# SCHOOL OF COMPUTING
## Faculty of Engineering

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## SECI2143 – PROBABILITY & STATISTICAL DATA ANALYSIS

## PROJECT 1

## DESCRIPTIVE STATISTICS ON CASE STUDY:

## LEARNING STYLE IN MATHEMATICS OR EQUIVALENT SUBJECT

SECTION          : 03 – 1SECR

COURSE NAME : BACHELOR OF COMPUTER SCIENCE – COMPUTER NETWORKS & SECURITY

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# Introduction

You have probably noticed that when you try to learn something new you prefer to learn by listening to someone talk to you about the information. Or perhaps you prefer to read about a concept to learn it, or maybe see a demonstration. Learning styles can be defined, classified, and identified in many ways. Generally, they are overall patterns that provide direction to learning and teaching. Learning style can also be described as a set of factors, behaviours, and attitudes that facilitate learning for an individual in each situation.

In our cases, we specified our sample to determine the learning style on Mathematics or equivalent subject. Each learner has distinct and consistent preferred ways of perception, organization, and retention (James, 2012). These learning styles are characteristic cognitive, affective, and physiological behaviours that serve as pretty good indicators of how learners perceive, interact with, and respond to the learning environment. Despite of all the examples given, the most common learning style are visual, auditory, and kinaesthetic. Therefore, in our study we want to extract the information from our sample which is among Universiti Teknologi Malaysia (UTM) students on what are their learning style.

In this report also, we include data representation through various type of graphs based on our findings in the survey on their demographic information, query in Maths learning style and others.

## Objective of Study

As referred to our main topic, we narrowed down the scope of learning style case study to Mathematics learning style either auditory, visual, or kinaesthetic. Thus, the objectives to be achieved are as follows:

1. To identify the demographic data among UTM students in terms of personal required information.

2. To study the main learning style that used by UTM students in Mathematics or equivalent subject in their study.

3. To interpret the overall findings and statistical data in various type of graph in description.

## Method of Data Analysis

To collect our data, we create a Google form that consists of numerous questions that we need to conduct our study. Then we blasted the form in every Electronic Message Service (EMS) such as WhatsApp and Telegram for the respondents to key in their preferences. A copy of questionnaire is attached together with this report.

# Descriptive Data Collection

Population: UTM Students

Sample: 100 students of UTM

| Variables | Type of Variable | Level of Measurement | Representation |
|---|---|---|---|
| Gender | Qualitative | Nominal | Pie chart |
| Age | Quantitative | Ratio | Stem and Leaf |
| Faculty | Qualitative | Nominal | Bar chart |
| Maths score | Quantitative | Interval | Bar Chart |
| Frequency of Maths study | Quantitative | Ratio | Box plot |
| Duration of Maths study | Quantitative | Ratio | Frequency distribution & Histogram |
| Learning style inventories | Qualitative | Interval | Pie chart & Scatter plot |

# Analysis and Discussions

## Gender

| Male | Female |
|:---:|:---:|
| **56** | 44 |

**Gender**
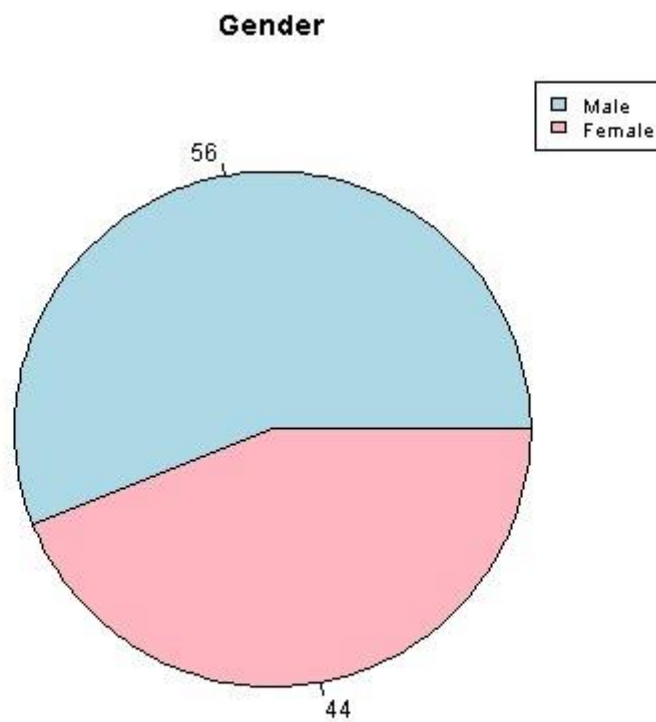


**Explanation:** In this survey, 56% of students are male and the other 44% students are female.

Age

| Age | Frequency/Percentage |
|---|---|
| 18 | 5 |
| 19 | 17 |
| 20 | 62 |
| 21 and above | 16 |

```
1 | 888889999999999999999

2 | 00000000000000000000000000000000000000000000000000000000000000111111
```

**Key: 1 | 8 = 18 years old**

**Explanation:** There are 5% of 18 years old respondents, 17% of 19 years old, 20% which is the major respondents are 20 years old and lastly 16% of 21 years old and above respondents.

