DIGEST

POLITEKNIK METRO KUANTAN
6/ 2022

TOURISM & HOSPITALITY DEPARTMENT
POLITEKNIK METRO KUANTAN
KEMENTERIAN PENDIDIKAN TINGGI
MALAYSIA

DIGEST

POLITEKNIK METRO KUANTAN

6/ 2022

KUMPULAN PENYELIDIKAN DAN INOVASI
DAN KUMPULAN PENERBITAN

POLITEKNIK METRO KUANTAN
KEMENTERIAN PENDIDIKAN TINGGI MALAYSIA

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PREFACE

Alhamdulilah, thanks to Allah S.W.T because with His bounty, eDigest Politeknik METrO Kuantan 6/2022 has been successfully published. First of all, I would like to congratulate the Digest PMKu 2022 implementation committee, Research, Innovation and Commercial Unit and all the lecturers who have contributed their energy and hard work to the creation of this book.

The world's attention is drawn to the fields of Science, Technology, Engineering, and Mathematics, or STEM, particularly with various steps to transform the education curriculum to produce creative students. Interestingly, Datuk Seri Anwar Ibrahim, Malaysia's 10th Prime Minister, has made creativity one of the six cores of Madani Malaysia. One of the reasons is that Malaysia is still classified as a consumer country rather than a creator country, particularly when it comes to technological inventions, which are frequently portrayed in Western or East Asian countries such as Japan and South Korea.

This book is published with the aim of fostering a culture of scholarly writing, information sharing and expertise in the field among academic staff. The production of this book provides a space for the final student project supervisor to highlight the writing results from the innovative products that have been produced throughout the implementation of teaching and learning.

This effort can be used as a platform for PMKu academician to interact and share experiences through studies that have been conducted tourism and hospitality field. This approach to some extent helps METrO Kuantan Polytechnic in transforming the National Higher Education.

Finally, it is hoped that through the results of this publication can be fully utilized towards producing creative, innovative and excellent among PMKu citizens.

Thank you.

CONTENT

1 KUIH ROKOK PREBIOTIC

DR. MOHD FADLY BIN LAMRI, NURUL HAZIRAH BINTI HASIM, NUR SYAZA SYAZWINA BINTI AZIZI, TENGKU PUTERI NURHIDAYAH BINTI ABDUL RAZAK

M/S : 1- 13

2 EFFECT OF BINDING AGENTS IN THE PRODUCTION OF BAR SAGUN KELAPA

MUHAMAD SURAIRI BIN SHARIPUZAN, NUR IZZAH ADIBAH BINTI RAHIM, ANIS MALIHAH BINTI ZAINUDDIN, DAYANG NURLIYANA BINTI ABDUL MUTALIB

M/S : 14 - 20

3 DEFRUITEEZ (PIL TABLET JUS BUAH CITRUS)

HASLINA BINTI AHMAD MUZAKIR, NUR FATIHAH BINTI ZULKEPLY, NORSHAFIKA IDAYU BINTI ZAKARIA,AIN ZUHAIRA BINTI ABD RAHMAN

M/S : 21 - 36

4 CRISPY CHICKEN FEET

AHMAD SAIFUL BIN ABDUL MANAF, SYED MOHD HAFIZAL BIN SYED ALI, BURHANUDDIN BIN AHMAD SIRAJUDDIN, AHMAD HAYMIE AL-HAFIZ BIN RAMLI, AMMAR DANISH BIN AZMAN, MUHAMMAD ISYRAF FARIS BIN MOHD NADZIR

M/S : 37 - 50

5 BANANA PEEL SAUSAGE

HAFIZAH BINTI ISMAIL, SITI NUR MAISARAH BINTI MAZLAN, NURUL JASMIN ARISSA BINTI ISMAIL @ KHALIT, MUHAMMAD AKHRIMI DANIAL BIN MOHD NAIM

M/S : 51 - 58

6 XPERT TMY

NURHIDAYAH BINTI HILIMI, MUHAMMAD SYADIL AIMAN BIN ABD MANAN, NURUL AINI SYAFIQAH BINTI KAMARUDDIN, NUR IZZAH SYAZWANNY BINTI ROSMAINI, NUR SYAKIRIN FIKRIYAH BINTI MOHD FARIZAN

M/S : 59 - 66

SESSION II 2021/2022

CONTENT

1 FOODIES LAW
NURRUL HASANAH BINTI MD TENI. NURSYAZWANI AINA BINTI MUHAMMAD ZUDI, WAN SYAHIRAH AQILAH BINTI WAN ROSLAN, MUHAMMAD ARASH FAKRULLAH BIN MAT NASIR
M/S: 67 - 75

2 YAANG - KEMBOJA TEA DRINK
SADARIAH BINTI MOHD ARIFF, ANG CHING HUI, ADANI SUMAYYAH BINTI ABDUL RAHMAN, NUR UZMA BALQIHS BINTI LOKMAN
M/S : 76 - 82

3 DUTACEAE PELL
SHAHIRAH BINTI MUHAMMAD ZIN , WAN FATIMAH BINTI WAN MOHD NOWALID, AINUL MARDHIAH BINTI MOHAMAD NAZRI, MUHAMMAD AL-AMIN BIN KAMARUZAMAN, NUR AIN SYAZRINA BINTI TERMIZE
M/S : 83 - 90

4 GO GRUNE TAPEX
NOR HUDA BINTI MD ASRI, MUHAMMAD ISMA AFIZI BIN ISMAIL, AIN SHAHIRA BINTI RAZALI, SITI NUR IWANI BINTI NASIR, NABILAH HUDA BINTI KAHAR
M/S : 91 - 96

5 TEMMIX FRUITY NUTS POWDER
SURAINI BINTI RIPIN, SYAFIQAH BINTI AHMAD REDHWAN , NUR ALISA IRWAYU BINTI MUHAMAD NAZIMI
M/S : 97 - 103

6 KITCHEN RUST REMOVER
MOHD FADLY BIN HJ LAMRI, MOHAMAD ADHHAM BIN MOHAMED YUSOF, MUHAMMAD HARIZ AKMAL BIN SHAHRIZAI
M/S : 104 - 115

7 DAITY SUPERBB
NURUL SAFAWATI BINTI ABD AZIZ, NURUL HAZWANI BINTI ADNAN, NOOR SYAFINA BINTI SAIDI, NUR AINAA SYAFIQAH BINTI MUHAMAD ADHA
M/S : 116 - 122

9 YOUMEE
NURULLIA NATASHA BINTI JAMAL, NURIN AINA SYAZWANI BINTI RAZMI, PUTRI DANIA AMISHA BINTI SHAMSUL AMER, AIRIN NUR ATIESYA BINTI MOHD SABRI
M/S : 123 -135

10 FRUITY JAM SLICEZ
AHMAD SAIFUL BIN ABDUL MANAF, WAN ASMA' BINTI WAN OTHMAN, INTAN SYAKILA BINTI HAMDAN, NURUL ILYANI BINTI ZULKEFLI, NUR NADIRAH SOFEA BINTI KAMARUDDIN
M/S : 136 - 144

11 BRAILLE CLASSIC GAMES BOOK
MOHD REZAL BIN MISKAM, AYU NAZIRA BINTI BAHARUDDIN, NOOR MUHAMMAD BIN ZULKIPLI AND NUR AAINAA SYASYA BINTI MUHAMMAED ARSHAD.
M/S : 145 - 151

SESSION I 2022/2023

CONTENT

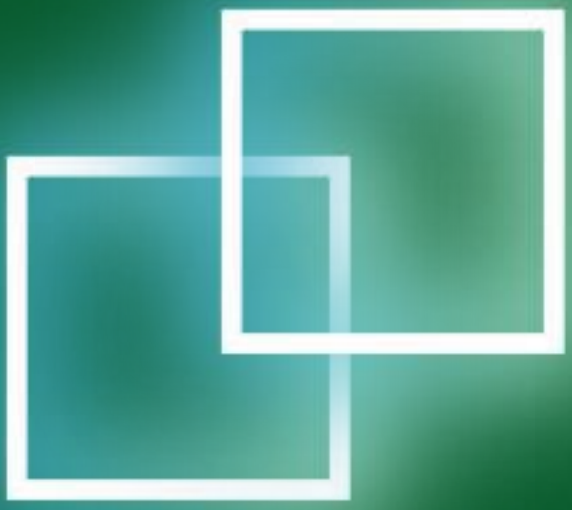
12 SUSTOCATION TOUR APPS
MUHAMAD ASYRAF BIN ROSLI, NURUL QALIS BINTI JASNI, MUHAMMAD AKIF BIN SUKIMAN, NUR SHAMIENA BINTI SAMSOL
M/S : 152 - 161

13 E-BOOK: EXPLORING BANJAR ETHNICITY
ANIS SHABIRAH BT. MD.ISA, NURUL HAFIZAH BINTI MOHD ZAKARIA, ERMA BINTI NORDIN, INURHASMIRA BINTI ARBAAI
M/S : 162 - 168

14 FEARLESS
NORSIDAH BINTI OTHMAN, AU LIANG WEI, NATASYA NAJWA BINTI MOHD NOOR, MUHAMMAD IMAN SUDFFIAN BIN SHAARI
M/S : 169 - 176

15 2 IN 1 BLANKET
RINA FAKHIZAN BINTI MOHD SUKRI, MADIHAH ZAHIRAH BINTI MOHAMMAD ZAIDI, NURFARZANA ATHIRAH BINTI SUHAIMI, WAN NUR AMIRA SHAZLIN BINTI ZULKIFLI
M/S : 177 - 182

16 TRAVELER'S LEVEL OF ACCEPTANCE TOWARDS BAG'CO SHOE BAG
NORAZURA BINTI MASDOR, LEE HUI SAN, MUHAMMMAD AIMAN HAZIQ BIN KAMARUL BAHRIN,SITI AINUL MARDHIAH BINTI ABD HAMID
M/S : 183 - 192



SESSION I 2022/2023

SESSION II 2021/2022

KUIH ROKOK PREBIOTIC

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ABSTRACT

This study try to make Kuih Rokok Prebiotic as a supplement which is contained prebiotics for people who suffered with digestive problems. It can helps maintain health especially consumer intestine. In this quantitative project at least 51 respondent from staff and student Politeknik Metro Kuantan doing their questionnaire and found the finding about 80% of them very excited and interested in this Kuih Rokok Prebiotic. For future planning this study could be expose to the outside market.

