



UTM
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SECI2143-Section 01

Project 1

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1.0.Introduction

Covid-19, a pandemic, a threat to humanity. Who would have known, such a drastic change the world would have to go through due a virus created in a fish market. First identified on 31 december, 2019 and identified on 7 January 2020, covid-19 was gradually transformed into a deadly virus. Businesses shut down, factories closed, government declaring bankruptcy in order to feed the citizens, schools and universities closed, ships on board but nobody to buy from the malls, in fact the long tradition of Tawaf circling Ka'ba Sharif was hampered and hereby stopped. In such a tremendous situation, our world brought out the need of the hour, online services in use. Thus we are where we are right now, attending online classes and working from home, so that we and our families can stay safe along with helping our world grow. Thus every individual has introduced themselves in using apps for online shopping such as Lazada, Shopee, Grab and many more. The Covid-19 pandemic has made people slightly change their shopping habits because of the movement control order (MCO) by frequently using e-commerce instead of going to the mall or store as it is much easier, and people do not have to go out from their home to shop.

The generation these days most likely to do business online either in terms of selling or buying. We were shocked by the fact that there were plenty of parcels being sent everyday during the pandemic as the courier service in Malaysia had become wider and busier each day especially during online sales when certain brands are giving discounts and other promotions.

The aim of our project is to study the change of consumer habits during shopping by collecting data from university students. We also would like to know about their preference for online shopping. We were interested to ask whether their online shopping will be the same or changed after the pandemic. We expect to see people will slightly reduce their online shopping when our environment becomes more stable.

2.0.Data Collection

We collected the data by using an electronic survey which is Google Forms platform and we shared it to UTM students and other university students as well. The questionnaire was divided into two sections where the second section is more to their preferences of online shopping. We managed to get 75 responded within a week. This survey is about collecting data during the COVID-19 crisis which forced consumers to change their shopping habits rapidly, pushing many to either increase their online spending or try shopping online for the first time. Although eCommerce has steadily been on the rise for many years, this is the first time we have seen such a sudden and widespread shift from shopping at brick-and-mortar stores to shopping online.

Sample Selection:

The questionnaire is divided into two sections. In part one we enlisted 8 close ended questions that considered pre-selected options. Moreover respondents were asked to provide general ideas of themselves such as gender, age or which university they are from based on the type of our survey we have redirected them to online shopping relevant questionnaires in section 2 where the respondents shared their experience or preferences through open-ended questions. Therefore provided an insight on all the opinions on our study which has the statistical data analysis needed for conclusive research analysis.

Every member of the group team was responsible for distributing the questionnaire to random members of the sample (75 random students from different faculties of various Universities).

The parameters and variables:

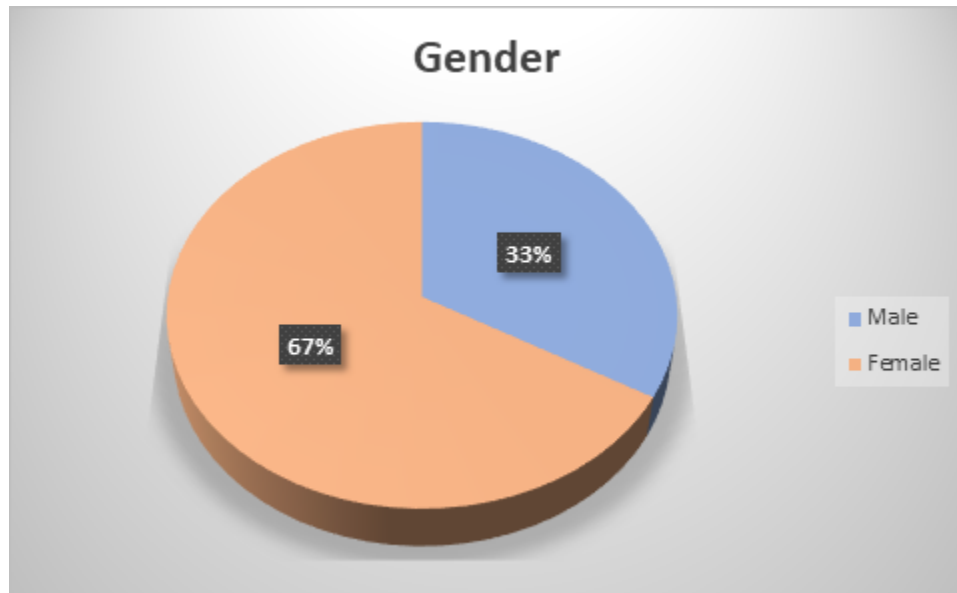
	Variable	Data type	Level of Measurement	Parameter
1	Age	Quantitative	Ratio	Mean
2	How would you rate your overall online shopping experience?	Quantitative	Ratio	Mean
3	Do you use the internet (mobile data or wifi)	Categorical	Ordinal	Mode
4	Which category do you often shop online during pandemic?	Categorical	Ordinal	Mode
5	Which element has the most priorities on your online purchases?	Categorical	Ordinal	Mode
6	While shopping for a product in a n online store ,how much are you willing to press on an ad showing a similar product at a lower price from a competing store ?	Quantitative	Ratio	Mean
7	After the end of the Outbreak of covid-19 how do you expect your online shopping on items besides groceries to change ?	Quantitative	Ratio	Mean
8	Are you comfortable with buying products online from a company you know?	Quantitative	Ratio	Mean
9	How confident are you that your personal information is kept confidential when buying products online ?	Quantitative	Ratio	Mean
10	How confident are you that your payment information is kept secure when buying products online ?	Quantitative	Ratio	Mean

Limitations of the Study:

There are limitations on doing the surveys online. Reaching specific groups of participants, such as those without internet connectivity can be difficult. Limited sampling and respondent availability. Certain populations are less likely to have internet access and to not respond to online questionnaires. It also depends on those who are sufficiently biased to be interested in the subject or else why would they take the time and trouble to respond to the survey.