## Faculty

| Faculty | Frequency/Percentage |
|---|---|
| Faculty of Engineering | 65 |
| Faculty of Build Environment and Surveying | 1 |
| Faculty of Science | 14 |
| Faculty of Social Science and Humanities | 9 |
| Razak Faculty of Technology and Informatics | 4 |
| Azman Hashim International Business School | 5 |
| Malaysia-Japan International Institute of Technology | 1 |
| UTM Space Foundation | 1 |
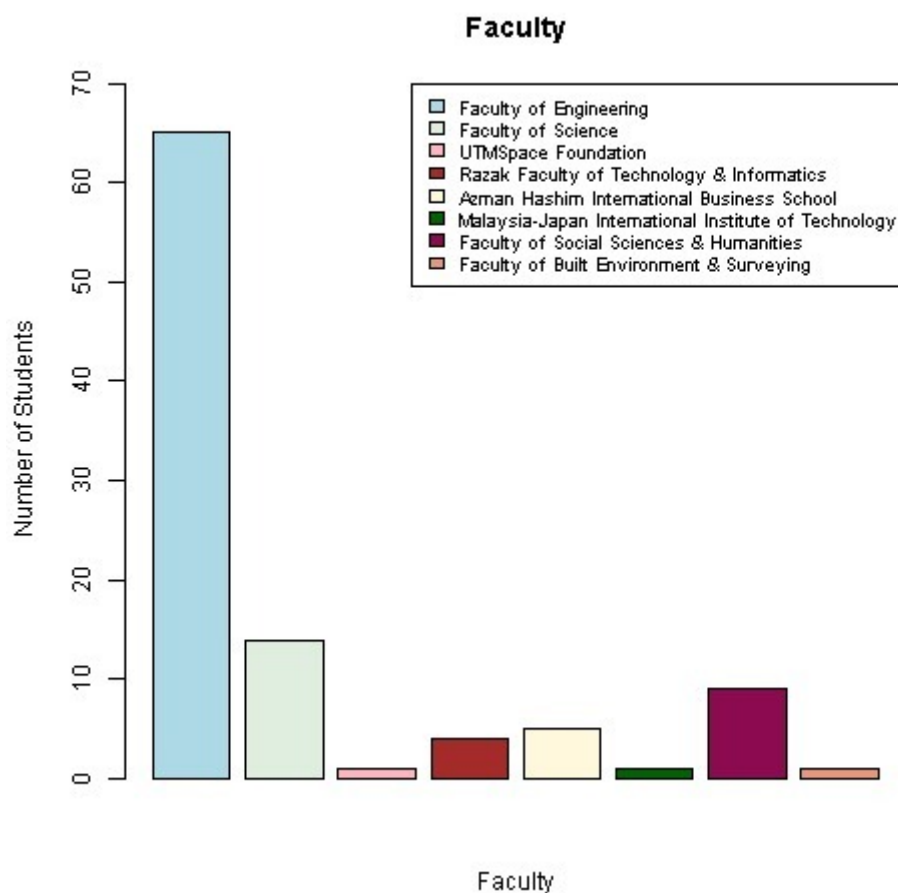


**Explanation:** The major respondents can be determined by the highest percentage of the faculty which is 65% from Faculty of Engineering, followed by 14% from Faculty of Science, 9% from Faculty of Social Science and Humanities and so on.

Mathematics score during Sijil Pelajaran Malaysia (SPM) or equivalent

| Score | Frequency/Percentage |
|-------|----------------------|
| **0-20** | 0 |
| **21-40** | 0 |
| **41-60** | 2 |
| **61-80** | 20 |
| **81-100** | 78 |



**Number of Students for Math Score Range**
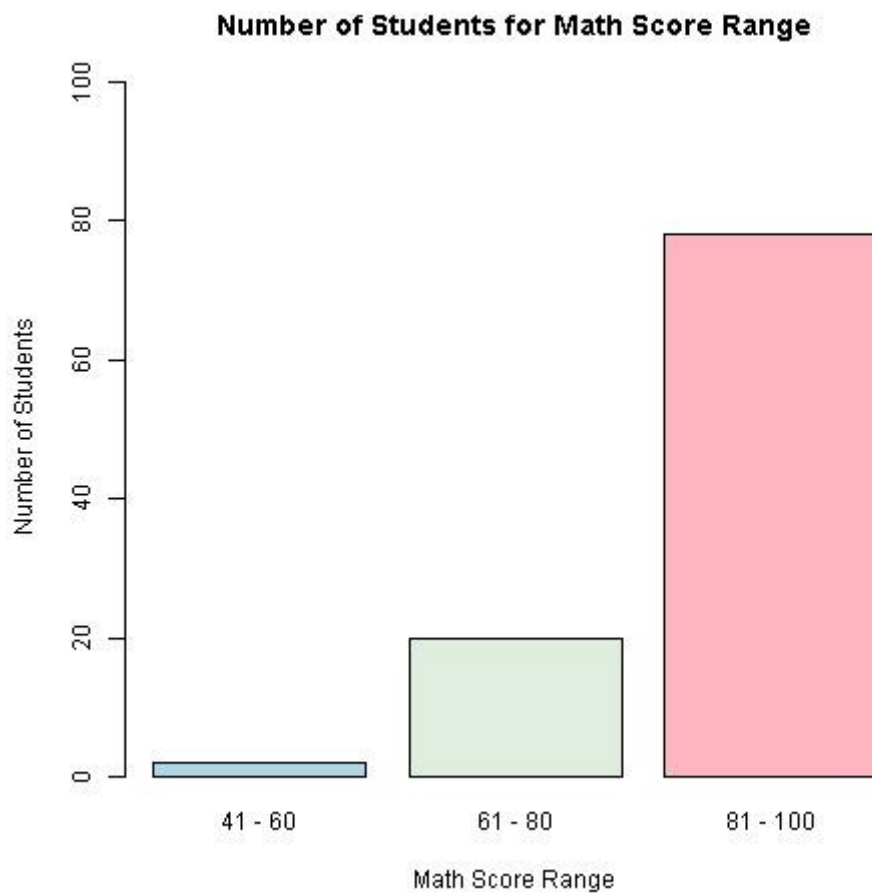
**Explanation:** From the data, we can see that there is no respondent who got score of 0 to 40. The data begins with 2% of students obtained marks between 41 and 60. Then, 20% of the students got 61 to 80 percent of the marks in examination. Finally, the major contribution to the distribution is 78% for students who achieved A's in Mathematics with score of 81 to 100 percent.

