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VIRTUAL SYMPOSIUM ON TEACHING & LEARNING (VSTL) 2020

Redefining the Practice of Teaching and Learning

E-PROCEEDING

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INTRODUCTION

The very first Virtual Symposium on Teaching and Learning 2020 has been organised by the Academy of Language Studies, UiTM Cawangan Johor Kampus Pasir Gudang in collaboration with Unit Penulisan dan Penerbitan, BPJIA UiTM Cawangan Johor Kampus Pasir Gudang.

This symposium has provided an opportunity for researchers and educators to share their ideas and insights in the name of education. This symposium has also provided a platform for the exchange of knowledge and expertise in relevant fields and promoted exploration of potential collaboration for future research.

This event has the goal to bring academicians and researchers in education together from across the globe.

Researchers and authors have been invited to submit original high-quality extended abstracts. Papers are solicited on, but not limited to:

- a. E-Learning
- b. Innovation and Creativity in Teaching and Learning
- c. Assessment and Evaluation in Teaching and Learning
- d. Best Practices in Teaching and Learning
- e. Others (related to Teaching and Learning)

All accepted extended abstracts have been presented by participants on the symposium day via Google Meet.

All accepted, registered and presented extended abstracts have been published in this e-proceeding with e-ISBN. Authors of selected extended abstracts will be invited after the symposium to submit a full paper for Scopus-indexed Journals/ a special issue in the Insight Journal UiTM Cawangan Johor. Best Papers and Best Presentations have also been awarded in this event.

FOREWORD BY ASSISTANT RECTOR



Dr. Haryana binti Mohd Hairi

Assistant Rector, UiTM Pasir Gudang

Assalamualaikum wbt and good day everyone.

I am pleased to welcome all of you to the Virtual Symposium on Teaching and Learning, VSTL, 2020. Congratulations for your participation, fruitful sharing session and discussion for the symposium.

Today, we have witnessed educators across institutions, disciplines and expertise, coming together to share the insights, experience, and practices in teaching and learning. I bet that everyone has had your fair share of not only getting inputs and ideas from others, but also share your own perspectives in the field of teaching and learning.

Ladies and gentlemen,

VSTL 2020 is one of the many virtual academic get-togethers, which could have been organized in the conventional way, with face-to-face meetings and sessions. However, considering the many aspects in our current situation, with the seemingly unending COVID-19 fiasco, this symposium is successfully done on a virtual platform today without neglecting the ultimate purpose of such programs. I believe that all of us today have gained so many positive inputs for various aspects in teaching and learning even without physically meeting each other, which is no less than if the program is done conventionally.

It is high time that such an event took place to highlight the remarkable contribution, in which “the new norm” of teaching and learning took place in our current education situation. I am proud to know that, through a glance at the list of presentations planned for today, reveals the amazing diversity of these areas. Congratulations to all of you.

COVID-19 pandemic has not only changed our way of teaching and learning, but also forced us to become more creative and innovative. In some cases, we could not meet our students face to face, and had to use virtual methods, as how we met today to carry out our duty as teachers and educators. This can be easy for some of us, but a mounting task for others. However, the responsibility of educating our learners still needs to be carried out, in one way or the other, no matter how challenging it is. Thus, the purpose of this symposium is for us to

not only share the traditional practices but also new methods and techniques in online or distance learning.

I hope that VSTL 2020 has been a good platform to inspire us, the educators to try out new teaching techniques and the experts to share their insight and valuable knowledge in this area. This could also be the route to a unique opportunity to share and exchange with counterparts from different specialties the advancements in your field. I also hope that our meeting will not stop today and can promote exploration of potential collaboration for future research.

Ladies and gentlemen,

On behalf of the committees and UiTM Cawangan Johor, I would like to thank all of you for your support and I hope that you have had fruitful and rewarding exchanges from this program. I would like to also congratulate the Academy of Language Studies, UiTM Cawangan Johor, Kampus Pasir Gudang for organizing the symposium, together with Unit Penulisan dan Penerbitan of BPJIA, UiTM Cawangan Johor Kampus Pasir Gudang. It is my hope to see more programs such as this in the future.

Before I end my speech, I would like to share a quote by Phil Collins;

“In learning you will teach, and in teaching you will learn”. May all of us here never stop learning, and continue inspiring the learners, and each other in our jihad to share and value the knowledge that we have.

I hereby officiate the closing ceremony and announcement of awards of Virtual Symposium on Teaching and Learning 2020.

All the best to everyone, and may all our effort be blessed. Thank you.

Gender Differences in Students' Attitude Towards Mathematics at UiTM Terengganu

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Abstract

This study aims to investigate the potential impact of gender in students' attitude towards Mathematics among students in UiTM Terengganu. A random sampling of 86 students have been selected for this study. Independent sample t-test was used to examine the effect of gender on students' attitude towards Mathematics. The finding concluded that there is no significant difference in students' attitude towards Mathematics between gender. Even though there is no difference between gender, the study found that the students' attitude towards Mathematics is considered as not very satisfactory. Therefore, the management of the university should focus on the empowerment of students' attitude to improve the quality of students' achievement in Mathematics.