1.0 INTRODUCTION

Apit-apit has made in many countries such as Brunei, Indonesia, Malaysia and Singapore.It is believed to come from Dutch egg bread wafers. Many biscuit and cake techniques were inherited to the Malays by the Dutch, English, and Portuguese. These biscuits may have been brought to parts of Malaysia and Singapore from Penang and Melaka by Peranakan Chinese who simply called it Kuih Belanda or Apit-apit. There are two versions of apit-apit, namely apit-apit gulung (arabic cigarette) and apit -apit lipat (folded into triangles - kuih sepit). This study created this product due to fulfil the project innovation. So its decide to make Kuih Rokok Prebiotic product because it can helps solve digestive problems to people with these problems. Apart from that, our group also make this product as a supplement which is contained prebiotics for people who suffered with digestive problems. It is also know, the prebiotic has many benefits and it can help maintain health especially consumer intestine. Prebiotic is 2 in 1 because it is good for our health as well as the plants. You can just use it to the root of the plants or put it inside of our drinks or food.

We specially make this product for DHF 5A respondents in Polytechnic METrO Kuantan (PMKu) for their project. Generally, intestinal obstruction or occur when the ducts in the small or large intestine are obstructed or blocked. this intestinal obstruction can be partial or total and prevents the absorption of fluids and digested food. We made this supplement with many functions and advantages. Furthermore, it is suitable for patients with digestive system problems. This is because, it contains prebiotics which is good for digestive internal intestine. To solve the problem of disrupted nutrient absorption for life energy, prebiotic has many benefits and nutrients not only for humans but also for animals and plants. Plus, the problem for these diabetics is lack of supplements. As a solution, we have created Kuih Rokok Prebiotic as a supplement to them. Moreover, Kuih Rokok Prebiotic are very tasty and ready to eat.

According to Davani-Davari et al., (2019), prebiotics are a group of nutrients that are degraded by gut microbiota. They can feed the intestinal microbiota, and their degradation products are short-chain fatty acids prebiotics with beneficial effects on human health. Since low quantities of fructo-oligosaccharides and galacto-oligosaccharides naturally exist in foods, scientists are attempting to produce prebiotics on an industrial scale. It seem to be fascinating candidates for promoting human health condition as a replacement or in association with probiotics. This review discusses different aspects of prebiotics, including their crucial role in human well-being. Non-digestible carbohydrates are considered prebiotic. Different types of prebiotics exhibit distinct health benefits. For example, inulin, GOS, and FOS have long been considered the chief prebiotics. However, various other com-pounds and dietary fibers have emerged as candidate prebiotics offering multiple health benefits (Kaur et al., 2021). Prebiotics are healthy bacteria grow in your gut. It not just for humans but to animals and plants is also good. These microbes can also help plants grow more productively by trapping important nutrients, such as nitrogen. For animal is works to maintain a balanced digestive microbiota. Our target market is attracting the student PMku. We made this product for them to look the result of this product (Gibson et al., 2004).

2.0 METHODOLOGY

A study design conducted to serve as a guide in assisting researchers in the process of collecting, analysing and interpreting the result of research conducted. This research method describes the process of designing a study, collecting data, making surveys and analysis are also focused on all students of Politeknik METr0 Kuantan. Here are the methods of research in this study were;

Quantitative method that using experimental method in which data is in the form of measurable numbers.

The collected data were processed and analysed using descriptive statistic by the latest version of SPSS.

a) Sampling & Data collections method

A sample is a subset of individuals from a larger population. Sampling is choosing the group from which we will actually collect data in our research. The sample was taken using Google Forms, which ensured that the respondents were Kuantan Metro Polytechnic students and the public consisting of the DHF listing and the public in the target population had an equal chance of being selected to be included in the survey. The total number is 60 people and the sample size obtained based on the sampling margin table is 51 people. As for the data collection method, the method is implemented using quantitative methods through the use of questionnaires. The questionnaire was distributed to the respondents via Google form. There are two parts in the questionnaire, namely section 1 and section 2. section 1 contains answers to demographic questions, namely age and gender. For section 2, there are questions containing user preferences for our products. In this section, the question of study is about the awareness and goodness of our products. In this section, try to see how consumers receive the products based on goodness, effectiveness and overall.

3.0 RESULT & DISCUSSION

The study was successfully assessed from 60 respondents who had answered properly from the questionnaires given to them, based on sample from students of the Diploma in Foodservice Halal Practice from the Politeknik Metro Kuantan. A total of 50 respondent were chosen to be testing respondent who can thoroughly test the product based on goodness, effectiveness and overall.

3.1 ANALYSIS OF RELIABILITY

Cronbach's Alpha	N of Items
.963	20

According to reliability analysis from the analysis conducted found that Cronbach's alpha of the study was 0.963 indicating that the questionnaire distributed was answered well by all respondents. It is reasonable and acceptable for the next study.

		GENDER		Total
		Male	Female	
1. Adakah kuih rokok prebiotik memenuhi cita rasa anda?	Not agree	2	1	3
	MODERATE	5	4	9
	agree	8	14	22
	strongly agree	7	10	17
Total		22	29	51

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	1.681[a]	3	.641
Likelihood Ratio	1.677	3	.642
Linear-by-Linear Association	.864	1	.353
N of Valid Cases	51		

3.2 ANALYSIS OF CHI-SQUARE

Correlation of question 13 vs Occupation (Prebiotik adalah selamat digunakan kerana ianya juga adalah hasil daripada tumbuhan * OCCUPATION)

CROSSTAB

According to the chi-square test form our result's questionnaire, there are significant differences with value 0.042 through occupation, whereas question 13 was discussed about whether prebiotics are safe to use because they are also the result of plants, so that means people or respondents agree about that question. The result is students are more agree than the staff because Kuih Rokok Prebiotic contains prebiotics that actually contain good bacteria made from plant fiber such as corn. It is not harmful to babies or the elderly if they consume this prebiotic.

) LJXUH SLHFKDUWRI JHQGHUYVTXHVWRQ

$ 1 $ / < 6 , 6 2) 0 ($ 1 6

3.3.1 Mean of Product Functional

Table 1.0 Descriptive Statistics of result

	1	0 LQLP XP	0 D[LP XP	0 HDQ	6WG ' HYLDWLRQ
* (1 ' (5	51	1.00	2.00	1.5686	.50020
2 && 8 3 $ 7 , 2 1	51	2.00	3.00	2.2157	.41539
1. Adakah kuih rokok prebiotik menepati cita rasa anda?	51	2.00	5.00	4.0392	.87088
2.Apakah warnanya membangkitkan selera anda untuk memakannnya?ok prebiotik menepati cita rasa anda?	51	2.000	5.000	3.92157	.844823
3.Bagaimana tekstur kuih rokok prebiotik itu, adakah ia rangup dan manis apabila dimakan?	51	2.000	5.000	3.98039	.812162
4.Adakah kuih rokok prebiotik ini dapat membantu anda dalam melancarkan sistem penghadaman anda?	51	2.00	5.00	3.6863	.86000
5.Anda kerap ke tandas setelah mengamalkan kuih rokok prebiotic sebagai makanan tambahan anda	51	1.00	5.00	3.4314	1.13587

	1	0 LQLPXP	0 DLPXP	0 HDQ	6WG' HYLDWLRQ
6.Adakah harga produk prebiotik ini lebih murah didapatkan berbanding dengan produk probiotik yang terdapat di pasaran	51	1.00	2.00	1.5686	.50020
7.Adakah kuih rokok prebiotik mudah didapati dipasaran?	51	2.00	3.00	2.2157	.41539
8.kuih rokok prebiotik ini bagus untuk setiap peringkat umur	51	2.00	5.00	4.0392	.87088
9.Prebiotik memberikan kesan kesihatan yang baik untuk penghadaman dan kuih rokok pula memberikan rasa yang enak untuk dimakan pada bila bila masa	51	2.000	5.000	3.92157	.844823
10.Sebelum ini penghadaman saya tidak lancar tetapi selepas mengambil produk tersebut sistem penghadaman saya semakin baik.	51	2.000	5.000	3.98039	.812162
11.Pengambilan prebiotik ini seharusnya diambil pada setiap hari dalam kadar sederhana supaya ia memberi kesan sampingan yang baik kepada kita	51	2.00	5.00	3.6863	.86000
12.Produk ini mengikut trend terkini	51	1.00	5.00	3.4314	1.13587
13.Prebiotik adalah selamat digunakan kerana ianya juga adalah hasil daripada tumbuhan	51	2.00	5.00	3.9608	.89355
14.Kuih Rokok Prebiotic ini mudah diambil di mana sahaja	51	1.00	5.00	3.8627	.87223
15.Kuih Rokok Prebiotic bukan sahaja membantu sistem penghadaman malah mampu mengawal gula	51	2.00	5.00	3.7843	.87895
16.Adakah kuih rokok prebiotic ini akan di terima oleh pengguna di pasaran antarabangsa	51	2.00	5.00	3.9412	.85818
17.Kuih rokok prebiotic ini akan diterima tidak kira umur, jantina dan budaya	51	1.00	5.00	4.0000	.89443
18.Produk ini boleh ditambahbaik dengan menyediakan penyataan Sijil HALAL pada produk	51	3.00	5.00	4.1765	.76696
19.Kuih Rokok Prebiotik akan menggunakan pembungkusan yang tahan lasak.	51	2.00	5.00	4.0392	.84760
20.Jika produk ini dijual di dalam talian, adakah anda setuju?	51	2.00	5.00	4.0784	.93473
Valid N (listwise)	51				

Of the 51 respondents answering all these questions many women agree with the product, with a mean value of 1.57. meanwhile most respondents work as government employees in polytechnics with a mean value of 2.26. This is because it gives a positive impact to the respondents in addition to providing a sweet, fatty and crunchy taste. However, it is also very suitable to be used as our daily food because it is suitable to be taken anytime. If you want to see here this prebiotic cigarette cake meets the taste of the respondent, maybe because it looks appropriate according to the respondent's opinion, this means 4,039 because it has the same number as question 19, that is, the prebiotic cigarette cake will use durable packaging with this same number but maybe each respondent's opinion was different but most agreed with the packaging that had been made by our group. There is also a high value of many of the questions he above means 4.17, this product can be improved by providing a halal certificate statement on the product. This means that this product can be marketed if there is a halal certificate because it gives another bonus so that the product becomes a bestseller in the Malaysian market. This analysis we find that it provides a lot of information that can be known from various angles. Also, most of those who like this product are women, why most women? This is because they really like the sweet and crunchy taste. In addition, there are also peanuts that can further enhance the texture.