How often students study Mathematics in a week

| Frequency of Studying Maths | Frequency/Percentage |
|---|---|
| 0 times | 1 |
| 1 time | 11 |
| 2 times | 36 |
| 3 times | 28 |
| 4 times and above | 24 |

Boxplot of how often study maths
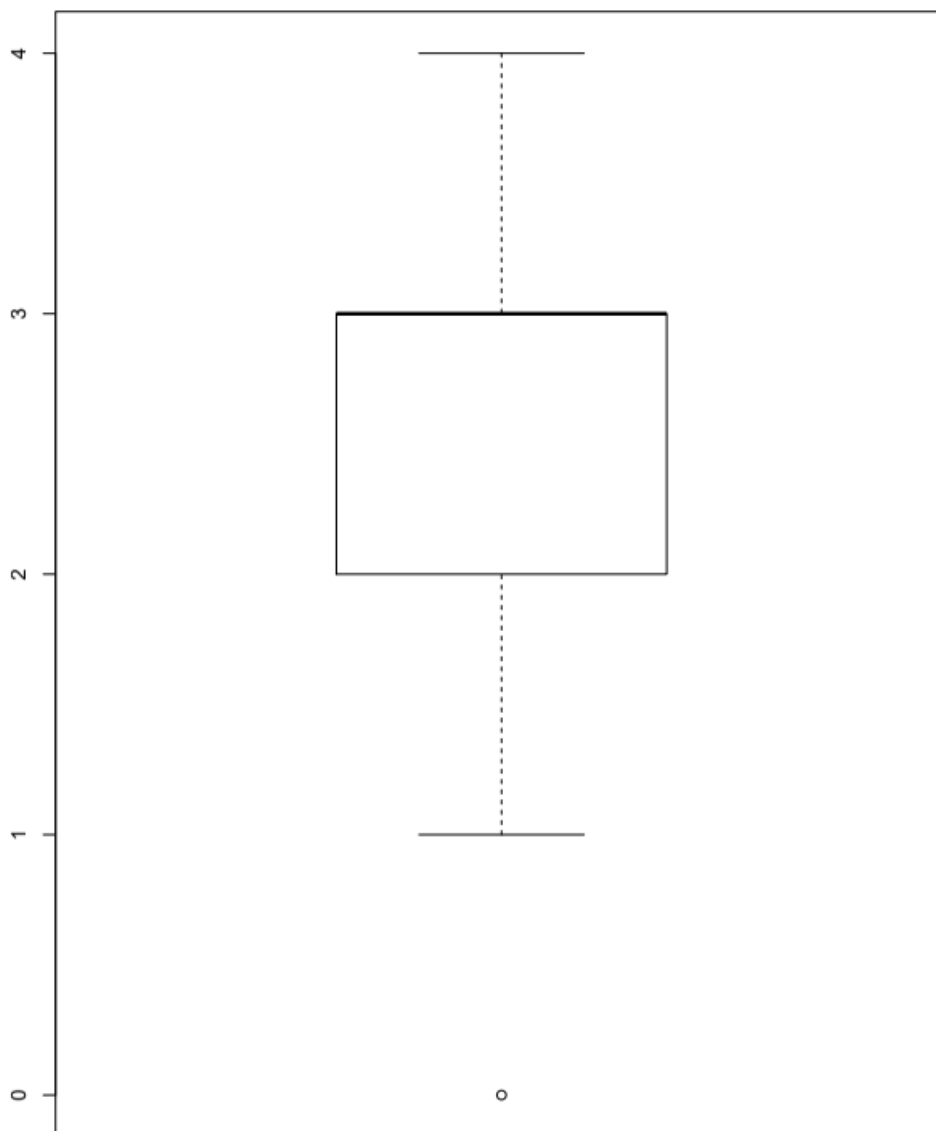


**Explanation:** In this study, we can say that majority of UTM students took 2 times a week to study Mathematics or equivalent subject as it contributes the highest percentage of 36% then followed by 28% and 24% who spent 3 and 4 times to study respectively.

## Duration of maths study in a week

| Class Interval | Class Frequency, $f$ | Class Cumulative Frequency, $cf$ | Class Midpoint, $x$ | $X^2$ | $f(x)$ |
|---|---|---|---|---|---|
| 0 - 1 | 6 | 6 | 0.5 | 0.25 | 4 |
| 1 - 2 | 31 | 37 | 1.5 | 2.25 | 45 |
| 2 - 3 | 35 | 72 | 2.5 | 6.25 | 85 |
| 3 - 4 | 21 | 93 | 3.5 | 12.25 | 73.5 |
| 4 - 5 | 7 | 100 | 4.5 | 20.25 | 31.5 |



**Histogram of Duration of Maths Study Per Week**

| $x - \bar{x}$ | $(x - \bar{x})^2$ |
|---|---|
| -241.5 | 58322.25 |
| -240.5 | 57840.25 |
| -239.5 | 57360.25 |
| -238.5 | 56882.25 |
| -237.5 | 56406.25 |
| TOTAL | 286811.25 |

| $\sum f(x)$ | 242 |
|---|---|
| Mean | 2.42 |
| sample variance, s^2 | 2897.083 |
| sample std. dev., s | 53.82456 |

Calculations:

Mean, $\bar{x} = \dfrac{\sum_{i=1}^{h} f_i x_i}{n}$

$= \dfrac{6(0.5) + 31(1.5) + 35(2.5) + 21(3.5) + 7(4.5)}{100}$

$= 2.42$

Mode, $l + h \times [(f1 - f0) \div (2f1 - f0 - f2)]$

$= 2 + 2 \times [(35 - 31) \div (2(35) - 31 - 21$

$= 2\dfrac{4}{9}$

Median, $L + \dfrac{\frac{N}{2} - cf_p}{f_{med}} \times W$

$= 2 + \dfrac{\frac{100}{2} - 37}{35} \times 2$

$= 2.7429$

Sample Variance, $s^2 = \dfrac{\sum_{i=1}^{n} (x_i - \bar{x})^2}{n-1}$

$= \dfrac{286811.25}{99}$

$= 2897.083$

Sample Standard Deviation, $s = \sqrt{s^2}$

$= \sqrt{2897.083}$

$= 53.8246$
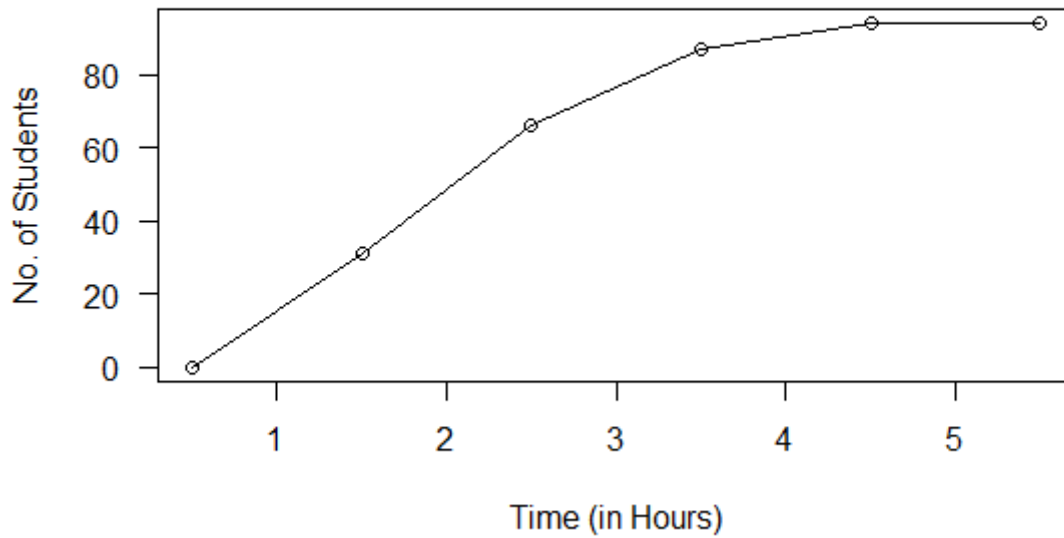
**Explanation:** We represent our findings for duration of Maths study via histogram. Here we calculate all the statistical data such as mean, mode and median to see the description of the data. We also compute the variance and standard deviation. A frequency distribution graph is also plotted as showed up here. Finally, we can say that our histogram is positively skewed (to the right-hand side).

