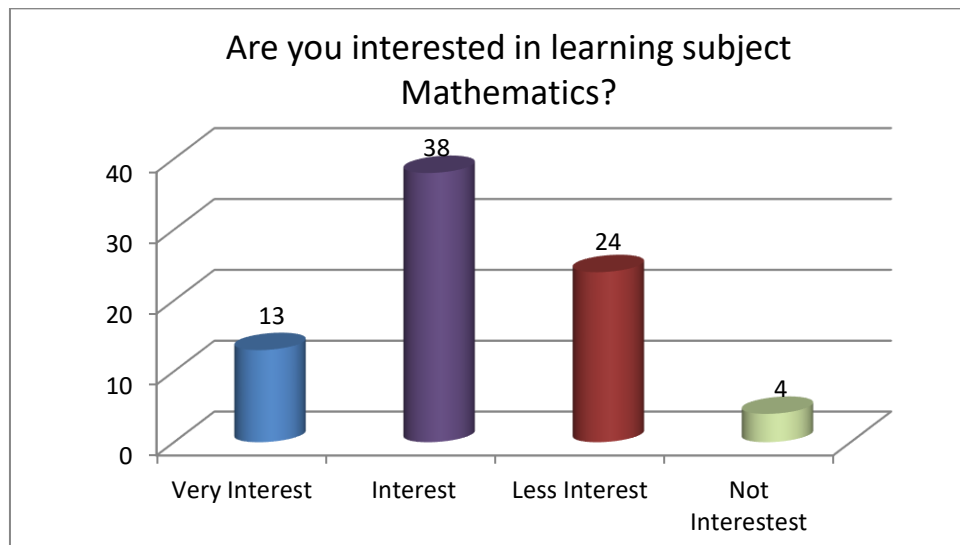


Figure 2: Respondent's interest in Mathematics subject

Figure 2 shows that the respondents level of interest towards subject mathematics. There are only 13 of the respondents who are very interested in mathematics subject and 38 of them have interest to learn mathematics subject. From the diagram also, we found that 24 of the respondents have less interest and 4 of them have no interest at all to the subject. This situation allow us to conclude that interest in the subject leads to excellent results and vice versa.

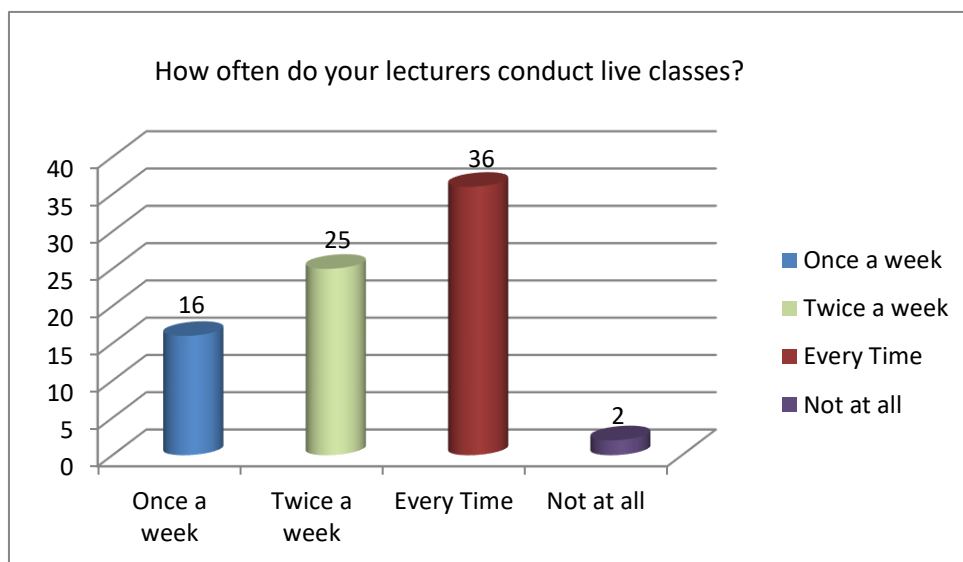


Figure 3: Respondents frequently attend online classes conducted

Figure above shows that the frequent live online classes conducted for MAT 037 course for the three groups involve. For this course, usually there will be 5 hours of lecture and 5 hours of tutorial slot. 36 students responded that most of the lecturers made live online classes almost every time. 25 of them said, there will be twice a week and 16 of them said

once a week for the frequency of live online classes. The lecturers do more live classes so that they can directly communicate with student to make sure the students clearly understand the topics especially for this mathematics course.