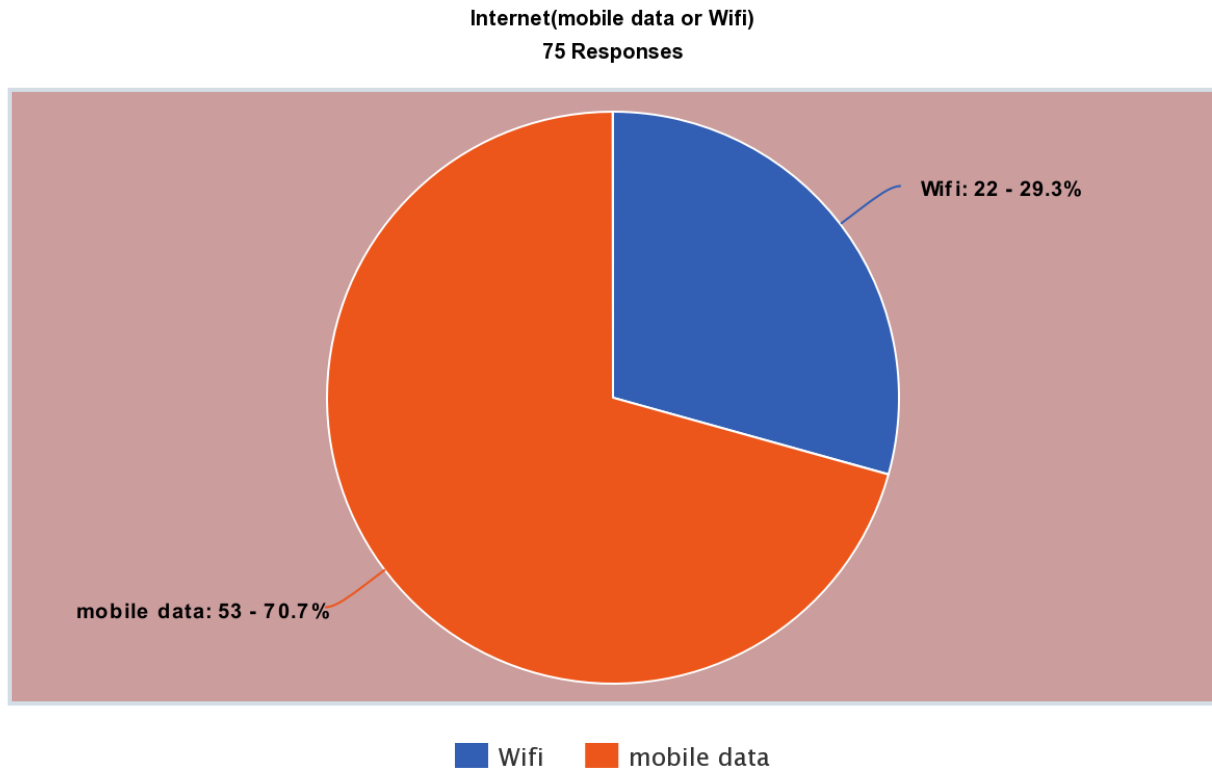
3.0.Data Analysis

Categorical Data



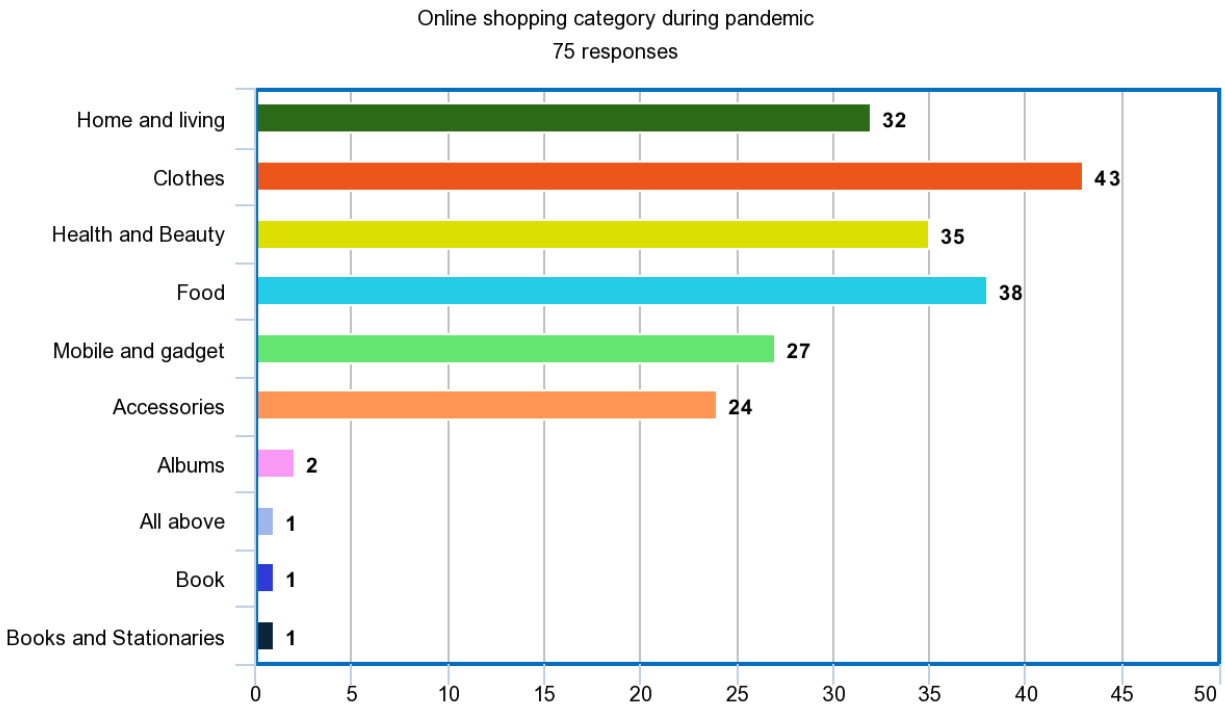
The pie chart above shows the gender of those who have answered the survey. There are 25 male respondents (33%) and 50 female respondents (67%). The respondents of females are triple from the male respondents. The survey's finding would focus on identifying the issues that female students would face.