# Learning style inventories

**Number of Students for each Learning style**
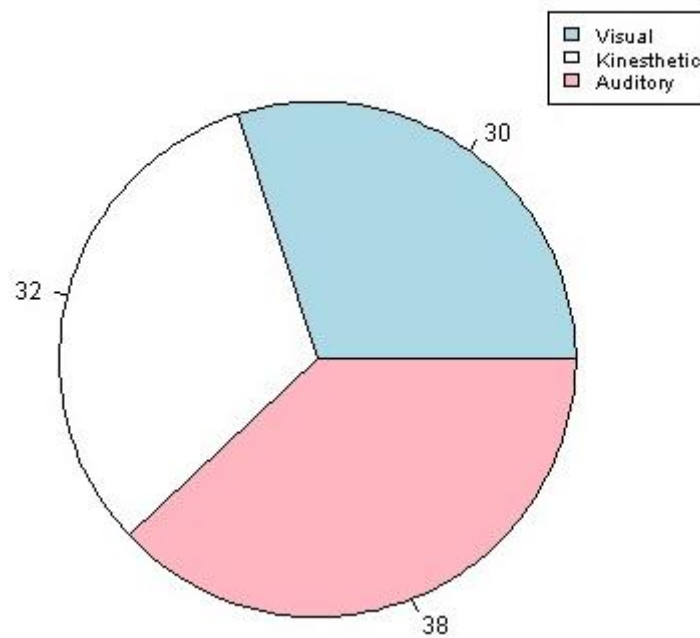


**Students' Opinion on Learning Style**
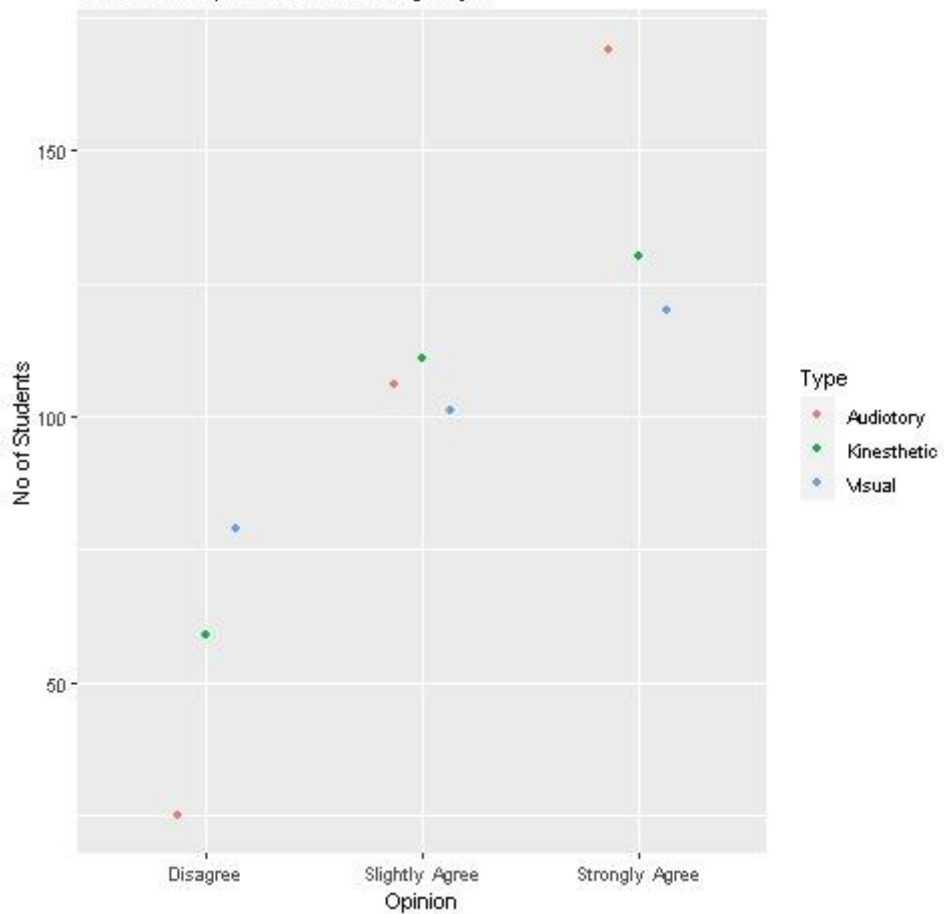
# Conclusion

In this study, 100 students were recorded and equally divided into male and female. Most of them are from Faculty of Engineering with various schools. Majority of the students obtained Mathematics score at SPM or equivalent level clustered around the higher ends, which is 80% to 100% which is an A. The most time spent on studying Mathematics in a week is between 2 to 3 hours. Finally, our objective is achieved as we successfully determine the learning style practiced by our respondents in learning Mathematics or equivalent subject. Based on the pie chart and scatter plot representing the learning style inventories, we found that most of the students is an auditory learner where it contributes 38% among the other styles. However, there are only small difference in percentage between these three-learning style, whereas all of them are 30% and above, which lead to a conclusion that these styles are required to achieve great understanding in Mathematics.

# References

District, L. R. (2003). From
      https://www.lrhsd.org/cms/lib/NJ01000316/Centricity/Domain/427/math_learning_st
      yle_inventory.pdf

Vermunt, J. (1992). *Learning Styles & Guidance of Learning Processes in Higher Education.*
      Amsterdam: Lisse Swets & Zeitlinger.

Wilson, V. A. (1998). Learning How They Learn. *A Review of the Literature on*, 1-16.

Workman, G. F. (2003). A Literature Review of Learning Style. *Learning Styles: Fact or
      Fiction*, 43-67.

# APPENDIX A

QUESTIONNAIRE

Questionnaire

Learning Style on Mathematics Subject Among UTM Students

Part A – Personal Information

1. What is your gender?
- Male
- Female

2. How old are you?
- 18
- 19
- 20
- 21 and above

3. Which faculty are you from?
- Faculty of Engineering
- Faculty of Build Environment and Surveying
- Faculty of Science
- Faculty of Social Science and Humanities
- Razak Faculty of Technology and Informatics
- Azman Hashim International Business School
- Malaysia-Japan International Institute of Technology
- UTM Space Foundation

Part B – Course Inquiry

4. Mathematics score in Sijil Pelajaran Malaysia (SPM):
- 0-20
- 21-40
- 41-60
- 61-80
- 81-100

5. How often do you study Mathematics in a week?
- 0 times
- 1 time
- 2 times
- 3 times
- 4 times and above

6. How long do you study in each session (hours)?

- 0-1
- 1-2
- 3-4
- 4-5
- 5 and above

Part C – Research on Learning Style Tendency

| Question | Strongly Agree | Slightly Agree | Not Agree |
|---|---|---|---|
| I learn better when I can picture working a problem out in my mind. (Lenape Regional High School District, 2003) | | | |
| I need to write down all the solutions and formulas in order to remember them. (Lenape Regional High School District, 2003) | | | |
| I prefer to study math in a quiet place. (Lenape Regional High School District, 2003) | | | |
| I learn Mathematics best when I can manipulate it or use hands-on examples. (Lenape Regional High School District, 2003) | | | |
| I cannot just be shown how to do a problem, I must do it myself so I can learn it. (Lenape Regional High School District, 2003) | | | |
| I learn math best if I can practice it in real-life experiences. (Lenape Regional High School District, 2003) | | | |
| I prefer to just listen on Mathematics lectures. (Lenape Regional High School District, 2003) | | | |
| I get easily distracted or have difficulty understanding in Maths class when there is talking or noise. (Lenape Regional High School District, 2003) | | | |
| The more people explain math to me, the faster I learn it. (Lenape Regional High School District, 2003) | | | |