)LJXUH 5$' $5 &+$57 2) +(' 21,& 7(67 . 8,+ 52. 2. 35(%27,&

' (6&5 , 37 , 2 1 2) + (' 2 1 , &

The description of the hedonic test of prebiotic cigarette cake from this project is that, there are 51 respondents who have answered the question about this prebiotic cigarette cake. On the radar there are 3 questions that are suitable to be discussed, namely taste, appearance and color. Why only 3? Because it involves how the prebiotic cigarette cake looks after being changed, however, not only that but it also involves the flavors that have been added to make it taste better and the appearance that attracts respondents to taste it.

&2 1 &/ 8 6 , 2 1

The resulting product will focus on the prebiotic and ingredient used, the taste of the consumer and the effectiveness of the product. In addition, this product can help facilitate the consumer in solving the problem of digestive and diabetes because of the power of prebiotic. Besides that, to attract the people to eat this prebiotic snacks without any doubt. Hence, focus on the prebiotic efficacy in humans. The product must be less sweet like prebiotic benefits that can control blood sugar levels. So, the highlight of this Kuih Rokok Prebiotic is eat and can be healthy at the same time. The consumer just needs to eat it without the need for other health supplements. The uniqueness of this Kuih Rokok Prebiotic is because of the combination of the taste of less sweet peanut butter filling and a bit salty. Based on the results on the questionnaire, the majority agreed with this question because most of them think that this Kuih Rokok Prebiotic is very suitable for all ages to eat this healthy snack. For the conclusion, Kuih Rokok Prebiotic is good and recommended to people at all ages because it contains prebiotic, this product helps consumers to be healthy even if they just have to eat this snack. It also gives a lot of benefits to consumers besides being easy to bring anywhere and easy for consumers to consume.

4.1 RECOMMENDATION

Our recommendation in the future is to make many more types of healthy snacks for patients. Nowadays, many people are afraid to take snacks because of their concern for their respective health. However, at the same time they also do not want to take supplements for their health. So, to solve the problem, health snack products need to be created more in the market.

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Effect of binding agents in the production of coin sagun kelapa

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ABSTRACT

In generally traditional food refers to a product with specific raw materials and with a recipe known for a long-time hereditary recipe and with a specific process. This study investigates the best binding agent for powder sagun to become coconut husk using honey, brown sugar and florenta flour. The sensory evaluation has been conduct using hedonic test. Descriptive analysis data have been done with 30 panellists from students of the Diploma in Foodservice Halal Practice from the Politeknik METrO Kuantan. Analysis data using one-way anova with SPSS version 21. The attributes tested are colour, taste, aroma, texture and overall acceptant. The result show that the overall acceptant panellist choose honey as the best binding agent followed by brown sugar and florenta flour for coconut husk.

Keyword: binding agent, honey, brown sugar and florenta flour.

1.0 INTRODUCTION

Problem Statements

Development to transform from powder into solid either coin or bar and whether the respondent can accept the new form of coconut shogun.

Objective

1.To determine food binding agent for coconut sagun
2.To determine responded acceptance levels of coconut sagun

SENSORY

Sensory is important for measuring food or reactions to that food. These sensory tests can also measure in terms of differences or receptors. After that will be able to collect data that has been evaluated by respondents. Sensory also plays an important role in sales, marketing, research, and production activities of food products. This sensory evaluation guide can help students identify, understand, choose, and use sensory evaluation methods. This screening was conducted on 30 students of Kuantan Metro Polytechnic semester 5, namely students (DHF) Diploma in Halal Practice in Food Service and (DUP) Diploma in Tourism to obtain the level of acceptance of respondents to coconut sagun from powder to coin which distinguishes is a food binding agent consisting of the three namely brown sugar, florenta flour, and honey.

SENSORY FORM

HEDONIC SCALE

You are presented with a sample of effect of binding agent. Please evaluate and rate the sample for each attribute and mark the number that best describes your choice on the accompanying scoring sensory.

SCORE VALUE ASSIGNED:

LIKE EXTREMELY = 7

LIKE VERY MUCH = 6

LIKE = 5

DISLIKE SLIGHTLY =4

DISLIKE MODERATELY = 3

DISLIKE VERY MUCH = 2

DISLIKE EXTREMELY = 1

	201	202	203	204	205	206	207	208	209
Colour									
Taste									
Aroma									
Texture									
Overall acceptant									

ANALYSIS DATA

Data analysis used one -way ANOVA with SPSS version 21. The Method of Analysis of Variance (ANOVA) is a hypothesis test in which only one category variable or factor is considered. This is a technique that allows comparison of three or more samples with the help of F distribution such as Sagun coconut group using brown sugar, florenta flour, and honey. It is used to find out the differences between different categories that have several possible values. Use the Turkish test to compare the 3 best samples and a multi -step comparison procedure as well as a statistical test. It can be used to find ways that are far different from each other.

4.0 FINDING (Data analysis)

Once all the data and information are obtained from the results of the study. According to table 4.1 above in terms of color there is a significant difference between sugar with florenta and honey. While florenta and honey are no different. In terms of taste, there is a significant difference between sugar with florenta and honey. In addition, for the aroma, there is a significant difference between sugar with florenta and honey. Next to the texture there is also a significant difference between sugar with florenta and honey. Overall acceptant panelists prefer honey over florenta and sugar because there are significant differences between the three binding agents.

5.0 DISCUSSION

After the data from the respondent's has been collected, modifications to the product's quality must be made. Because the information originates from sensory and hedonic scale, the quality needs to be improved. Furthermore, improve the market strategy for the manufacture of this product in all Malaysian marketplaces.

Also, be aware of the needs of the local market and establish a cooperative strategy. As a result, market this unique product on various social media channels, such as broadcast media or social media and it will receive a large reaction. The product's price is reasonable and comparable to other market rates, making it accessible to people from all walks of life. Furthermore, the enhancer makes the packaging of the product more appealing. Next, present this product to nearby agencies to immediately get the attention of the specified target market because it makes it easier for consumers to contact only the agencies in their immediate vicinity if they want to acquire this product.

6.0 CONCLUSION

In conclusion consumers will be more familiar with the traditional coconut sagun products in the market. In addition, after being innovated using 3 binding agents that are most suitable from coconut sagun powder to coin shape. This can further popularize traditional food so that it is not forgotten and will be known by outsiders who come to travel. In addition, only some people can accept coconut sagun in powder form. Meanwhile, some people cannot accept coconut sagun in powder form. By innovating from coconut sagun powder to coin shaped, many respondents prefer and can accept coconut sagun in the form of coins compared to coconut sagun powder. Furthermore, from the results of the study obtained respondents' acceptance of products that are in binding agents such as sugar, florenta and honey. Overall acceptant panelists prefer honey over florenta and sugar because there are significant differences between the three binding agents. In this project plan, the strategy has been carefully arranged so that the reader understands how high the potential of the project has been.

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DE FRUITEEZE

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ABSTRACT

The objective of this paper is to provide alternative ways and ease to prepare for people that are difficult to consume juice from natural fruits. And to provide the solution for the consumption of fruits and fruit juice to be more convenient and affordable. We use natural ingredients such as citrus juice, sugar and zest processed into powder and made in the form of tablet pills. We provide 2 forms of packaging, namely bottles and packaging for easy carrying keychain bottle. We use scoring and hedonic methods to determine the level of acceptance of respondents will our product is DE FRUITEEZ.

1.0 INTRODUCTION

Consumers have difficulty when wanting to drink juice from natural fruit juices. To make juice from fruit takes time and many things to do for example consumers must have and buy fruit first. Next, clean the fruit, peel the skin, cut the fruit blend the fruit, and so on. This problem will cause consumers to feel lazy and burdened to drink fruit juice. After that, Consumers face difficulties consuming juice from natural fruit for certain reasons. Drinking juice from natural fruit requires some time to be prepared as it needs to be washed, cut, fruit storage, and so on people who are busy, do not have time, time pressure, demands, and so on will have difficulty drinking juice from natural fruit.

The next problem is that consumers face difficulties in carrying fruit anywhere to drink juice from natural fruits. Fruits are difficult to take with them anywhere because they need space to store fruit. This burdens them as they must bring fruit with them to consume the fruit and drink the fruit juice. Moreover, consumers want to drink juice from real fruit in the easiest way and not juice that has been processed in the market because most juices or sweeteners on the market have added additives that may be the juice does not have any main ingredient juice that is fruit but has been replaced or processed from chemicals or preservatives and additives.

The objectives of this study are
• To provide alternative ways and ease to prepare for people that difficult to consume juice from natural fruits.
• To provide the solution for the consumption of fruits and fruits juice to be more convenient and affordable.

2.0 LITERATURE REVIEW

DE FRUITEEZE. DE FRUITEEZE is a sweetener juice tablet. DE FRUITEEZE is a convenience food product with natural ingredients, without additives, and produce manually. Convenience food. Convenience food product is types of foods that save time in food acquisition, preparation, and clean-up.

Hanying Sun et al., (2019) has explained, fruit consumption has increased, resulting in a greater desire to maintain their high nutritious contents as well as a critical eye toward their aesthetic look. According to Saifullah et. al., (2016), as a result, postharvest storage and processing of fruit products are required. In terms of preservation, fruit powder has various advantages over fruit juices, including lower volume, weight, and packaging needs; easier preservation, handling, transportation, and storage; and a longer shelf life. Fruit powder, on the other hand, is heavy and highly hygroscopic due to its dry, granular form; as a result, it is sensitive to the external environment and necessitates careful handling and packaging during storage and transportation.

Many factors influence the demand for fruit in pill or powder form, according to Siekierski et al., (2013), including population maturation, changes in family structure, women's participation in the labour force, longer working hours, purchaser success, desire to maintain good food sources, independence, decline in cooking abilities, and desire to spend less energy and effort in supper-related activities such as shopping, preparing, and cleaning fruit sources. Family size, salary level, and job system are all factors that have a big impact.

3.0 METHODOLOGY

Data Collections Method

The method is implemented using quantitative methods using questionnaire methods. Questionnaire were distributed to respondents by paper of questionnaire. There are four sections in the questionnaire which is section A, B, C and section D. Section A contains answer demographic question, section B about product, section C contains taste test determination and section D contains Respondent comments and suggestions.