Gender	Frequency	Relative Frequency	Cumulative Frequency	Cumulative Relative Frequency
Female	50	0.67	50	0.67
Male	25	0.33	75	1.0
Total	75	1	75	1



The pie chart above illustrates the proportion of two categories of students who use wifi and mobile data for the online shopping platforms. Overall the highest percentage of students who have responded into the mobile data category is 53 responders(70.7%).The other category is wifi which shows 22 responders (29.3%).

Internet preference	Frequency	Relative Frequency	Cumulative Frequency	Cumulative Relative Frequency
Wifi	22	0.2933	22	0.293
Mobile data	53	0.7067	75	1
TOTAL	75	1	75	1



In this part there is research on the online shopping fields on which sectors the students usually shop the online goods. The separate colored bar represents each group. The y axis represents the online shopping category of Home and living where we have found 32 responders(42.7%). However the response for Clothes is 43 (57%). For Health and Beauty the responders is 35(46.7%). Meanwhile Mobile and gadget has considerably less responders depending on the need, it has 27 responders (36%). Nonetheless, Food has a dominance over the shopping category, it has 38 responders (50.7%). Moreover Accessories also has a good percentage, 24 (32%). Besides, Albums are also found responses by 2 (2.7%). On the other hand book has received 1 (91.3%) responses and Books and Stationeries has received 1 (1.3%). Overall, the all above category has received 1 (1.3%) responses.

Category	Frequency	Relative Frequency	Cumulative Frequency	Cumulative Relative Frequency
Home & living	32	0.1569	32	0.157
Clothes	43	0.2108	75	0.368
Health & beauty	35	0.1716	110	0.539
Mobile & gadget	27	0.1323	137	0.672
Food	38	0.1863	175	0.858
Accessories	24	0.1176	199	0.975
Albums	2	0.0098	201	0.985
All above	1	0.0049	202	0.990
Book	1	0.0049	203	0.995
Books and Stationaries	1	0.0049	204	1
TOTAL	204	1	204	1

Elements which has most priorities on online shopping purchase
75 resonses

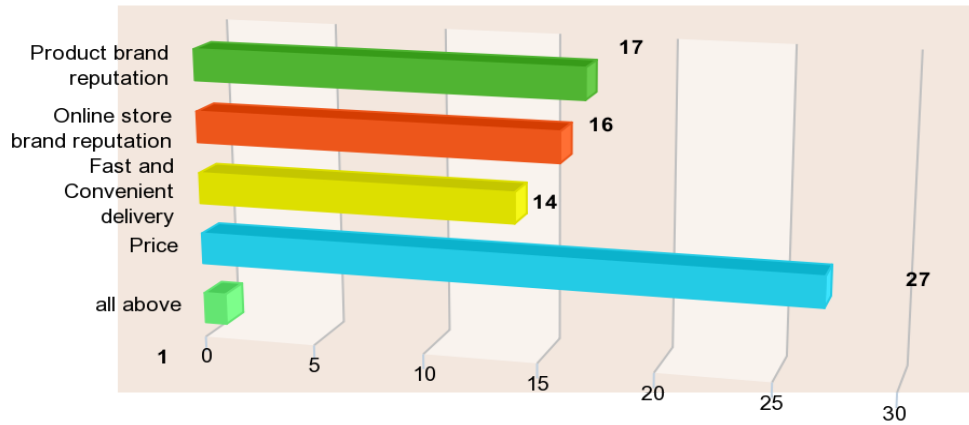
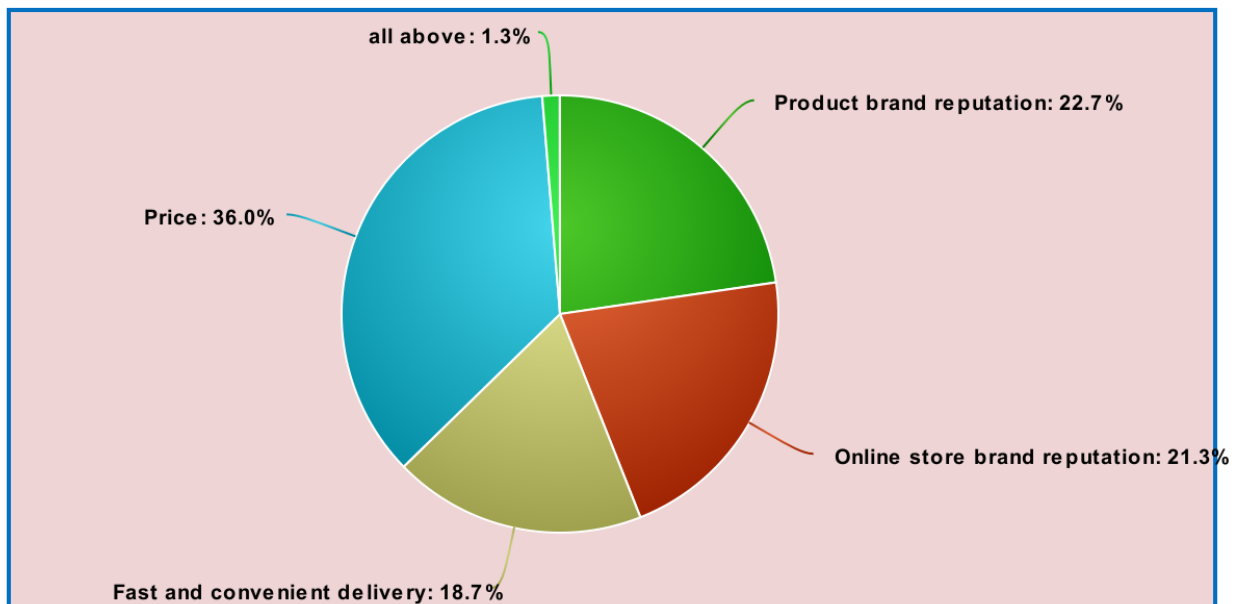