# APPENDIX B

RESPONSES

| Timestamp | Gender | Age | Faculty | score | Times | duration | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2020/03/15 10:44:19 pm GMT+8 | M | 20 | FE | 81 - 100 | 1 time | 1 - 2 | 3 | 1 | 2 | 1 | 1 | 2 | 3 | 3 | 2 |
| 2020/03/15 10:45:32 pm GMT+8 | M | 19 | FE | 81 - 100 | 3 times | 2 - 3 | 1 | 1 | 2 | 2 | 2 | 1 | 3 | 2 | 2 |
| 2020/03/15 10:47:13 pm GMT+8 | M | 19 | FE | 81 - 100 | 4 times and above | 3 - 4 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 2020/03/15 10:48:59 pm GMT+8 | F | 20 | FE | 81 - 100 | 1 time | 4 - 5 | 2 | 1 | 1 | 1 | 1 | 1 | 3 | 1 | 2 |
| 2020/03/15 10:50:15 pm GMT+8 | F | 20 | FE | 81 - 100 | 4 times and above | 2 - 3 | 1 | 1 | 3 | 1 | 1 | 2 | 3 | 2 | 3 |
| 2020/03/15 11:16:24 pm GMT+8 | M | 20 | FE | 81 - 100 | 3 times | 2 - 3 | 2 | 1 | 2 | 1 | 1 | 1 | 2 | 1 | 1 |
| 2020/03/15 11:17:02 pm GMT+8 | M | 20 | FE | 81 - 100 | 3 times | 2 - 3 | 2 | 1 | 2 | 1 | 1 | 1 | 2 | 1 | 1 |
| 2020/03/15 11:17:48 pm GMT+8 | F | 20 | FE | 61 - 80 | 2 times | 3 - 4 | 2 | 3 | 3 | 2 | 2 | 3 | 2 | 2 | 2 |
| 2020/03/15 11:28:44 pm GMT+8 | F | 20 | FE | 81 - 100 | 4 times and above | 1 - 2 | 2 | 1 | 1 | 1 | 2 | 2 | 3 | 1 | 1 |
| 2020/03/15 11:32:57 pm GMT+8 | F | 21 | FE | 61 - 80 | 4 times and above | 1 - 2 | 3 | 1 | 3 | 2 | 1 | 2 | 1 | 1 | 2 |
| 2020/03/15 11:33:50 pm GMT+8 | M | 20 | FE | 81 - 100 | 2 times | 2 - 3 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| 2020/03/15 11:35:42 pm GMT+8 | M | 20 | FE | 81 - 100 | 4 times and above | 3 - 4 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 |
| 2020/03/15 11:36:51 pm GMT+8 | F | 20 | FE | 81 - 100 | 3 times | 2 - 3 | 2 | 1 | 2 | 2 | 1 | 1 | 3 | 2 | 1 |
| 2020/03/16 1:25:02 am GMT+8 | M | 20 | FE | 81 - 100 | 4 times and above | 2 - 3 | 2 | 1 | 2 | 2 | 1 | 2 | 3 | 2 | 1 |
| 2020/03/16 10:03:38 pm GMT+8 | M | 20 | FE | 61 - 80 | 2 times | 1 - 2 | 2 | 2 | 2 | 1 | 1 | 2 | 3 | 2 | 1 |
| 2020/03/16 10:13:37 pm GMT+8 | F | 20 | FE | 81 - 100 | 2 times | 1 - 2 | 2 | 2 | 1 | 2 | 1 | 1 | 1 | 2 | 2 |
| 2020/03/16 10:19:32 pm GMT+8 | M | 20 | FE | 81 - 100 | 2 times | 0 - 1 | 1 | 1 | 3 | 1 | 1 | 2 | 3 | 3 | 1 |
| 2020/03/16 10:27:09 am GMT+8 | M | 20 | FE | 81 - 100 | 2 times | 0 - 1 | 1 | 2 | 1 | 2 | 2 | 2 | 2 | 3 | 1 |
| 2020/03/16 10:27:38 pm GMT+8 | M | 20 | FE | 81 - 100 | 4 times and above | 2 - 3 | 1 | 1 | 2 | 1 | 1 | 2 | 2 | 2 | 1 |
| 2020/03/16 10:35:30 am GMT+8 | M | 20 | FE | 81 - 100 | 1 time | 4 - 5 | 2 | 2 | 1 | 2 | 2 | 1 | 1 | 3 | 1 |
| 2020/03/16 10:40:33 pm GMT+8 | F | 21 | FS | 81 - 100 | 2 times | 2 - 3 | 2 | 1 | 2 | 1 | 2 | 2 | 3 | 2 | 2 |
| 2020/03/16 11:26:26 pm GMT+8 | F | 20 | FS | 81 - 100 | 2 times | 3 - 4 | 1 | 1 | 2 | 1 | 2 | 2 | 3 | 2 | 1 |
| 2020/03/16 6:11:40 am GMT+8 | F | 20 | FE | 61 - 80 | 4 times and above | 1 - 2 | 3 | 2 | 3 | 3 | 2 | 2 | 3 | 3 | 2 |
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| 2020/03/16 8:05:49 pm GMT+8 | M | 20 | FE | 81 - 100 | 3 times | 0 - 1 | 1 | 1 | 2 | 3 | 2 | 2 | 3 | 2 | 2 |
| 2020/03/16 8:08:24 pm GMT+8 | M | 20 | FE | 81 - 100 | 4 times and above | 1 - 2 | 1 | 1 | 2 | 1 | 1 | 2 | 2 | 2 | 1 |
| 2020/03/16 8:17:18 pm GMT+8 | F | 20 | FE | 81 - 100 | 3 times | 4 - 5 | 2 | 1 | 1 | 1 | 1 | 1 | 3 | 2 | 2 |

| | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **2020/03/16 8:17:59 pm GMT+8** | M | 20 | FE | 81 - 100 | 2 times | 2 - 3 | 1 | 1 | 2 | 1 | 2 | 3 | 3 | 1 | 3 |
| **2020/03/16 8:20:14 pm GMT+8** | M | 20 | FS | 81 - 100 | 2 times | 1 - 2 | 2 | 2 | 1 | 2 | 2 | 2 | 2 | 2 | 2 |
| **2020/03/16 8:21:33 pm GMT+8** | F | 20 | FE | 81 - 100 | 1 time | 1 - 2 | 1 | 3 | 2 | 3 | 1 | 1 | 3 | 3 | 3 |
| **2020/03/16 8:22:50 pm GMT+8** | M | 20 | FS | 81 - 100 | 1 time | 2 - 3 | 1 | 1 | 1 | 1 | 2 | 1 | 3 | 1 | 1 |
| **2020/03/16 8:23:06 pm GMT+8** | M | 19 | UTMSF | 81 - 100 | 2 times | 0 - 1 | 2 | 1 | 1 | 2 | 1 | 2 | 3 | 1 | 1 |
| **2020/03/16 8:23:59 pm GMT+8** | F | 20 | FE | 81 - 100 | 3 times | 3 - 4 | 3 | 1 | 2 | 3 | 1 | 2 | 3 | 3 | 1 |
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| **2020/03/16 8:31:14 pm GMT+8** | M | 19 | FE | 81 - 100 | 2 times | 4 - 5 | 2 | 2 | 3 | 3 | 2 | 3 | 3 | 3 | 1 |
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| **2020/03/16 8:37:13 pm GMT+8** | F | 20 | AHIBS | 81 - 100 | 1 time | 1 - 2 | 2 | 2 | 1 | 2 | 2 | 2 | 3 | 2 | 1 |
| **2020/03/16 8:41:07 pm GMT+8** | F | 20 | FE | 81 - 100 | 2 times | 3 - 4 | 2 | 2 | 2 | 2 | 2 | 2 | 3 | 3 | 2 |
| **2020/03/16 8:47:34 pm GMT+8** | M | 20 | AHIBS | 81 - 100 | 3 times | 1 - 2 | 1 | 1 | 1 | 1 | 1 | 1 | 3 | 1 | 1 |
| **2020/03/16 8:59:21 pm GMT+8** | F | 21 | FE | 61 - 80 | 2 times | 0 - 1 | 2 | 3 | 3 | 3 | 3 | 3 | 1 | 3 | 1 |
| **2020/03/16 9:18:15 pm GMT+8** | M | 20 | FE | 81 - 100 | 2 times | 3 - 4 | 1 | 1 | 2 | 1 | 1 | 2 | 3 | 2 | 1 |
| **2020/03/16 9:31:15 pm GMT+8** | M | 20 | FE | 61 - 80 | 2 times | 1 - 2 | 1 | 2 | 1 | 2 | 2 | 3 | 3 | 2 | 2 |
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| **2020/03/16 9:35:10 pm GMT+8** | M | 20 | FE | 81 - 100 | 3 times | 2 - 3 | 1 | 1 | 3 | 1 | 1 | 1 | 3 | 3 | 1 |
| **2020/03/16 9:38:51 pm GMT+8** | F | 20 | FE | 61 - 80 | 2 times | 2 - 3 | 2 | 2 | 3 | 2 | 1 | 2 | 3 | 2 | 1 |
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| | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2020/03/16 9:55:27 pm GMT+8 | F | 21 | FSSH | 81 - 100 | 3 times | 1 - 2 | 1 | 1 | 2 | 1 | 1 | 1 | 2 | 2 | 2 |
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| 2020/03/17 6:18:10 pm GMT+8 | F | 19 | FE | 81 - 100 | 3 times | 3 - 4 | 2 | 2 | 1 | 1 | 2 | 2 | 2 | 2 | 2 |
| 2020/03/17 6:21:25 pm GMT+8 | F | 18 | FE | 61 - 80 | 2 times | 1 - 2 | 3 | 1 | 1 | 2 | 1 | 1 | 2 | 1 | 2 |
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| 2020/03/17 6:27:34 pm GMT+8 | F | 21 | FE | 61 - 80 | 2 times | 2 - 3 | 3 | 3 | 3 | 2 | 2 | 2 | 3 | 3 | 2 |
| 2020/03/17 6:40:33 pm GMT+8 | F | 21 | FE | 81 - 100 | 4 times and above | 1 - 2 | 3 | 3 | 1 | 2 | 1 | 2 | 3 | 2 | 2 |
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| 2020/03/18 5:48:51 pm GMT+8 | M | 19 | FE | 61 - 80 | 3 times | 1 - 2 | 1 | 1 | 1 | 1 | 1 | 2 | 3 | 2 | 1 |
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| 2020/03/18 8:07:01 pm GMT+8 | M | 20 | FS | 81 - 100 | 3 times | 3 - 4 | 1 | 1 | 2 | 1 | 1 | 1 | 1 | 1 | 1 |
| 2020/03/18 8:16:13 pm GMT+8 | M | 19 | FSSH | 81 - 100 | 3 times | 3 - 4 | 2 | 3 | 3 | 3 | 3 | 3 | 2 | 2 | 2 |
| 2020/03/18 8:17:33 pm GMT+8 | M | 20 | FS | 81 - 100 | 3 times | 2 - 3 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 2020/03/18 8:17:43 pm GMT+8 | F | 19 | FE | 81 - 100 | 4 times and above | 2 - 3 | 3 | 1 | 1 | 1 | 1 | 1 | 2 | 2 | 1 |
| 2020/03/18 8:18:25 pm GMT+8 | F | 20 | FE | 81 - 100 | 4 times and above | 3 - 4 | 1 | 1 | 1 | 1 | 1 | 1 | 3 | 3 | 1 |
| 2020/03/18 8:20:49 pm GMT+8 | M | 20 | FE | 81 - 100 | 2 times | 3 - 4 | 1 | 1 | 3 | 2 | 1 | 1 | 3 | 3 | 3 |
| 2020/03/18 8:26:35 pm GMT+8 | F | 21 | FE | 81 - 100 | 3 times | 2 - 3 | 1 | 1 | 2 | 1 | 1 | 1 | 1 | 1 | 2 |
| 2020/03/18 8:33:22 pm GMT+8 | M | 20 | FE | 81 - 100 | 2 times | 2 - 3 | 2 | 1 | 1 | 1 | 1 | 1 | 3 | 2 | 1 |
| 2020/03/18 8:33:32 pm GMT+8 | M | 20 | FABU | 81 - 100 | 3 times | 2 - 3 | 3 | 1 | 1 | 2 | 1 | 1 | 2 | 2 | 2 |
| 2020/03/18 8:33:49 pm GMT+8 | F | 21 | FE | 81 - 100 | 3 times | 2 - 3 | 1 | 1 | 1 | 1 | 1 | 1 | 3 | 3 | 2 |
| 2020/03/18 8:34:10 pm GMT+8 | F | 19 | FE | 81 - 100 | 4 times and above | 3 - 4 | 1 | 1 | 1 | 1 | 1 | 1 | 3 | 1 | 1 |
| 2020/03/18 8:34:30 pm GMT+8 | M | 20 | FE | 61 - 80 | 2 times | 2 - 3 | 2 | 1 | 2 | 1 | 1 | 2 | 2 | 3 | 1 |
| 2020/03/18 8:36:42 pm GMT+8 | F | 20 | FE | 81 - 100 | 2 times | 2 - 3 | 1 | 2 | 3 | 1 | 2 | 3 | 2 | 3 | 2 |

| | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **2020/03/18 8:40:10 pm GMT+8** | M | 20 | FABU | 61 - 80 | 3 times | 1 - 2 | 1 | 2 | 1 | 1 | 1 | 2 | 3 | 1 | 2 |
| **2020/03/18 8:46:52 pm GMT+8** | M | 21 | FS | 81 - 100 | 4 times and above | 0 - 1 | 2 | 2 | 2 | 2 | 1 | 1 | 2 | 3 | 3 |
| **2020/03/18 8:48:12 pm GMT+8** | M | 19 | RTI | 81 - 100 | 2 times | 1 - 2 | 1 | 3 | 1 | 1 | 1 | 1 | 2 | 2 | 2 |
| **2020/03/18 8:48:14 pm GMT+8** | M | 20 | FE | 81 - 100 | 1 time | 0 - 1 | 1 | 2 | 1 | 1 | 1 | 1 | 1 | 2 | 1 |
| **2020/03/18 8:49:35 pm GMT+8** | M | 19 | FE | 81 - 100 | 3 times | 2 - 3 | 1 | 2 | 2 | 1 | 1 | 1 | 2 | 2 | 1 |
| **2020/03/18 8:50:28 pm GMT+8** | F | 21 | FSSH | 81 - 100 | 4 times and above | 3 - 4 | 2 | 3 | 3 | 3 | 3 | 3 | 2 | 3 | 2 |
| **2020/03/18 8:50:35 pm GMT+8** | M | 20 | FS | 81 - 100 | 3 times | 3 - 4 | 2 | 1 | 1 | 2 | 1 | 2 | 3 | 2 | 1 |
| **2020/03/18 8:51:11 pm GMT+8** | M | 20 | RTI | 41 - 60 | 2 times | 1 - 2 | 1 | 2 | 1 | 1 | 1 | 1 | 2 | 1 | 1 |
| **2020/03/18 8:51:50 pm GMT+8** | F | 21 | FS | 81 - 100 | 4 times and above | 4 - 5 | 2 | 1 | 2 | 1 | 1 | 1 | 3 | 3 | 1 |
| **2020/03/18 8:57:04 pm GMT+8** | F | 18 | FSSH | 61 - 80 | 1 time | 1 - 2 | 2 | 1 | 3 | 2 | 2 | 2 | 3 | 1 | 1 |
| **2020/03/18 8:59:17 pm GMT+8** | M | 20 | FS | 81 - 100 | 4 times and above | 1 - 2 | 1 | 2 | 1 | 1 | 3 | 1 | 2 | 1 | 1 |
| **2020/03/18 9:02:07 pm GMT+8** | F | 21 | FS | 41 - 60 | 3 times | 1 - 2 | 1 | 2 | 1 | 1 | 2 | 1 | 3 | 3 | 1 |
| **2020/03/18 9:02:14 pm GMT+8** | M | 20 | FE | 81 - 100 | 4 times and above | 3 - 4 | 1 | 2 | 2 | 1 | 1 | 3 | 2 | 1 |
| **2020/03/18 9:07:05 pm GMT+8** | F | 19 | FS | 61 - 80 | 4 times and above | 2 - 3 | 1 | 1 | 1 | 1 | 1 | 1 | 2 | 1 | 1 |
| **2020/03/18 9:13:27 pm GMT+8** | F | 20 | FE | 81 - 100 | 3 times | 2 - 3 | 1 | 1 | 3 | 2 | 1 | 1 | 3 | 2 | 1 |
| **2020/03/18 9:14:20 pm GMT+8** | M | 20 | AHIBS | 81 - 100 | 4 times and above | 4 - 5 | 1 | 1 | 3 | 1 | 1 | 1 | 1 | 1 | 1 |
| **2020/03/18 9:24:31 pm GMT+8** | F | 20 | FE | 81 - 100 | 2 times | 1 - 2 | 1 | 2 | 1 | 2 | 1 | 2 | 3 | 2 | 2 |

*(an Excel file of respond is attached in the set)*