ACADEMIC PERFORMANCE DISPARITIES ACROSS GENDER IN ENTREPRENEURSHIP COURSE

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1. INTRODUCTION

In the age of unprecedented global and technological transformation, the education ministry through higher learning institutions such as universities has progressively designed various learning programs for students to adapt to skills that had been neglected or not been the point of focus in the curriculum before. As a reflection of this, entrepreneurship education has emerged out as a demanding subject and has been made compulsory for public university students in Malaysia.

Introduced into the education system a few decades ago, the effectiveness of entrepreneurship learning programs should be consistently addressed to ensure quality in academic performance. Issues surrounding academic performance such as gender difference have become a central debate to highlight the virtue of learning success. At Universiti Teknologi MARA (UiTM), the entrepreneurship subject is coded as ENT300 (Fundamentals of Entrepreneurship) and is mandatory for all undergraduate program students. ENT300 has been perceived as a non-technical subject. Due to this, people tend to assume that it is a reading-based subject where female students would perform better as compared to male students. Hence, the main question posed in this study is: is it true that there are disparities in gender performance in the ENT300 course? To address this issue, we analyse ENT300 course marks between male and female students in the UiTM Negeri Sembilan branch. The findings may guide us in bringing innovative approaches for the future development of this subject discipline through effective learning platforms where practical entrepreneurial skills can be trained and amplified.

2. LITERATURE REVIEW

The landscape of gender differences has been debated for several past decades (Keller, 1985; O'Dea, Lagisz, Jennions, and Nakagawa, 2018; Tessa and Charlesworth, 2019; Justus, 2021). Women have made advances in both schools and the workforce; they are now representatives of schools and workplaces, and they get equitable pay and recognition through awards, grants, and publications. However, gender differences can still be seen in the fields of science, technology, engineering, and mathematics (STEM).

O'Dea, Lagisz, Jennions, and Nakagawa (2018) revealed that gender differences in both mean and variance of grades are smaller in STEM than in non-STEM subjects. It was proposed that greater variability is insufficient to describe male over-representation in STEM. Simulations of these differences suggest the top 10% of a class contains equal numbers of girls and boys in STEM, but there are more girls in non-STEM subjects. A population sample of 1.6

million students was involved in the study to compare gender differences in academic grades by applying for recent meta-analytic advances. It is found that there is strong evidence for lower variation among girls than boys, and of higher average grades for girls.

In addition, a study in a private school from Pakistan with a population sample of 72 participants of 8th grade (aged 12–15) shows a positive influence on students' engagement and learning outcomes in which girls outperformed boys. The study consists of five phases. The first phase is investigating the effect of Digital Game-based Learning (DGBL) and gamification on engagement, learning, and gender difference; the second phase is planning learning activities and developing a GBL application; the third phase is conducting an intervention with the sample using quasi-experimental research framework; the forth is observing behaviour and emotions of the respondents during science lessons; and lastly, the fifth phase is accompanying pre and posts tests to assess the learning outcomes by focusing on group discussions. The analysis tests used were the Friedman test, Mann-Whitney U test and Wilcoxon Signed Rank test (Tessa & Charlesworth, 2019).

A study was conducted using an online survey with a sample of 281 students at universities in Germany and Czech in which gender-specific differences in the form of various components of entrepreneurial competence were examined. The results found that the mean differences had statistically significant lower values for female students than for male students for all the variables investigated, except for entrepreneurial intention. This study focused on (1) entrepreneurial knowledge, (2) domain-specific interest in entrepreneurship, (3) interest in leadership roles, and (4) entrepreneurial and (5) entrepreneurial intention. The findings emphasized the need for targeted promotion of female entrepreneurship within the context of academic entrepreneurship education (Justus, 2021).

3.   METHODOLOGY

A total of 119 students (44 male and 75 female) of Universiti Teknologi MARA, Negeri Sembilan branch, specifically Seremban and Rembau campuses who sat for ENT300 Fundamentals of Entrepreneurship, semester March 2021 have been employed as the subjects of the study. The students are from the Faculty of Business Management, Faculty of Information Management, Faculty of Sports Science and Recreation, and Faculty of Communication and Media Studies that enrolled in Diploma in Banking Studies, Diploma in Information Management, Diploma in Sports and Recreational Management, and Diploma in Communication and Media respectively. The distribution of the respondents across the program and gender are listed in Table 1 and displayed as a bar chart in Figure 1. The highest sample comes from a Diploma in Communication and Media that consisted of 38.7 percent. While 37 percent from the gender distribution are males and 63 percent are females.