Figure 1

Elements has the most priorities on online purchase



■ Product brand reputation
 ■ Online store brand reputation
■ Fast and convenient delivery
 ■ Price
 ■ all above

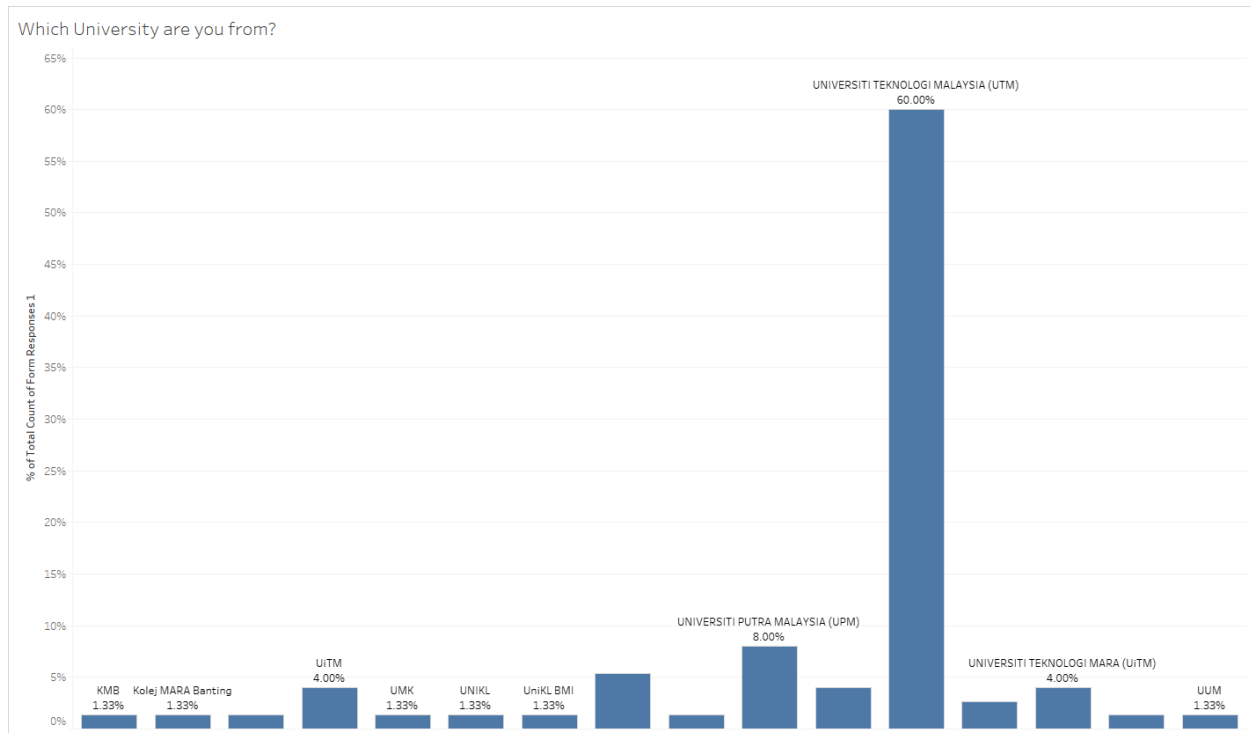
meta-chart.com

Figure1.1

In this part of the graph there is thorough research on elements which have most priorities on online shopping purchase. On y axis, the number of responses have been put and on x axis the

categories of purchase have been put. The first one, product brand reputation has gotten 17 which has gotten 22.7% responses. Then, there is a category for online store brand reputation that a lot of people believe to focus on, it has received 16(21.3%) responses. After that, fast and convenient delivery is believed to have been a good priority to look up for, it has 14 responses and 18.7%. The lion share of responses are owned by the price of the products, as customers tend to depend on the price for their product of choice, it has hence gotten 27 responses which is 36%. Finally, all above has received the least response which is 1. And finally all above received 1.3%, the least.

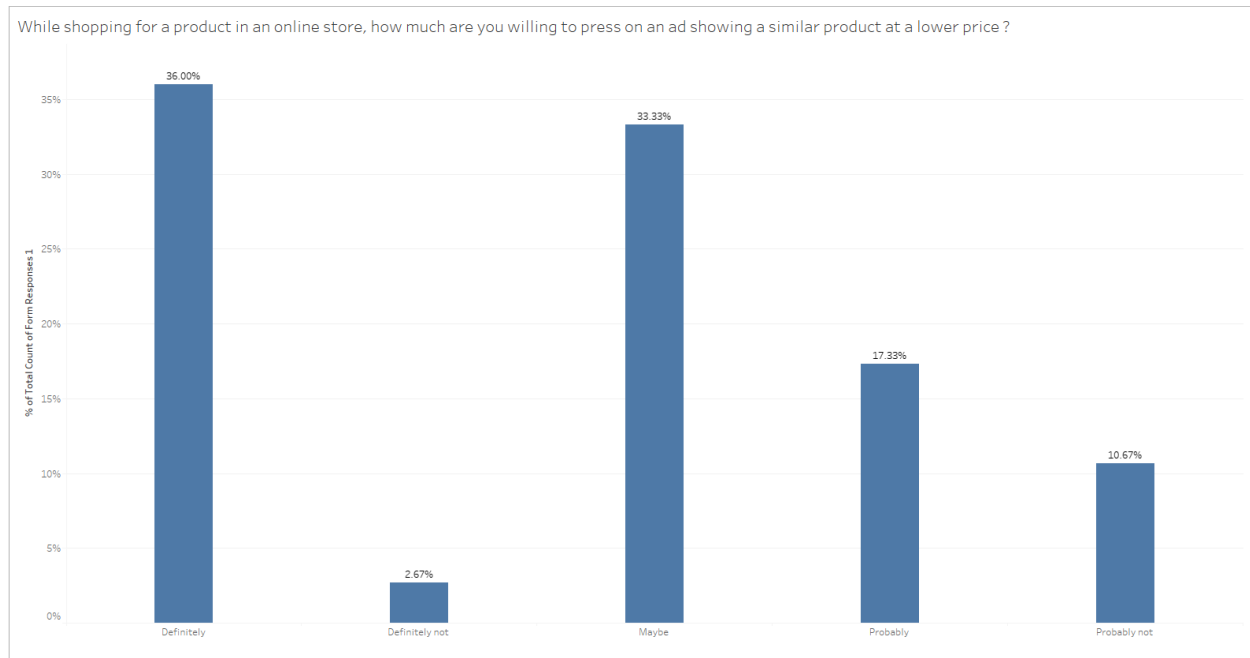
Element which has most priority	Frequency	Relative Frequency	Cumulative Frequency	Cumulative Relative Frequency
Product brand reputation	17	0.2267	17	0.227
Online store brand reputation	16	0.2133	33	0.44
Fast and Convenient delivery	14	0.1867	47	0.627
Price	27	0.3600	74	0.987
All above	1	0.0133	75	1
TOTAL	75	1	75	1