Product Process

How to make oranges into powder: First blend the oranges to get the juice. After that, pour the orange juice into the nonstick pans, stirring over low heat for an hour until it thickens. Then cool the thickened juice. Once cool, stir to blend well with the sugar that has been weighed. Next, stir again until it becomes a lumpy powder. When ready over a fine blend fire the lumpy powder into a fine powder. This way it can be made with sour fruit only

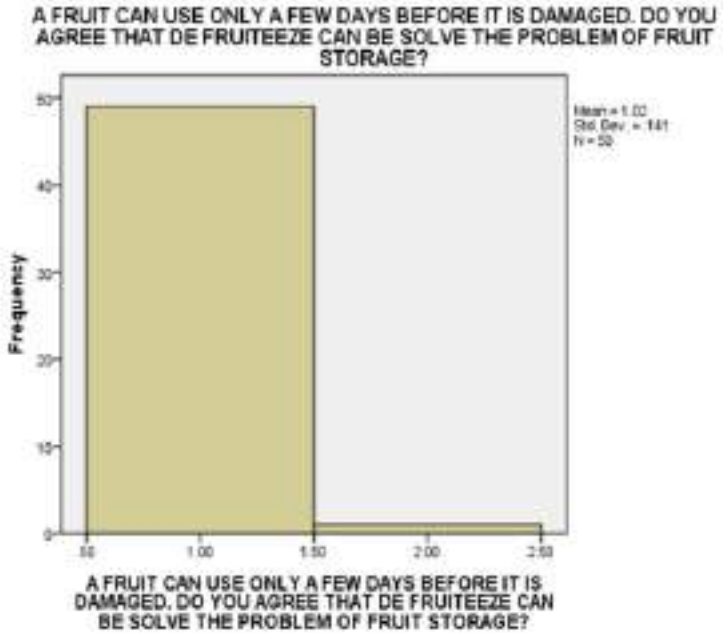
Respondents are Academic staff and students from Polytechnic Metro Kuantan. The total number of respondents is 50 selected from the Krejcie & Morgan format to evaluate and comment on this product. They will be instructed on the study's objective and their right as respondents to find how their feelings and think about our product DE FRUITEEZE process that takes place in the market. After the data was successfully collected, the process of data analysis and theme formation based on the data was performed.

4.0 FINDING (Data analysis)

ARE THIS PRODUCT CAN SAVE THE COST?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	YES	48	96.0	96.0	96.0
	NO	2	4.0	4.0	100.0
	Total	50	100.0	100.0	

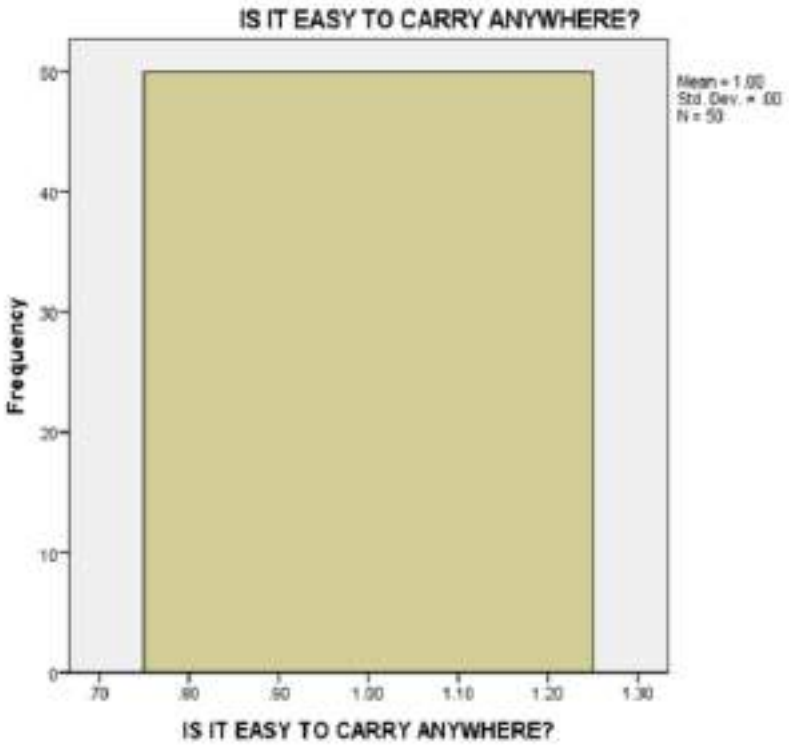
Most respondents chose to agree (48 respondents). Following that, (2 respondents) expressed disagreement. In general, almost all respondents agreed that our product saves costs because of the questionnaires we distributed, 48 out of 50 respondents agreed that this product saves costs. While out of 50 respondents there were 2 respondents disagreed because they lacked understanding of the question given.



A FRUIT CAN USE ONLY A FEW DAYS BEFORE IT IS DAMAGED. DO YOU AGREE THAT DE FRUITEEZE CAN BE SOLVE THE PROBLEM OF FRUIT STORAGE?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	YES	49	98.0	98.0	98.0
	NO	1	2.0	2.0	100.0
	Total	50	100.0	100.0	

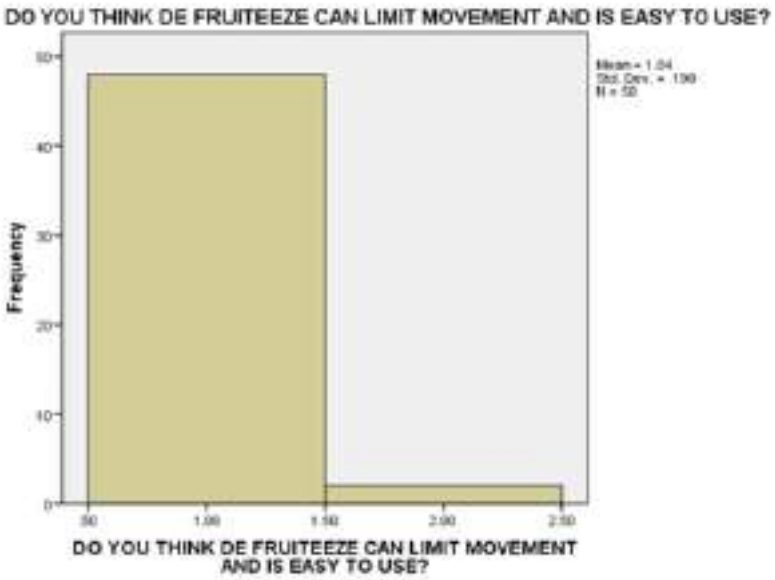
Most respondents chose to agree (49 respondents). Following that, (1 respondent) expressed disagreement. Almost all of them agree that our product can solve the problem of fruit storage in general because based on the questionnaire that we distributed, 49 out of 50 respondents agreed that our product can solve the problem. While 1 out of 50 respondents disagreed that our product could solve the problem of fruit storage as they could not be able to understand the whole concept of our product.



IS IT EASY TO CARRY ANYWHERE?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	YES	50	100.0	100.0	100.0

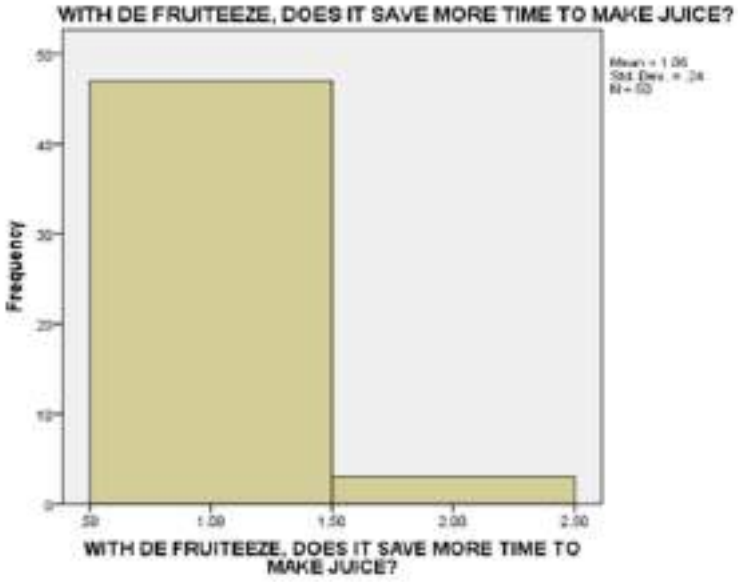
All respondents chose to agree (50 respondents). Overall, 100% of the respondents agreed that our product is easy to carry anywhere because our product is in the form of a pill and uses appropriate packaging that saves space and is lightweight. Our products come with 2 types of packaging, namely bottle and keychain packaging that only needs to be hung anywhere, whether it is a bag, key, or anything else.



DO YOU THINK DE FRUITEEZE CAN LIMIT MOVEMENT AND IS EASY TO USE?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	YES	48	96.0	96.0	96.0
	NO	2	4.0	4.0	100.0
	Total	50	100.0	100.0	

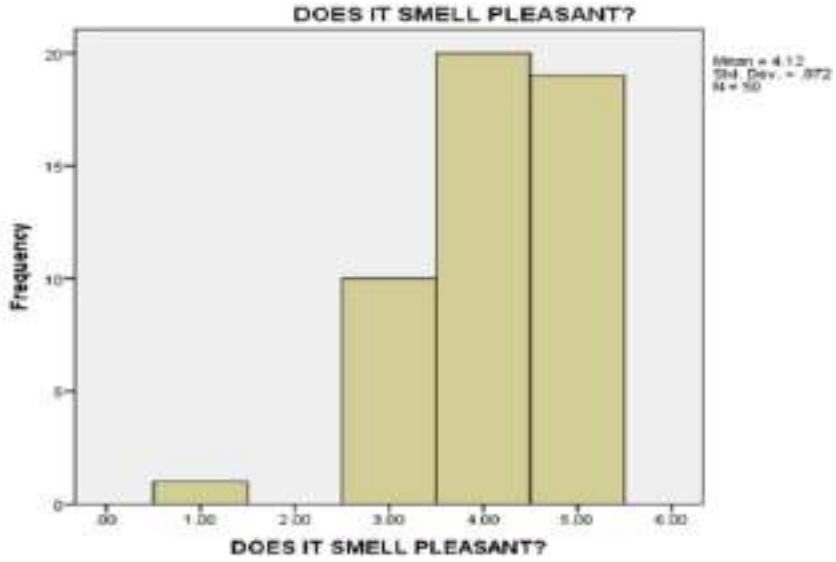
Majority of respondents chose to agree (48 respondents). Following that, (2 respondents) expressed disagreement. In general, almost all respondents agreed that our is easy to use because based on the questionnaire that we distributed, 48 out of 50 respondents agreed that our is easy to use. While out of 50, there are 2 respondents do not agree that our products are not easy to use, and they consist of senior citizens because they do not see more clearly how to consume our products.