Keywords: students' attitude, gender differences, Mathematics achievement

Introduction

Mathematics is a very important subject in the academic curriculum either in primary, secondary or tertiary level. Individuals who are brilliant in Mathematics tend to develop their paths in science, technology, engineering and Mathematics (STEM) stream. Simultaneously, it will help the nation by producing the professionals in many important fields. In order to achieve the objectives, schools or academic institutions are to put extra efforts in the learning of Mathematics in ensuring students' success in the subject. Attitude has a prominent factor in students' achievements in mathematical studies in which it can be in positive or negative feelings. As stated by Kiranjit Kaur (2017), attitude towards Mathematics is the liking or disliking, approving or disapproving the subject, which implies a positive or negative attitude towards Mathematics. A significant number of educational researchers have reported a considerable gender differences in students' attitude towards Mathematics (Da'inna, 2016; Amalu, 2016; Boran, Aslaner & Cakan, 2013; Lee & Anderson, 2015; Yenilmez, & Ozabaci, 2003). The findings by Kosgey, Manduku & Bii (2015) clearly indicated that both boys and girls have positive attitudes towards the learning of Mathematics despite the facts that boys were more positively inclined than girls. Elsi (2017) found that the students' attitudes towards Mathematics differed by gender, field, and Mathematics score. According to Mohd Fadzil, Mohd Hasrul & Noriah (2018) through the findings of their study, have revealed that there was no relationship between age, gender and attitude of gifted students towards Mathematics. In UiTM Terengganu, most program will have at least one Mathematics subject which includes Diploma in Office and Management System. Pursuant to the high failure rate in MAT111, a research has been conducted. Therefore, the objective of this study is to investigate the potential impact of gender in students' attitude towards Mathematics in UiTM Terengganu.

Methodology

A sample survey was undertaken involving a total of 86 students out of 108 students registered for Mathematics subject at UiTM Terengganu. This sample size is recommended by Sekaran & Bougie (2016). The combination of stratified random sampling and systematic random sampling were used in this study. Under stratified random sampling, the number of students for each gender was determined proportionately. Then, the systematic random sampling was used to select the students for each

gender. A questionnaire was distributed to the selected students during their common test in class. The students were asked 15 questions on their attitude towards Mathematics and they need to rate (5 Likert-scale rating) their level of agreement for each question. The data was analyzed using Statistical Package for Social Science (SPSS). Descriptive analysis was used to gauge an overview of the students' profile. Meanwhile, inferential analysis was carried out to test the following hypothesis using the Independent sample t-test:

H₁: There is a significant difference in students' attitude towards Mathematics between male and female students.

Findings

Table 1 shows the demographic profile of the students. Majority of the students are female with 86% and the rest are male (14%). There are 77.9% students from part 1, 19.8% from part 2 and 1.2% from both part 3 and part 5. Most of the students scored D (43%) for Mathematics subject in Sijil Pelajaran Malaysia (SPM) examination. Only 10.5% of students scored A while the others scored B (11.6%), C (16.3%) and E (18.6%).

Table 1
Profile of the students

	Category	Frequency	Percentage (%)
Gender	Female	74	86
	Male	12	14
Part/Semester	1	67	77.9
	2	17	19.8
	3	1	1.2
	5	1	1.2
SPM's Mathematics Grade	A	9	10.5
	B	10	11.6
	C	14	16.3
	D	37	43.0
	E	16	18.6

The reliability of the items used to measure students' attitude towards Mathematics was conducted using Cronbach's Alpha. It measures the internal consistency of the items, that is, how closely related a set of items as a group. Based on the value of Cronbach's Alpha (0.878) shown in Table 2, it indicates good internal consistency of the items in the scale.

Table 2
Reliability Statistics

Cronbach's Alpha	Number of items
0.878	15

Overall, the mean score of students' attitudes towards Mathematics obtained from the students was 3.1938 with the standard deviation of 0.6030 as shown in Table 3. This finding showed that the attitude of the students towards Mathematics in the university is not very satisfactory and need to be improved.

Table 3
Descriptive statistics

	Number of students	Mean	Standard deviation
Students' attitude towards Mathematics	86	3.1938	0.6030

The Independent t-test requires that the variable to be approximately normally distributed within each group (male and female) and the variances of the two groups are equal in the population.

George & Mallery (2010) stated that the values for skewness and kurtosis between -2 and +2 are considered acceptable to prove normal univariate distribution. The result obtained in Table 4 shows that

the skewness and kurtosis for both male and female are between -2 and +2. Therefore, the normal assumption is not violated for both groups.