Form the above bar chart we can clearly see that most our respondents was from University of Technology Malaysia with frequency of 60% respondents while in second place was UNIVERSITI PUTRA MALAYSIA with frequency of 8% respondents followed by University MALAYA with frequency of 5.33% respondents followed by both Universiti teknologi mara and UiTM with frequency of 4% respondents.

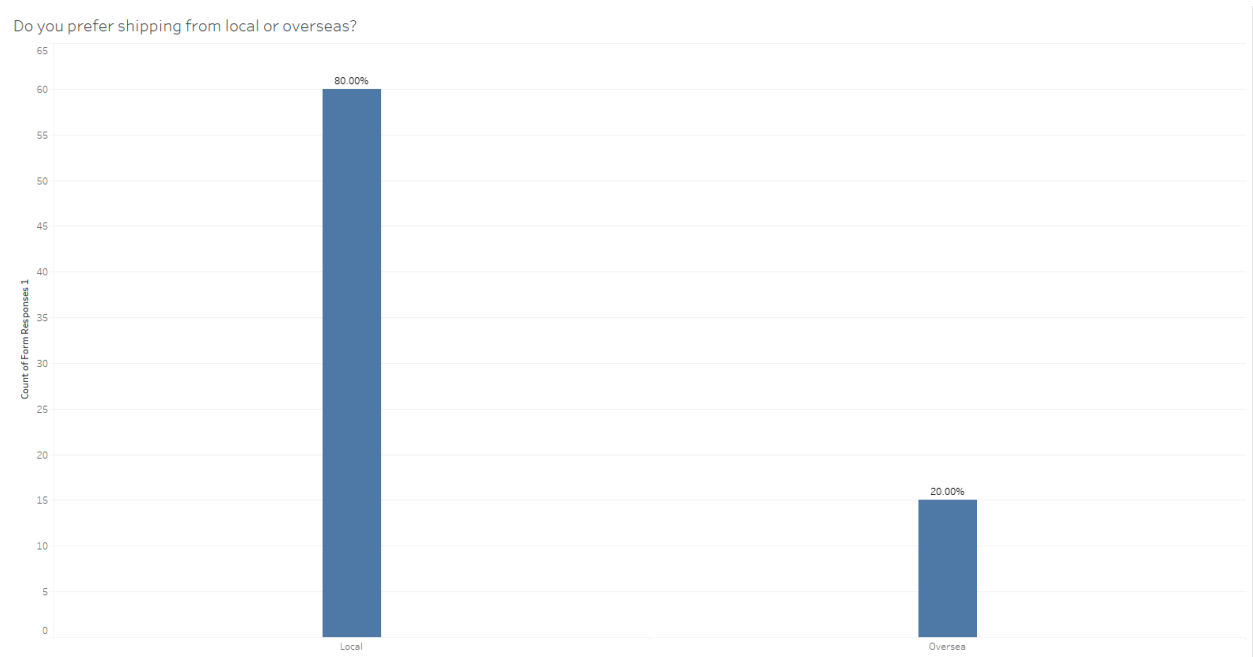
University	Frequency	Relative Frequency	Cumulative Frequency	Cumulative Relative Frequency
KUPTM KL	1	0.0133	1	0.0133
UMK	1	0.0133	2	0.0267
UNIKL	2	0.0267	4	0.0533
KOLEJ MARA BANTING	2	0.0267	6	0.0800
UNIVERSITI MALAYA (UM)	4	0.0533	10	0.1333
UNIVERSITI MALAYSIA SARAWAK	1	0.0133	11	0.1467
UNIVERSITI PUTRA MALAYSIA (UPM)	6	0.0800	17	0.2267
UNIVERSITI SAINS MALAYSIA (USM)	3	0.0400	20	0.2667
UNIVERSITI TEKNOLOGI MALAYSIA (UTM)	45	0.6000	65	0.8667
UNIVERSITI TEKNOLOGI MARA (UiTM)	8	0.1067	73	0.9733
USIM	1	0.0133	74	0.9867