WITH DE FRUITEEZE, DOES IT SAVE MORE TIME TO MAKE JUICE?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	YES	47	94.0	94.0	94.0
	NO	3	6.0	6.0	100.0
	Total	50	100.0	100.0	

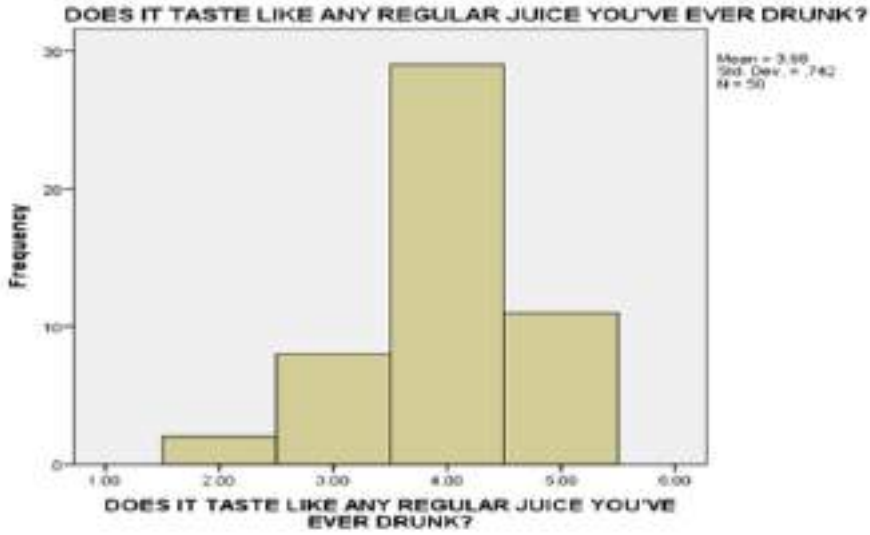
The bar graph shows majority of respondents chose to agree (47 respondents). Following that, (3 respondents) expressed disagreement. Based on the information we obtained from the questionnaire we distributed, generally almost all agree that our product can solve the problem of saving time to drink juice because 47 of them agree that our product saves more time than consuming natural juice from real fruit. However, there are 3 out of 50 respondents do not agree that our product can solve the problem of saving time to consume juice and they are senior citizens because they are less exposed to convenience products and for them this product is less suitable for them.



DOES IT SMELL PLEASANT?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	DISLIKE VERY MUCH	1	2.0	2.0	2.0
	NEITHER LIKE NOR DISLIKE	10	20.0	20.0	22.0
	LIKE SLIGHTLY	20	40.0	40.0	62.0
	LIKE VERY MUCH	19	38.0	38.0	100.0
	Total	50	100.0	100.0	

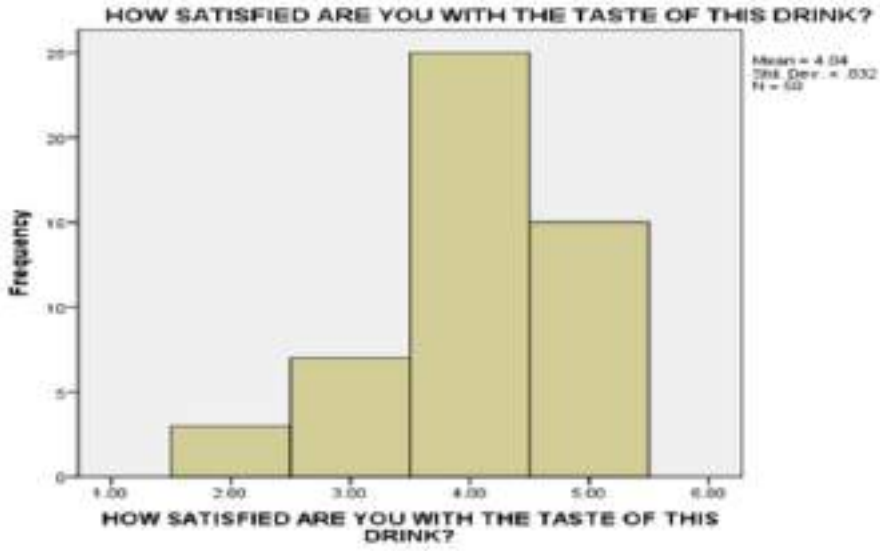
The graph bar shows Majority of respondent's 40.0 percent voted like slightly (20 respondents). As a result, 3percentcent (19 Respondents) said they like very much. Further, 10.0 percent voted neither like nor dislike (10 respondents) and 2.0 percent said they dislike very much (1 respondent). In general, half of the respondents really liked the smell of our products because based on the questionnaire we distributed 19 out of 50 respondents agreed. while out of 50 respondents, 10 respondents neither like nor dislike and 1 is dislike very much because they say that our product has less smell or does not have a smell or smell that is less pleasant compared to the juice available in the market.



DOES IT TASTE LIKE ANY REGULAR JUICE YOU'VE EVER DRUNK?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	DISLIKE SLIGHTLY	2	4.0	4.0	4.0
	NEITHER LIKE NOR DISLIKE	8	16.0	16.0	20.0
	LIKE SLIGHTLY	29	58.0	58.0	78.0
	LIKE VERY MUCH	11	22.0	22.0	100.0
	Total	50	100.0	100.0	

The graph bar shows Majority of respondent's 58.0 percent voted like slightly (29 respondents). As a result, 22.0percentt (11 respondents) said they like very much. Further, 16.0 percent voted neither like nor dislike (8 respondents) and 4.0 percent said they dislike very much (2 respondents). Based on the information we found from the questionnaire that we distribute generally quarter that is 11 out of 50 respondents like our product taste like any regular juice they have consume. And out of 50 respondents there are 2 respondents who dislike slightly that our products taste like any regular juice they have consumed. Because in their opinion our product is not as tasty as the juice, they have ever drunk, that's because our product only uses 100% natural ingredients and has no additives.

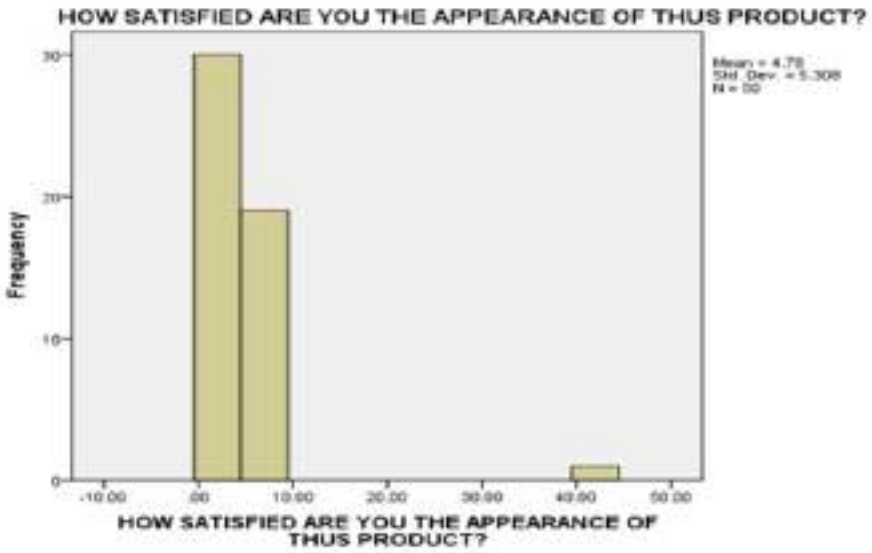


HOW SATISFIED ARE YOU WITH THE TASTE OF THIS DRINK?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	DISLIKE SLIGHTLY	3	6.0	6.0	6.0
	NEITHER LIKE NOR DISLIKE	7	14.0	14.0	20.0
	LIKE SLIGHTLY	25	50.0	50.0	70.0
	LIKE VERY MUCH	15	30.0	30.0	100.0
	Total	50	100.0	100.0	

The bar graph shows Majority of 50.0 percent respondents voted a little like (25 respondents). Further, 30.0 percent (15 respondents) said they really liked it. Furthermore, 14.0 percent voted neither like nor dislike (7 respondents) and 6.0 percent said they strongly dislike (3 respondents). In general, half of the respondents are satisfied and like our products because based on the questionnaires that we distribute, 25 out of 50 respondents really like and are satisfied with our products. However, there are 3 out of 50 respondents strongly dislike our product because they say our product is not tasty compared to the products available in the market, therefore because the products in the market use additives and our products are additive free.

The bar graph shows Majority of respondent's 46.0 percent voted a little like (23 respondents). Further, 30.0 percent (15 respondents) said they really liked it. Furthermore, 6.0 percent voted neither like nor dislike (3 respondents) and 4.0 percent said they strongly dislike (2 respondents). Based on the information we obtained from the questionnaire that we distributed generally half of the respondents agreed that is 23 out of 50 respondents that the appearance of our product will interest them to buy it. While 2 of them do not agree that the appearance of our product will interest them to buy our product because they do not see our packaging clearly.



HOW SATISFIED ARE YOU THE APPEARANCE OF THUS PRODUCT?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	DISLIKE VERY MUCH	3	6.0	6.0	6.0
	DISLIKE SLIGHTLY	11	22.0	22.0	28.0
	NEITHER LIKE NOR DISLIKE	16	32.0	32.0	60.0
	LIKE SLIGHTLY	19	38.0	38.0	98.0
	LIKE VERY MUCH	1	2.0	2.0	100.0
	Total	50	100.0	100.0	

The bar graph shows Majority of respondent's 38.0 percent voted a little like (19 respondents). Further, 32.0 percent voted neither like nor dislike (16 respondents) and 22.0 percent said they dislike slightly very dislike (11 respondents) and 2.0 percent said they really like (2 respondents) In general, half of the respondents are satisfied with the appearance of our product, because based on the questionnaire we distribute 19 out of 50 respondents agree that the appearance of our product is interesting. However, there are 3 out of 50 respondents who disagree that our product is not interesting because they say our product already has someone who makes it.