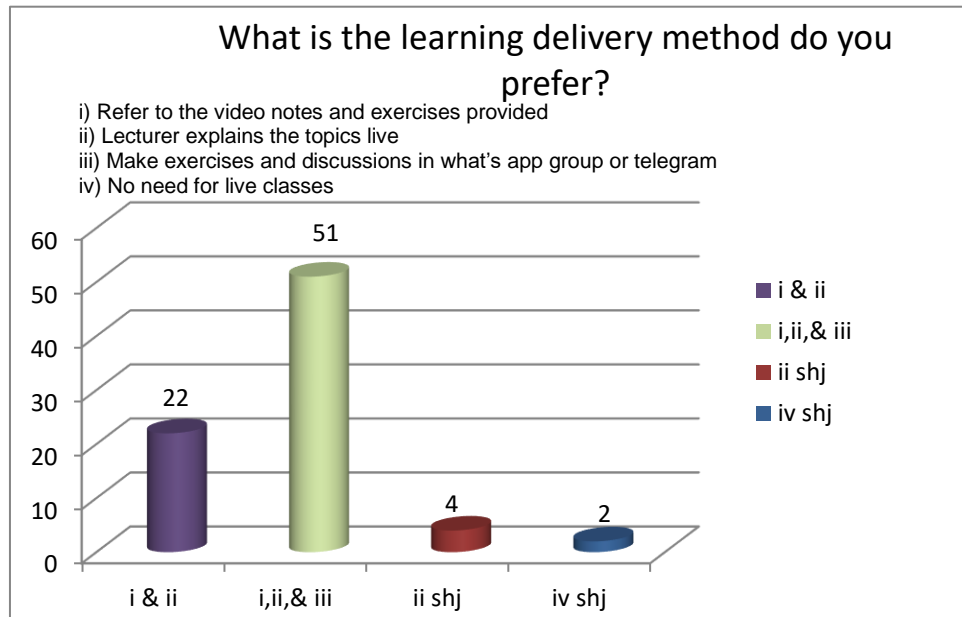


Figure 4: Respondents preference in learning delivery method

Figure 4 above shows the respondent's preference in style of learning delivery methods. There are few style of learning methods used like recorded lecturing video for notes and exercises and live teaching classes, perform exercise through WhatsApp or Telegram. The results shows, most of the respondents prefer all of learning style. Around 22 of them prefer to learn using recorded notes, video exercises and live teaching classes. Besides that, a minimum number of them prefer to have live teaching classes only.

Figure 5 below shows the respondent's perception on taking online assessment or exam. Here, the result shows that most respondents assume that they have no problem or difficulty taking the online assessment or exam. Only 23 of the 79 respondents found there are some difficulty like slow or interruption in network connection.