UUM	1	0.0133	75	1
TOTAL	75	1	75	1



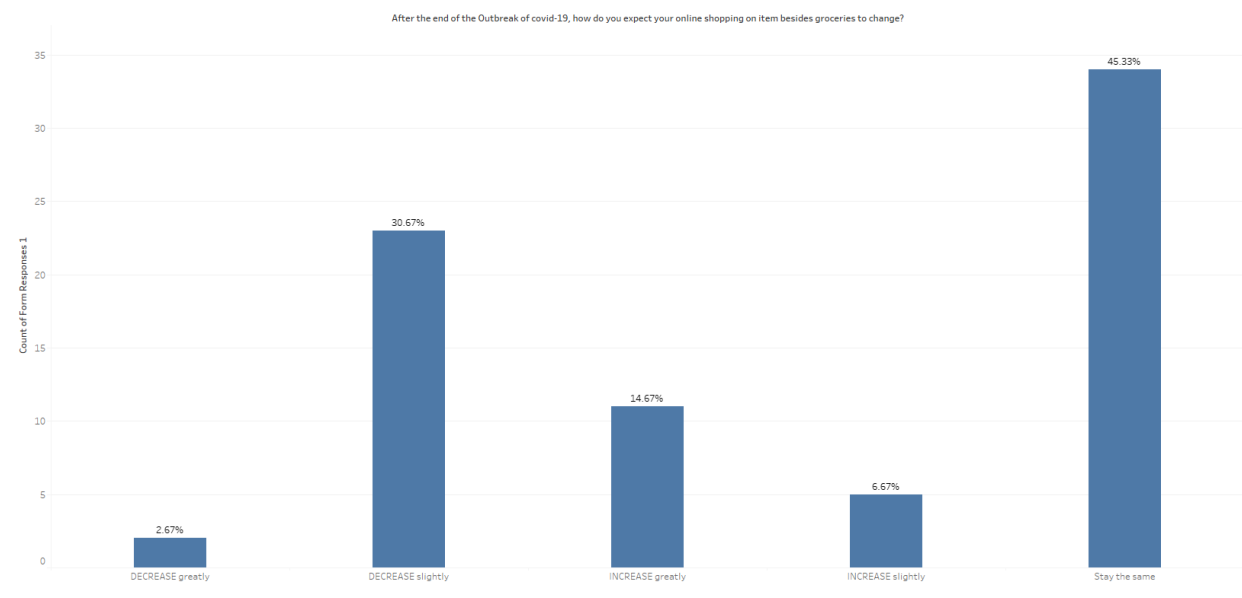
The above bar chart shows how much our respondents are willing to press on an ad showing a similar product at a lower price and the result as we can see that our respondents will definitely press on the add by frequency of 36% followed by Maybe with frequency of 33.33% followed by Probably with 17.33% respondents then Probably not with frequency of 10.67% respondents and lastly Definitely not with the least frequency of 2.67% respondents.

Willingness to press on ad showing a similar product	Frequency	Relative Frequency	Cumulative Frequency	Cumulative Relative Frequency
Probably	13	0.173	13	0.173
Maybe	25	0.333	38	0.507
Definitely	27	0.360	65	0.897
Probably not	8	0.107	73	0.973
Definitely not	2	0.027	75	1
TOTAL	75	1	75	1



From the above bar chart shows that our respondents prefer local shipping instead of Overseas shipping from the chart we can see that 80% of the respondents prefer local shipping and 20% prefer Overseas shipping.

Preference in shipping	Frequency	Relative Frequency	Cumulative Frequency	Cumulative Relative Frequency
Local	60	0.8	60	0.8
Oversea	15	0.2	75	1
TOTAL	75	1	75	1

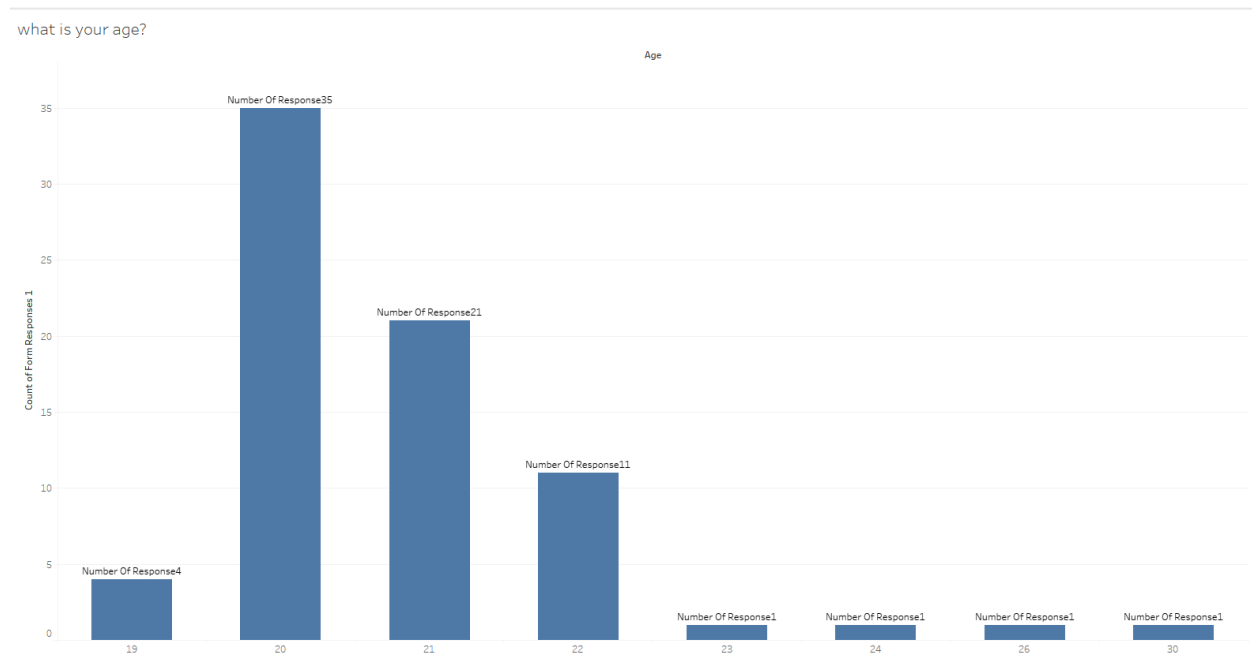


The above bar chart shows the opinion of the respondents whether their will be in online shopping After the end of the Outbreak of covid-19 and from the chart we can see that 45.33% of the total respondents their opinion was that it will stay the same followed by 30.67% said that it will decrease slightly followed by 14.67% said that it will increase greatly followed by 6.67% said that it will increase slightly and lastly 2.67% said that it will decrease greatly.