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CRISPY CHICKEN FEET

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ABSTRACT

There is a lot of unused parts of chicken such as chicken heads and chicken legs,they are often discarded and wasted because people in Malaysia are less intrested in eating them and lack of knowledge about its nutrients.This product is aimed at consumer looking for variety of snacks that are on the market.We create a product based on chicken feet that are suitable for all ages.The purpose of this product is to diversity snacks that contain nutrients.Our project is about chicken leg skin which is a snack that is dried under the sun and friend until crisp.These snacks are made from variety of ingredients and are named after the type of the material used to make them .The project also targets snacks food enthusiasts. The methodology is we will make the product from the skin of the chicken feet, which comes from the chicken feet themselves. The process that we need to do to produce these crispy chicken feet is using a simple method. Firstly, we need to clean the chicken feet with clean water and cut all the chicken nails. Secondly, we must prepare hot water in a pot to boil the chicken feet. Thirdly, we need to chop ginger and garlic to put in the boiling water. Apart from that, we need to stew the chicken feet with chopped ginger and garlic using hot water that has been boiled.

Furthermore, we will debone the chicken feet using a knife. After that, the chicken feet that have been deboned will be dried using a drying method .Next, we will fry the chicken feet and lift them using strainer. Lastly, we will let the chicken feel oil strain and seasoned it with a flavor. The method that we used to study is by using quantitative method. This quantitative method was using a questionnaire to collect data. We were using a google form to collect all data that can be found easily by the respondents. This Google form contains some answers and questions that will provided and can be answered easily by the respondents. After that, all the data from the respondents will be recorded and collected. By converting a dish to snack might be a brilliant idea for more entrepreneur who excel in pursuing the food industry relatively. Lastly, the objective in this research has been achieve successfully.

1.0 INTRODUCTION

There is a lot of unused parts of chicken such as chicken heads and legs ,they are often discarded and wasted because people in Malaysia are less interested in eating them and lack of knowledge about its nutriensts. We took the initiative to change the perception of the public by producing the product based on chicken leg.

Problem Statement

- Chicken Feet being wasted
- Lack of product variety based on chicken feet
- Consumer lack of knowledge in chicken feet benefits.

Objective

- To identify consumers' trends towards chicken feet products.
- To identify consumers' acceptance towards chicken feet products.

2.0 LITERATURE REVIEW

Collagen has been found in low market value by-products of the chicken processing industry, such as skin, bones, and cartilage (all found in chicken feet). (Amir Mustafa).Thus, we found innovative way to create a product based on chicken feet. Malaysia's annual consumption of chicken is 50kg per person, the prime source of protein for Malaysians. This equates to 1.62 million tons of consumption per annum, of which 98.4%was supplied by domestic producers in 2019 (Hunter, 2022). Considering this factor, we took advantage by using the most waste chicken part which is chicken feet. Eating chicken feet may sound unappetizing to some people, but it is a delicacy in many Asian countries, including China, Vietnam, the Philippines, and Korea. People in other parts of the world eat chicken feet, too. Recipes featuring chicken feet are popular in Jamaica, South Africa, Trinidad, and a number of countries in South America (A, 2021). Collagen and gelatin from natural sources like chicken feet merit special attention because, although chicken feet are considered waste material in various countries, they contain important nutrients and have essential health beneficial properties. In Brazil, chicken feet are regarded as waste from the poultry industry because Brazilian consumers do not have a habit of using chicken byproducts like chicken feet and carcasses (Santana, et al., 2020).Most studies that investigated how people think about snacks and their features have typically only focused on these morally charged healthy versus unhealthy associations. Such a research format prevents a good understanding of what an ideal snack that meets both health and hedonic criteria should be like. When attempting to synthesize the apparent contradictory features of health and taste, it is almost impossible to avoid these moralized associations of healthy and unhealthy. We therefore conclude that people hold such idiosyncratic conceptions of ideal snacks that they do not lend themselves for a classification into one or more clear general ideal snack conceptions.

(Schlinkert, Gillebaart, Benjamins, Poelman, & de Ridder, 2020)Most studies that investigated how people think about snacks and their features have typically only focused on these morally charged healthy versus unhealthy associations.

Such a research format prevents a good understanding of what an ideal snack that meets both health and hedonic criteria should be like. When attempting to synthesize the apparent contradictory features of health and taste, it is almost impossible to avoid these moralized associations of healthy and unhealthy. We therefore conclude that people hold such idiosyncratic conceptions of ideal snacks that they do not lend themselves for a classification into one or more clear general ideal snack conceptions. (Schlinkert, Gillebaart, Benjamins, Poelman, & de Ridder, 2020).

Students were more attentive to negative nutrients when two attributes interacted. Price had the highest relative importance of snack characteristics followed by nutritiousness, social, taste, and convenience. Students were more likely to choose a snack in which their family eats even if the snack was low in nutrient content (Rusmevichientong, Jaynes, & Chandler, 2021). The "low-fat eating" subscale was split into healthy eating and low-fat eating (Kee et al., 2008). The "snacking and convenience" factor was split into three sub-scales - snacking, eating out, as well assweets. Therefore, the nine patterns of eating behaviors identified were (1) emotional eating, (2) eating outside, (3) cultural habits, (4) low-fat eating, (5) meal skipping, (6) snacking, (7) healthy eating, (8) planning for food and (9) sweets. Cronbach's α revealed a high internal consistency among the items of each component (Kheirollahpour, Shariff, Merican, & Danaee, 2020).

3.0 METHODOLOGY

The introduction of this chapter discusses the methodology in terms of suitable methods to run this crispy chicken feet product. There are various topics that need to be discussed namely production sampling, data collection methods and analyzing methods. This method is implemented using a quantitative method through a questionnaire. We made this questionnaire using a google form, we will distribute this questionnaire to the respondents to answer and provide for our production products. The population that we focused is based on the students of Kuantan Metro Polytechnic. We choose semester 5 students which consist of DHF 5A and DHF 5B classes as our respondents. To determine the sample size, we need to refer to the Morgan table to find out the total. For that, we found a total of 40 people that become our respondents. The sampling technique that our group used was convenience sampling. The method that we used to study is by using a quantitative method. This quantitative method was using a questionnaire to collect data. We were using a google form to collect all data that can be found easily by the respondents. This Google form contains some answers and questions that will be provided and can be answered easily by the respondents. After that, all the data from the respondents will be recorded and collected. Data were analyzed through the SPSS application system after successfully collecting data. Data collection is taken through Google form. The process that we use to produce this crispy chicken feet product is using a lot of methods such as stewing, chilling, deboning, drying, and frying.

The materials used to produce Spicy Chicken Feet:

INGREDIENTS	WEIGHT/QUANTITY
Chicken Feet	2kg
Cheese Powder	200g
Salt	40g
Ice	300g

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The research was carried out among students from semester 5 in Diploma Foodservice Halal Practice that studied in Polytechnic Metro Kuantan. Based on findings, there are 40 students that involved in this research based on morgan table sampling.

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This segment focused on respondent's background such as age, gender and class.

Based on figure 1, 70% respondents age is 21-23 years old, 20% is 24-26 years old. This shows that majority of respondent are teenagers and suitable for snack product. 28 respondents is from 21-23 years old, 8 respondents is from 24-26 years old, 3 respondents is from 18-20 years old and 1 respondent is from 26-30 years old.

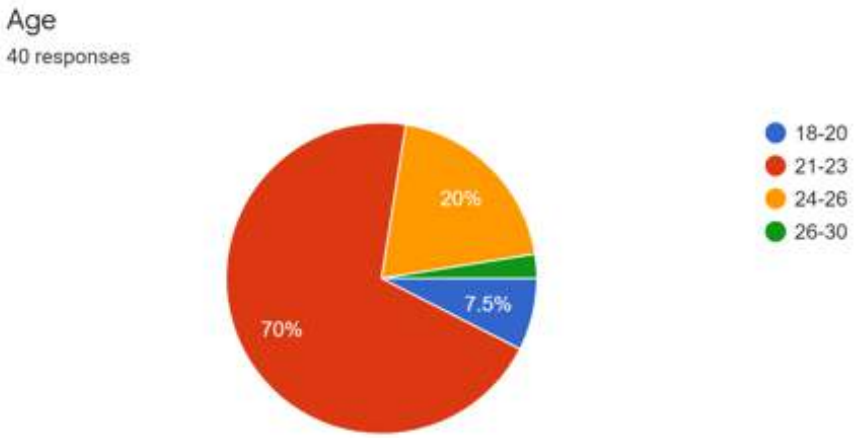

Figure 1 shows respondent's age

Based on figure 2, it shows respondent's gender. 62.5% which is 25 respondents are from female and 37.5% which is 15 respondents are from male. The majority in this segment is female which likely to have more interest in snacking behavior.

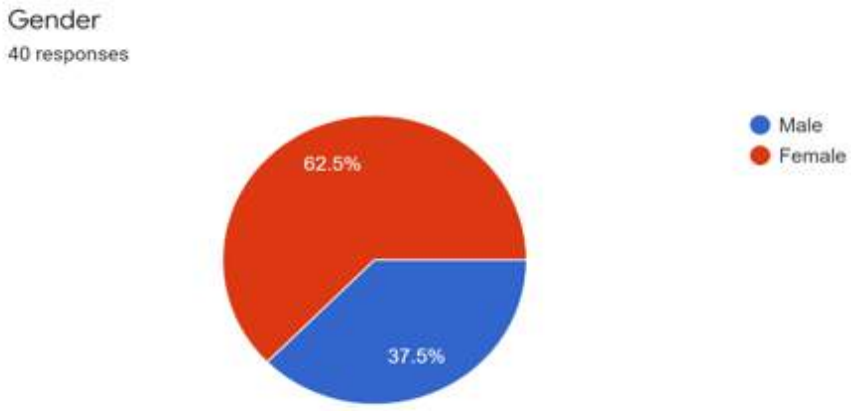

Figure 2 shows respondent's gender

Based on figure 3, it shows respondent's class. 52.5% which is 21 respondents are from DHF5B and 47.5% which is 19 respondents are from class DHF5A.