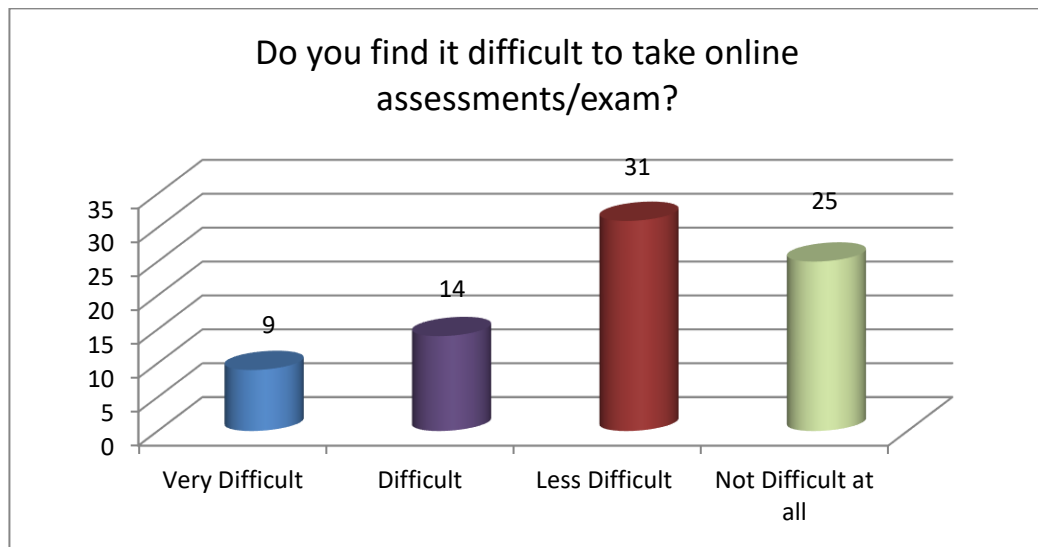


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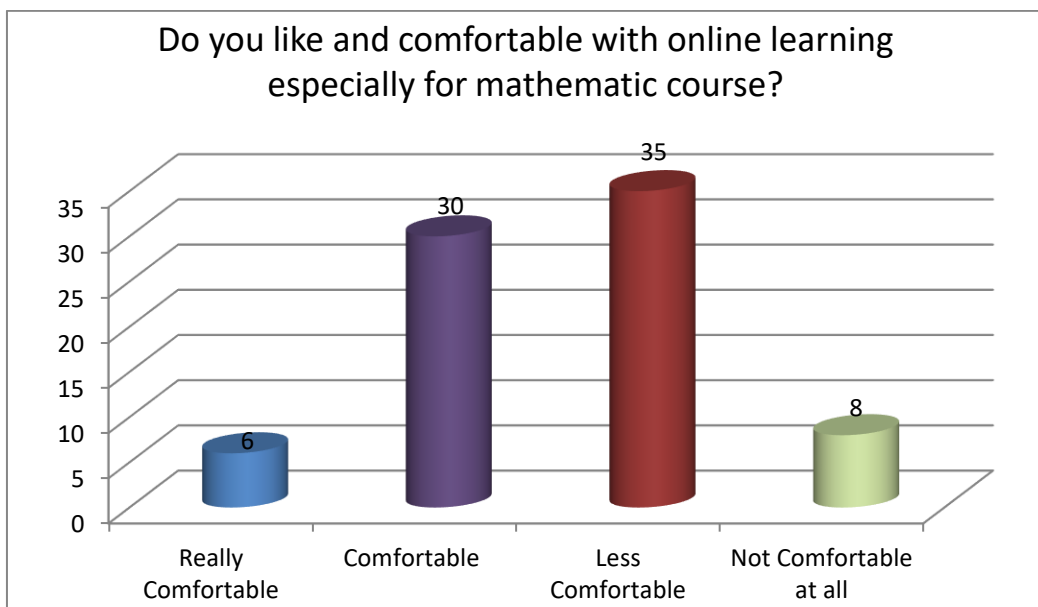


Figure 6: Respondents preference about comfortable level for online learning for subject mathematics

Figure 6 above shows the respondent's preference about comfortable level for online learning for mathematics course. From the result, 8 of them are not comfortable at all and 35 of the respondents are feeling less comfortable for learning mathematic through online. The result also shows that 30 of the respondent felt comfortable to do so. This may be due to the students themselves are lack of interest in lessons and problems in the network.

Conclusion

As a conclusion, most of these pre-commerce students have a background of not-so-excellent results in mathematics. This means they have a weak foundation of mathematical knowledge. This is also one of the reasons they are less interested in the mathematics course offered in this programme. Those who are weak in mathematics often expect their educators to pay individual attention. In addition, these students are first year students in the higher education system. They are not familiar with the higher education system, where often in higher education students need to be independence to obtain knowledge compared to the school system where they are in pampered. Unfortunately, nowadays in the era of the Covid-19 pandemic, all education systems are conducted through online. However, the lecturers at UiTM Cawangan Pulau Pinang have put their effort to help these students to understand the MAT 037 course. Various delivery teaching methods have been implemented such as video notes, examples of calculations and exercises, live online teaching and discussions using WhatsApp or Telegram. This variety of presentation materials will attract students' interest and help them to understand the content. With all the effort, the student is expected to score well in this MAT 037.

References

- Abdulwahed, M., Jaworski, B. & Crawford, A. R. (2012). *Innovative approaches to teaching mathematics in higher education: a review and critique*. Nordic Studies in Mathematics Education, 17(2), 49–68.
- Ernazarova N., (2020). *Methods of Intensification of Teaching Mathematics of Students*: European Journal of Research and Reflection in Educational Sciences, Vol. 8 No. 3, 2020 Part II ISSN 2056-5852, pg16-20
- Hodges, C., Moore, S., Lockee, B., Trust, T., & Bond, A. (2020). *The difference between emergency remote teaching and online learning*. Educause Review, 27.; <https://er.educause.edu/articles/2020/3/the-difference-between-emergence-remoteteaching-andonline-learning> Authors: Charles Hodges, Stephanie Moore, Barb Lockee, Torrey Trust and Aaron Bond Published: Friday, March 27, 2020
- Kaplan, M., Haenlein, M., (2016). *Higher education and the digital revolution: About MOOCs, SPOCs, social media, and the Cookie Monster*. Business Horizons. 59 (4): 441–50. Doi: 10.1016/j.bushor.2016.03.008.
- Kudryavtsev L. D. *Thoughts on modern mathematics and its teaching*. Fav. tr M., 2008.
- Siti Nurleena A.M., Mahanim, O., & Siti Mariam, S., (2020). *What if Mathematics is Learned using ODL in Hogwarts?*, Teaching and Learning in Higher Education Vol. 1

Su, H.F., Ricci, F.A., & Mnatsakanian, M. (2016). *Mathematical teaching strategies: Pathways to critical thinking and metacognition*. Journal of Research in Education and Science (IJRES), 2 (1), 190-200.

Wan Anisha, W.M., Azlina, M.M, Rafizah, K., (2020). *UiTM Cawangan Pulau Pinang Students Readiness Towards Online Teaching And Learning, Innovative and Creatives Ideas of Teaching and Learning Methodology During Movement Control Orders (MCO), COVID-19 Pandemic, Volume1, September 2020*.

Retrieved from: www.wikipedia.com

PPT(2020), Retrieved from: <https://penang.uitm.edu.my/index.php/component/sppagebuilder/?view=page&id=52>