Table 1: Respondent Distribution across Programme (Faculty)

| Program (Faculty)	Gender		Total
	Male	Female	
Diploma in Banking Studies (Faculty of Business Management)	6 (37.5)	10 (62.5)	16 (13.4)
Diploma in Information Management (Faculty of Information Management)	16 (45.7)	19 (54.3)	35 (29.4)
Diploma In Sports and Recreational Management (Faculty of Sports Science & Recreation)	11 (50.0)	11 (50.0)	22 (11.6)
Diploma in Communication & Media (Faculty of Communication and Media Studies)	11 (23.9)	35 (76.1)	46 (38.7)
Total	44 (37.0)	75 (63.0)	119 (100)

Note: (% within Programme)
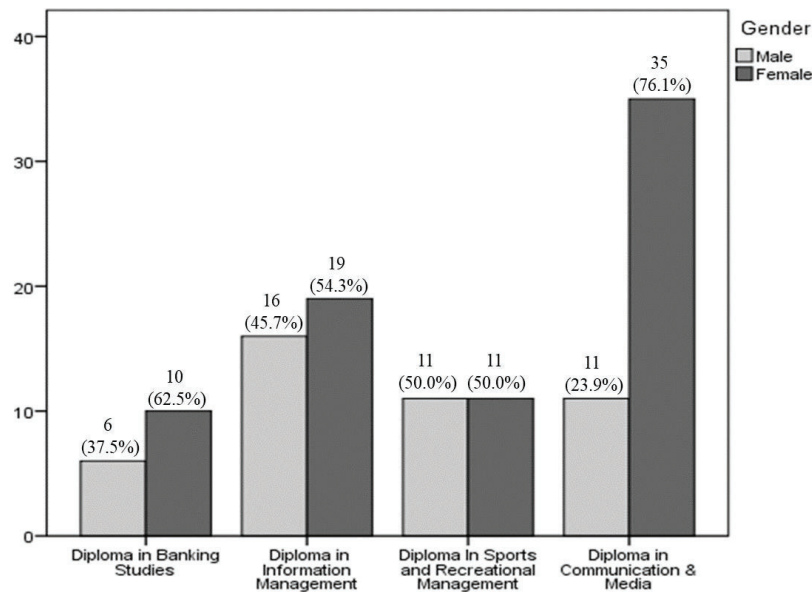
Figure 1: Bar Chart of the Respondent Distribution across Programme

A parametric test was performed to examine the differences between two independent samples (male and female). For this case, the independent t-test is considered an appropriate test to conduct. The independent t-test assumes that the variances of two groups are equal, or that variances are homogeneous. If the option for equality of variances is selected in SPSS, the independent t-test by default is linked with Levene's test. The insignificant findings indicate that the variance is homogenous. On contrary, a modified t-test, also known as the Welch t-test, would be used if significant results (equal variances are not assumed) are found. All analyses were run using IBM SPSS v.20.

4.   RESULTS AND DISCUSSION

Based on the group descriptive statistics, the male mean score is 82.17 (sd. 6.27) and the female mean score is 84.73 (sd. 6.42). The boxplots of the mark for each gender are shown in Figure 2. Based on the mean statistics and the diagram, it is fair to say that females outperformed males in the ENT300 course. The mean difference is 2.56. However, descriptive statistics simply characterises a sample in the research and does not attempt to infer features about the entire population. Inferential statistics, on the other hand, draw conclusions about the population based on the sample. Thereby, the analysis proceeds with the independent sample t-test.

Table 2: Group Statistics

	Gender	N	Mean	Std. Deviation	Std. Error Mean
Mark	**Male**	44	82.166061	6.2694649	.9451574
	Female	75	84.731788	6.4236913	.7417440

The independent sample t-test fulfills the variance homogeneity assumption. The results are based on Levene's test. The independent sample t-test indicated that the mark disparities between gender are statistically significant at a 5 percent significant level (t(117) = -2.122, p = 0.036). It was predictable since the gender mean difference of 2.56 was previously reported. Therefore, it is statistically proven that there is a significant difference between male and

female marks in the ENT300 course. The findings of this study seem to support the previous findings by Parajuli and Thapa (2017) and reject the findings from Goni et. al. (2015). Parajuli and Thapa (2017) found a significant gender disparity in student academic performance where the female students were discovered to surpass their male peers. They claimed that the male students are more engaged in a variety of extracurricular activities than females, while girls may devote more time to their assignments or to complete lecturer-assigned duties, as well as self-study after class, resulting in higher academic achievement than males. In contrast, there was no substantial gender difference in student academic achievement found by Goni et. al. (2015).

Table 3: Equality of Variances & Independent Samples t-test

Variables	Equality of Variances		Independent Samples t-test		
	F	P-value	t	df	p-value
Mark	.043	.836	-2.122	117	.036

*All equal variance assumed

5.   CONCLUSION

The main goal of this study is to examine gender differences in academic achievement, notably in ENT300. Female students were found to perform substantially better than male students. This is predictable as male students are more interested in technical courses. The ENT300 course, on the other hand, is a non-technical course in which more than half of the chapters are reading-based. To enhance male interest in the course, interactive approaches such as digital technology and greater visualization might be used in the teaching and learning process. Interactive videos, game-based learning, and online learning via the website could be used to enrich the lectures. As for future studies, it is recommended that a comparison be made between technical and non-technical academic achievement across genders, and an investigation be conducted on the elements that influence students' involvement in such courses.

6.   REFERENCES

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