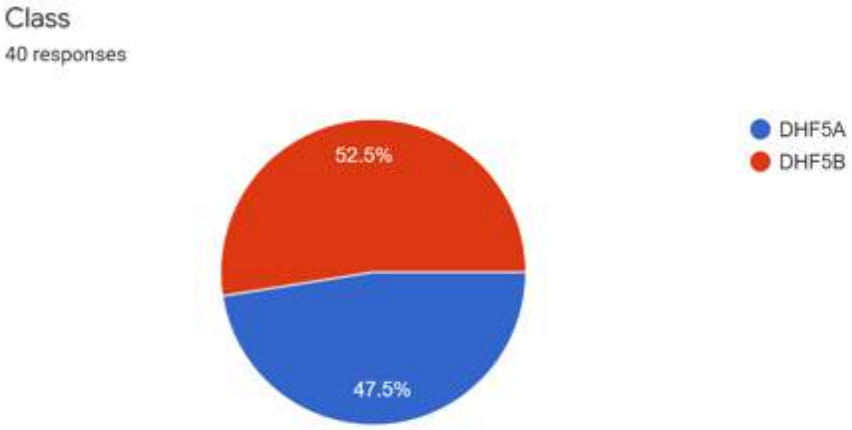

Figure 3 shows respondent's class

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This segment is about consumer tendencies toward chicken feet product and benefits. The segment is focused on consumer knowledge and curiosity.

Based on figure 4, 87.5% which is 35 respondents interested in product based on chicken feet. 35 respondents agreed that they would spend their time to acknowledge chicken feet products.

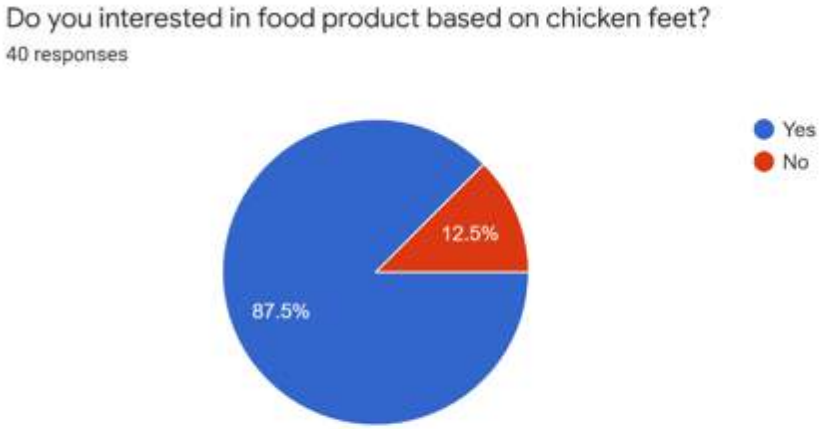

Figure 4 shows respondent's tendencies

Based on figure 5, it shows that 62.5% which is 25 respondents know about chicken feet benefits. We can conclude that most of our respondent has knowledge about chicken feet benefits toward our health.

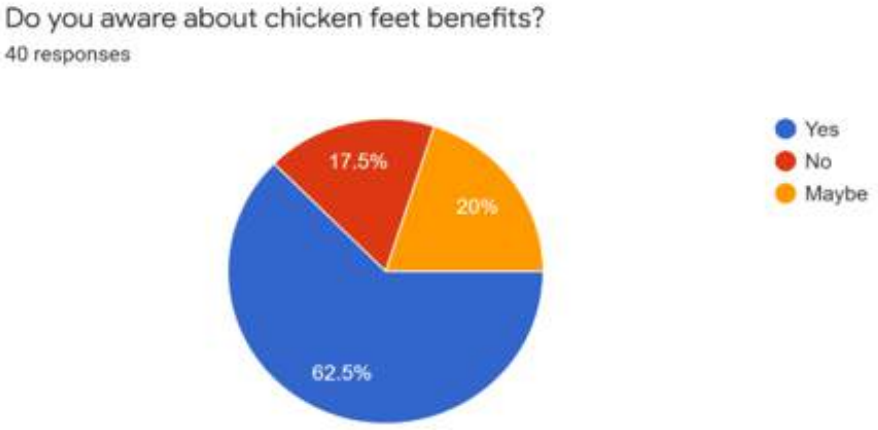

Figure 5 shows awareness about chicken feet benefits

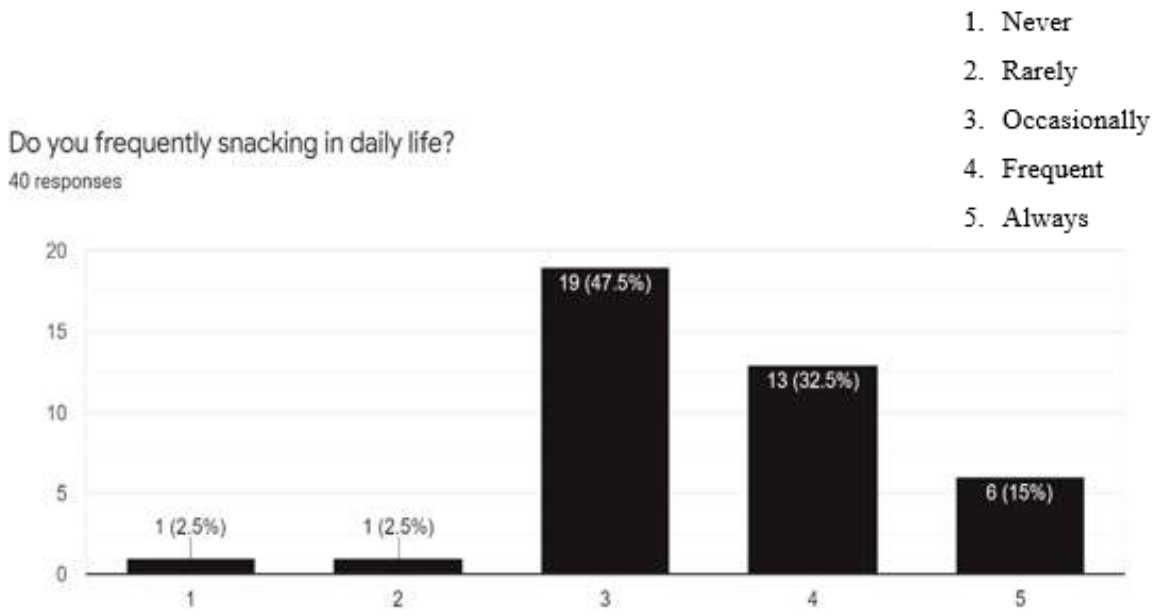

Figure 6 shows respondent's snacking behavior

Based on figure 6, it shows snacking behavior among respondents. 19 respondents occasionally snacking in their daily life. We can conclude that majority of respondents likely to eat snack in their daily life.

4.2 Determination of Product Test

This segment to evaluate our product based on respondent satisfaction. Sensory evaluation is held among respondent and recorded using hedonic test and Likert scale.

Based on figure 7, for crispiness 13 respondents vote for likeable. It shows that this product still can be improve for crispiness to suits consumer preference. For saltiness, 16 respondents vote for likeable, it shows that this product suits the level of saltiness for snack type of product. For oiliness, 19 respondents vote neutral means that they neither agree or disagree the saltiness of this product. For color, 17 respondents vote likeable, it shows the color of this product is acceptable and still can be improve for commercialized. For looks, 12 respondents vote strongly likeable means the respondents agreed that the product is good enough from their first perspective.

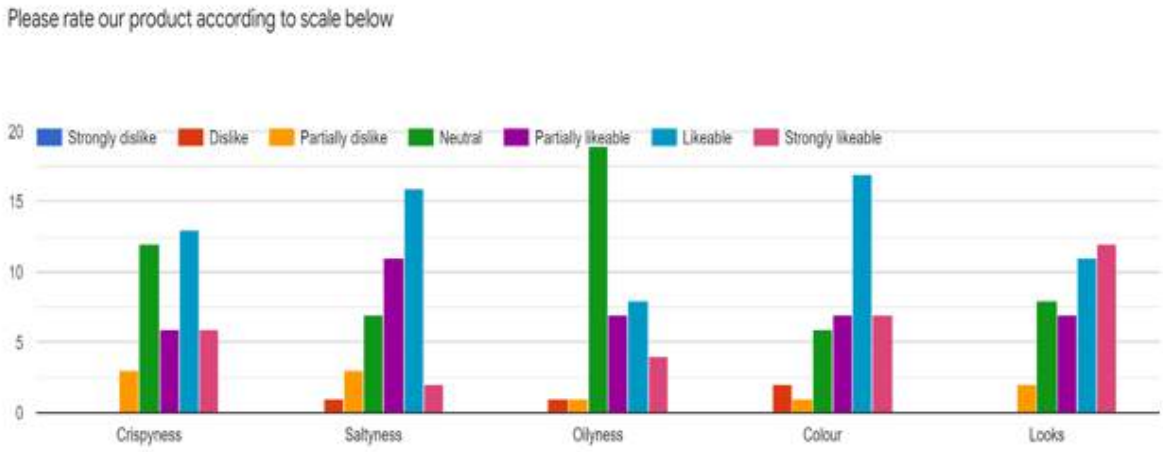

Figure 7 shows respondents satisfaction based on their categories

Based on figure 8, for looks of the packaging 13 respondents vote likeable means that thepackaging is suitable for the product and can be improve. For logo design, 16 respondents votefor likeable means that the logo is acceptable and suitable for the product. For the informationon the packaging 14 respondents vote for likeable means the information on the labelling in goodand informative for the product. For the size, 16 respondents vote for likeable means the productis suitable and meet the expectation. For the convenience of the packaging, 14 respondents vote for likeable as we use zip lock packaging to seal the product to avoid the product oxidate.

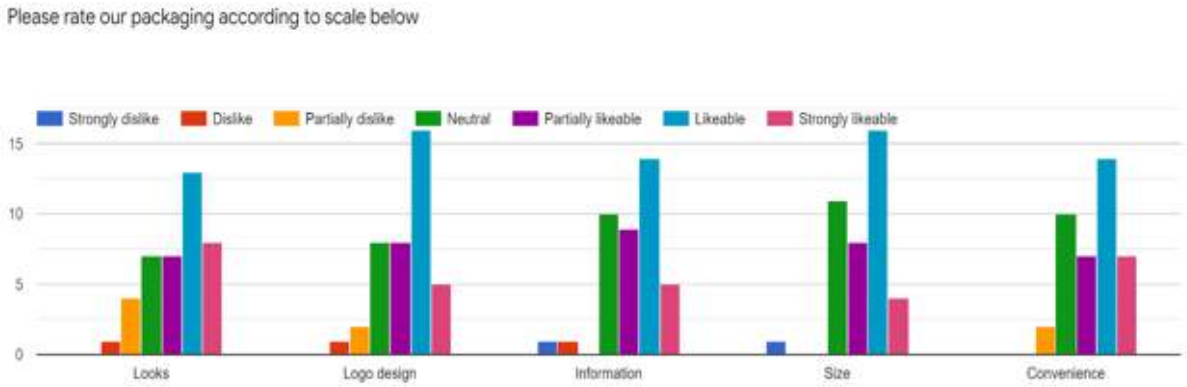

Figure 8 shows respondent's acceptance towards product packaging

5.0 DISCUSSION

Based on the findings above, it can be said for the sensory evaluation that the product is acceptable for consumer from the product itself and the packaging also. The crispiness, oiliness, saltiness, color and looks is suitable for snacking among consumer. Although, chicken feet might be not acceptable for some people but when it turns to snack, most of respondent accept the product with a good rating result. For the packaging itself, the comment was made by a panel from innovative showcase that the logo is confusing but it can be improve by designing a better minimalist design logo to avoid misunderstood among consumers. But for respondent, majority of them vote for likeable in each looks, logo design, information, size and convenience.