Expectation on online shopping after Covid-19	Frequency	Relative Frequency	Cumulative Frequency	Cumulative Relative Frequency
INCREASE greatly	11	0.1467	11	0.1467
DECREASE greatly	2	0.0267	13	0.173
DECREASE slightly	23	0.3067	36	0.480
INCREASE slightly	5	0.0667	41	0.547
Stay the same	34	0.4533	75	1
TOTAL	75	1	75	1

Quantitative Data

Age of Respondents

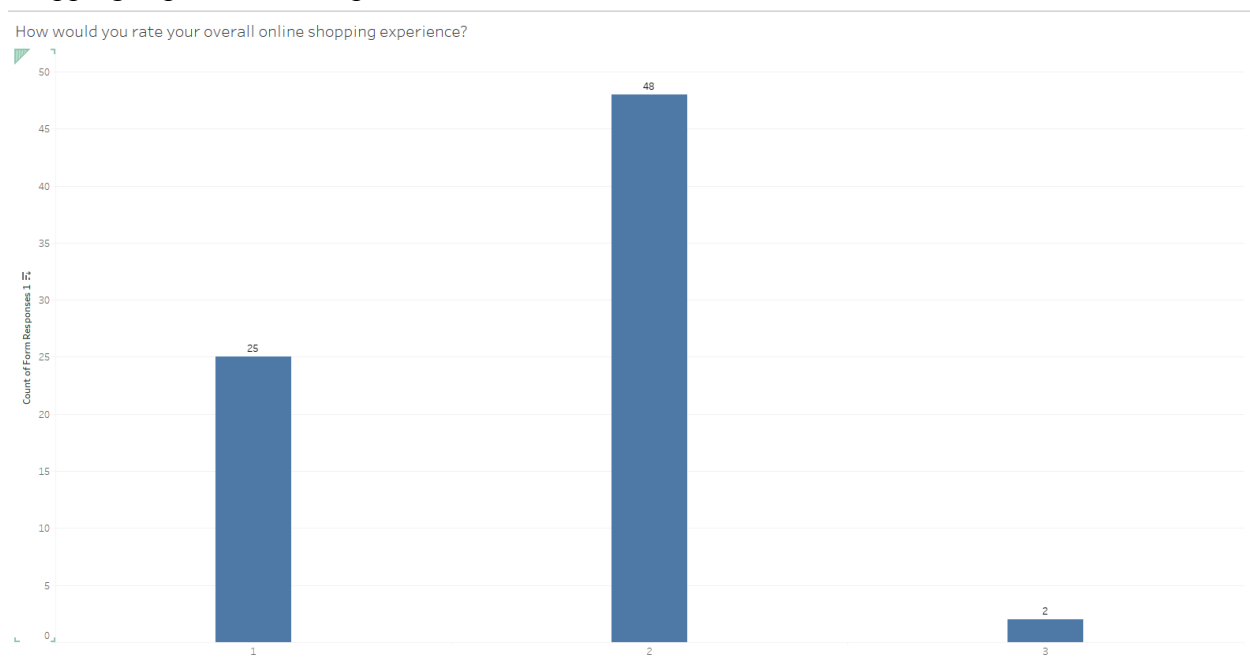


Above mentioned bar chart showed the number of respondents in y axis and age counts in x axis. The highest response has been shown by the age group 20(35 students). The second highest goes to the age count of 21(21 students). 22 years students showed interest in the third position(11 students). While the fourth state goes to 19 years old students(4 respondents). From the age limit of 23 ,24,26 and 30 years old respectively surveyed by 1 respondent. It is clear that the 20-22 years old students feel the online shopping platform is more convenient and useful at the time of a pandemic situation.

Count	76
Mean	1.693
Std	0.5192
Median	2.0
Min	1
Max	3
Variance	0.2695

The arithmetic average of Age count for mean for the students who attended the increase of online shopping during covid is approximately 1.7 while the data distribution among the all the age that is median is 2.0 .

Shopping experience of respondents



The above bar chart shows the shopping experience of the respondents where they shared their rated experience. The absolute left bar shows excellent feedback and the exact right one is for poor experience and the central bar shows their experience in between excellent and poor which is a sort of feedback in between positive and negative. Firstly, the excellent feedback has 25 responses. Whereas, the poor experience was encountered by 2 respondents. In the end 48 respondents felt a combination of positive and negative experience. To conclude, it can be said, 25 answers were in favour of excellent, 48 which is the highest response was for combined experience while negative responses were 2.

Count	76
Mean	20.83
Std	1.554
Median	20.00
Min	19
Max	30
Variance	2.415

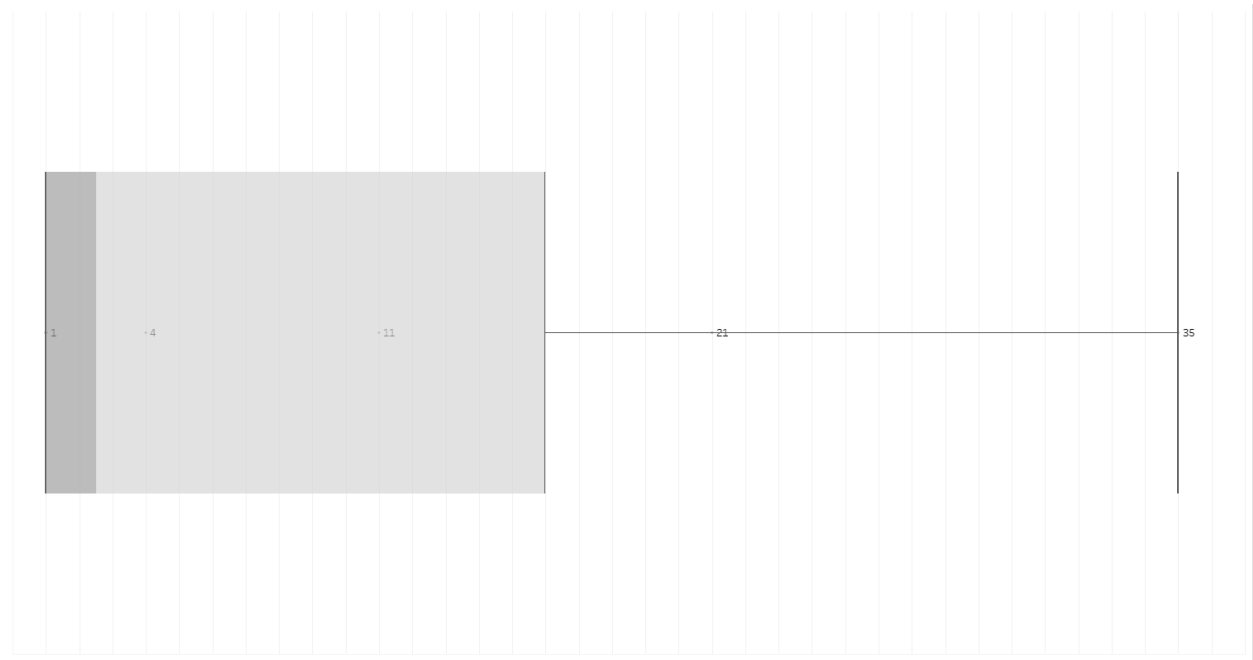
The arithmetic average of online experience count for the mean of the students who attended the increase of online shopping during covid is approximately 20.83 while the data distribution among all that is the median is 20.0.