Table 4

	Test for normality		
	Gender	Skewness	Kurtosis
Students' attitude towards Mathematics	Female	-0.006	1.437
	Male	-0.143	-0.071

Levene's Test of Equality of Variances was used to test the equality of variances between the two groups. Based on the result obtained in Table 5, it is shown that the group variances can be treated as equal ($F = 0.210$; $p = 0.648$).

Table 5
Test for Equality of variances

	Levene's Test for Equality of Variances	
	F	Sig.
Equal variances assumed	0.210	0.648

The analysis was then continued with the Independent t-test to determine whether there is a significant difference in students' attitudes towards Mathematics between male and female students. Table 6 shows that the female students obtained higher mean score in attitude ($M = 3.2770$; $SD = 0.6097$) than the male students ($M = 2.9889$; $SD = 0.5377$). However, this difference is not significant ($t = 1.274$; $df = 84$; $p = 0.206$). Thus, hypothesis 1 is rejected. Therefore, it can be concluded that there is no significant difference in students' attitudes towards Mathematics between male and female students in the university.

Table 6
Independent t-test

Gender	N	Mean	Standard Deviation	df	T	p-value
Female	74	3.2770	0.6097	84	1.274	0.206
Male	12	2.9889	0.5377			

Conclusion

The purpose of this study is to compare the attitude towards Mathematics among female and male students at UiTM Terengganu. According to the test conducted, it is concluded that statistically there was no significant difference between students' gender according to the attitudes towards Mathematics. This finding is in line with some studies include Batool et al. (2020) which found that the existence of gender difference in attitude towards Mathematics was not significant, while Lee and Anderson (2015) showed that both male and female had a very similar attitudes towards Mathematics when the sample was taken as a whole. Other researchers (Lindberg, Hyde, Petersen, & Linn, 2010) also have concluded that the gender gaps in attitudes toward Mathematics are insignificant.

Based on the research findings, it is recommended for the university management and educators assessing students' attitude towards learning Mathematics. The problems associated with negative attitudes towards Mathematics' mathematical ability and about the usefulness of this subject should be addressed, so that with the possible solutions taken, the students' performance in Mathematics might be enhanced. Regardless of the gender difference, it still depends on the type of Mathematics involved, and math-skill level of the students. Therefore, these factors may be useful for researchers in this area to investigate further in relating to gender and attitudes towards Mathematics.

References

- Amalu, M. N. (2016). Gender differences in attitude towards Mathematics in Nigerian secondary schools. *Sophia. An African Journal of Philosophy*, 17(1), 191-197.
- Batool, T., Akhter, S. & Kalsoom, T. (2020). Exploring gender differences in attitude towards Mathematics at secondary level in Pakistan. *Journal of Business and Social Review in Emerging Economies*, 6(2), 587-596. Retrieved from <https://doi.org/10.26710/jbsee.v6i2.1157>
- Boran, A., Aslaner, R., & Cakan, C. (2013). Examining the attitudes of first grade pre-service teachers towards Mathematics according to some variables. *Turkish Journal of Computer and Mathematics Education*, 4(1).
- Dan'inna, Abdullahi. (2016). Gender differences in secondary school students' attitudes towards learning Mathematics and the resulting implications on their performance. 6. 179-192.
- Elcl, A. (2017). Students' attitudes towards Mathematics and the impacts of Mathematics teachers' approaches on it. *Acta Didactica Napocensia*. 10. 99-108.
- George, D. and Mallery, P. (2010). *SPSS for Windows Step by Step: A Simple Guide and Reference*. 10th Edition, Pearson, Boston.
- Kiranjit Kaur, (2017). Gender differences in the attitude towards Mathematics of ninth class adolescents of Chandigarh. *International Journal of Research in Humanities & Soc. Sciences*, 5(3).
- Lee, K., & Anderson, J. (2015). Gender Differences in Mathematics Attitudes in Coeducational and Single Sex Secondary Education. *Proceedings of the 38th annual conference of the Mathematics Education Research Group of Australasia*, 357-364.
- Lindberg, S. M., Hyde, J. S., Petersen, J. L., & Linn, M. C. (2010). New trends in gender and performance in Mathematics: A meta-analysis. *Psychological Bulletin*, 136, 1123–1135. doi: 10.1037/a0021276
- Mohd Fadzil Bin Kamarudin, Mohd Hasrul Bin Kamarulzaman, Noriah Mohd Ishak. (2018). The relationship between gender, age, and attitude toward Mathematics among malaysian gifted students. *The Educational Review, USA*, 2(8), 410-416. Retrieved from <http://dx.doi.org/10.26855/er.2018.08.001>
- Sekaran, U., & Bougie, R. (2016). *Research methods for business: A skill building approach*. John Wiley & Sons.
- Yasar, M. (2016). High school students' attitudes towards Mathematics. *Eurasia Journal of Mathematics, Science & Technology Education*, 12(4), 931-945.
- Yenilmez, K., & Ozabaci, N. S. (2003). With Mathematics of student school students. *Pamukkale University Faculty of Education Journal*, 14 (14), 132-146