In conclusion from this measurement we can see that the mean and the median are almost the same which means that our data is normally distributed.

According to the measurements we can say that the data is almost normal distributed because the mean and the median are almost the same .

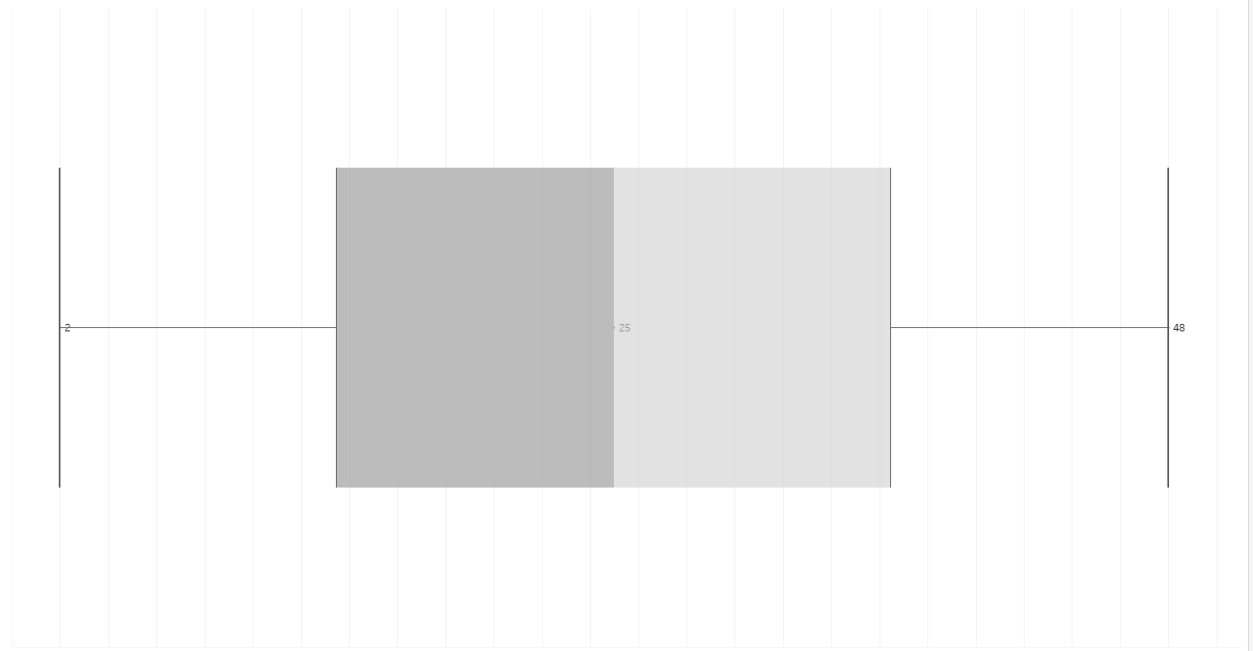
Box-Plots

For Age



According to the Age count, the smallest sample value is 0 and the first quartile range is 1 and the median value is 20 . Then again the maximum largest value is 35 and the third quartile is 16. And there's no outliers because we don't have any data outside the IQR.

How would you rate your overall online shopping experience?



According to the rating of overall online shopping experience we can depict that the minimum smallest value for the median is 2 and our max value is 3 and lowest value is 1 and we don't have any outliers because most of our data is between the IQR.

4.0.Conclusion

We can conclude that students around Malaysia have shopped online. The most problems students face during online shopping is delay in delivery. Due to the pandemic, parcels from overseas or local might take a few days to arrive. The increasing amount of parcels to get delivered is contributing to why some parcels were delivered late. As seen from the question on survey, students are most likely to choose shipping from the local as it is much faster to arrive and it is easier to chat and ask about the products to the seller. The category that students often shop online during pandemic is clothes. Since in shops, we may not be able to do the fitting, it is way easier to buy clothes online. The second most often shop online during pandemic by students is food. Online shopping makes it easier to shop for food as you do not have to go outside to buy some food. Just one click away and the food will arrive in front of the door. The element that has the most priorities on online purchase for students is price. Students have to budget their money so price is very important for them.

This survey gave us a clear understanding of how analysis is conducted in a systematic manner when a question needs to be answered. Technology has advanced significantly in recent years to provide customers with a better online shopping experience, and it will continue to do so in the future. With rapid growth of products and brands, it was predicted that online shopping would replace in-store shopping. The availability of online shopping has resulted in a more knowledgeable customer who can shop around at ease and without wasting a lot of time. In return, online shopping has enabled many small retailers to enter the market who would not have been able to do so if they had to pay high costs of running a physical store. At the end of the day, it was a win-win situation for the buyer and the seller.

5.0.Appendix

<https://forms.gle/azjOq4dz3FaZyaie8> (Links to the form)