6.0 CONCLUSION

The product and packaging is acceptable for the target sampling for both classes DHF5A and DHF5B. It shows that this product can be improve in many aspect. From the looks of it, the product still can be manufactured by industries to speed up the process. We can conclude this type of product can go further in food industry. Crispy chicken feet is proved to be acceptable among consumer. The process of making the product is quite difficult and the product can be stored up to 2 weeks in room temperature between 25-30o c. On the other hand, people tend to consume snack frequently during leisure time and this product is more likely to be eaten by this type of consumer. The chicken feet also has many variety dish among Chinese, Taiwanese and many Asian countries. By converting a dish to snack might be a brilliant idea for some entrepreneur who excel in pursuing the food industry relatively. Lastly, the objective in this research has been achieve successfully.

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BANANA PEEL SAUSAGE

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ABSTRACT

We chose to make Banana Peel Sausage because to reduce garbage disposal in areas where consumers or sellers use bananas as the main ingredient. The problem is often the banana peel emits a foul odour causing the environment to become dirty. So we want to produce banana peel based products into sausages in order to reduce a bit of garbage dumping. We will make data analysis using google form and distribute to several places around Kuantan that use bananas as the main ingredient. The study was successfully evaluated from 40 respondents who answered correctly from the questionnaire given to them, based on a sample of outsiders namely banana entrepreneurs, traders selling fried bananas, bakeries and the general public. A total of 40 respondents were selected to test respondents who were able to test the product thoroughly based on (texture, taste, smell, color and overall). Analytical data showed the majority were satisfied with the banana skin sausage products we produced. We use banana skins (chestnuts) taken from a cake shop that makes banana cakes. Moreover, After the data from the respondents 'questionnaires are collected, modifications to the product quality must be made. In addition to the adjustments that need to be made in improving the shape, color is among the many accepted suggestions. Since the information comes from the questionnaire, its quality needs to be improved. In addition, improve the market strategy for the manufacture of these products in all Malaysian markets. Also, be aware of the needs of the local market and create a cooperation strategy.

1.0 INTRODUCTION

Problem Statements

i)Dumping of unused banana peels

There is a lot of dumping of unused banana peels because people are unaware of other uses which are banana peels and throw them away in some places which causes the banana peels to become dirty waste.

ii)Emitting a foul odour causes the environment to become dirty

From the disposal of banana peel the environment will cause it to stink and the environment to become dirty. Hence, our products are environmentally friendly.

Objective

Clear objectives have been recorded to ensure the product is known before the product is produced successfully. The first objective is to produce an innovative product based on banana peels, namely banana peel sausage. Many people do not know that banana peel is edible and has various benefits from it. Banana peel also has good nutrition for our body.

The second objective is to reduce the dumping of banana peels, according to the study there are many dumping of waste based from banana peels that have been wasted. Perhaps with this innovation, people can reduce the disposal of banana peels

2.0 LITERATURE REVIEW

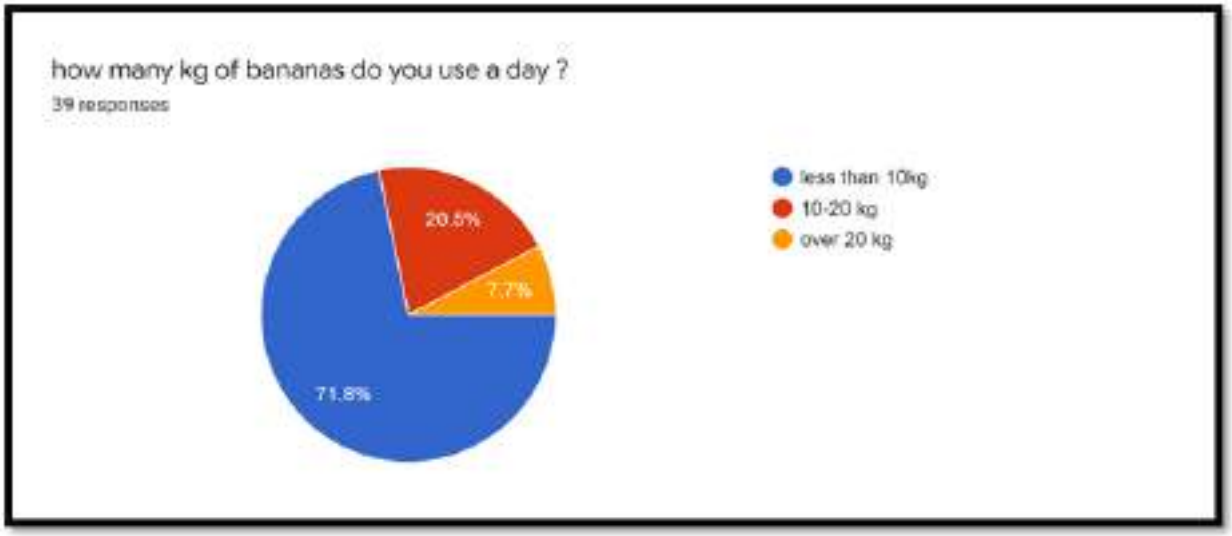
Related topic

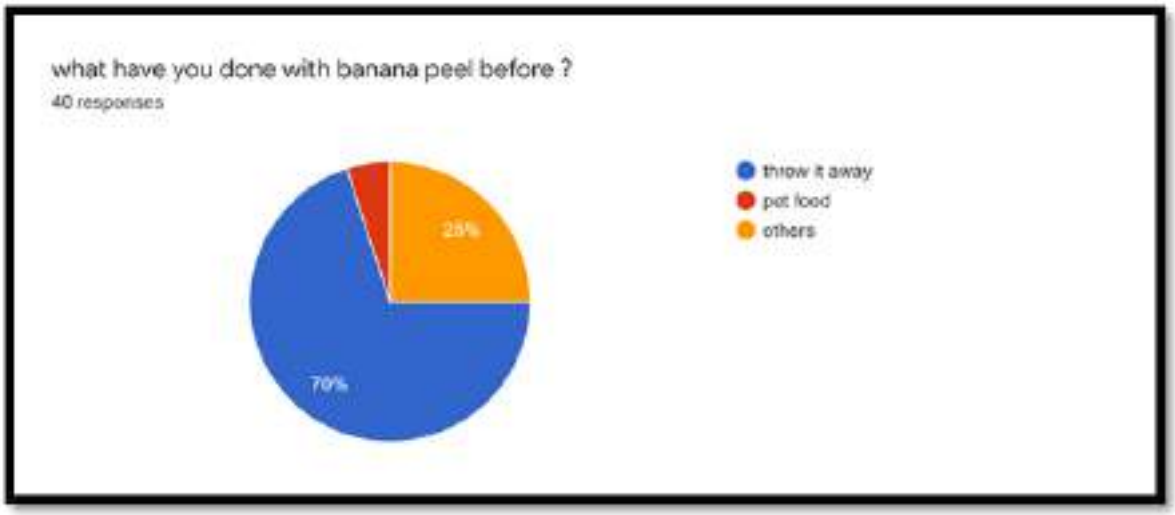
A literature review is an overview of the previously published works on a specific topic. It can refer to a full scholarly paper or a section of a scholarly work such as a book, or an \r article. A good review can ensure that a proper research question has been asked and a proper theoretical framework and/or research methodology chosen. Banana peel also have its own benefits. Banana peels are used as food for animals, an ingredient in cooking, in water purification, for manufacturing of several biochemical product., banana peel rich in antioxidants, fiber and essential nutrients, helps brighten the skin and reduce wrinkles. It even acts as a moisturizer and helps in hydrating the skin.

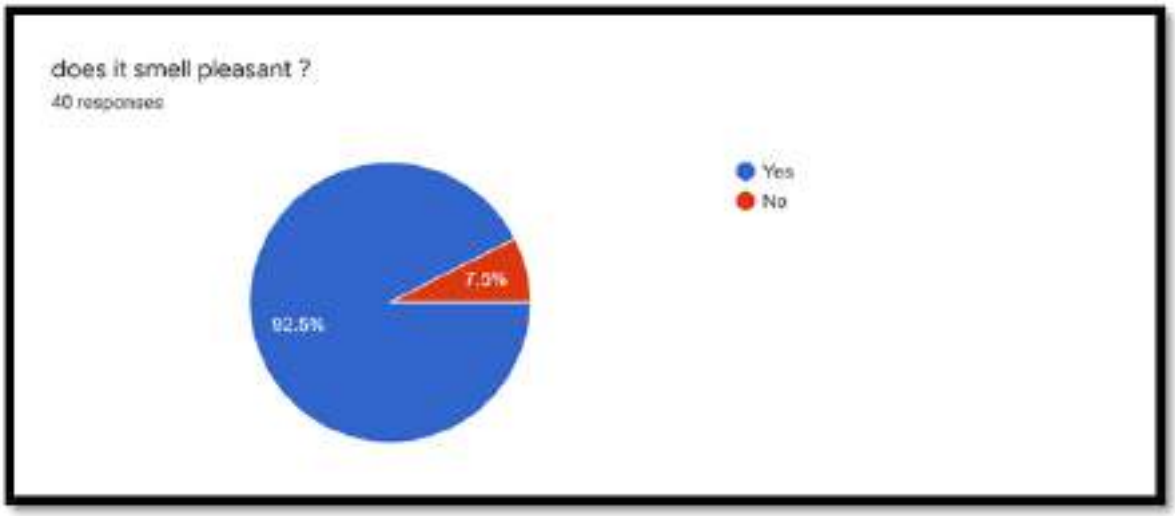
METHOD	
STEP 1: Prepare all the ingredient	
Step 2 : Soak the banana skin with salt water and a little vinegar	
Step 3: Mix all the ingredients, namely chicken, scallions, garlic, ginger, chili,	

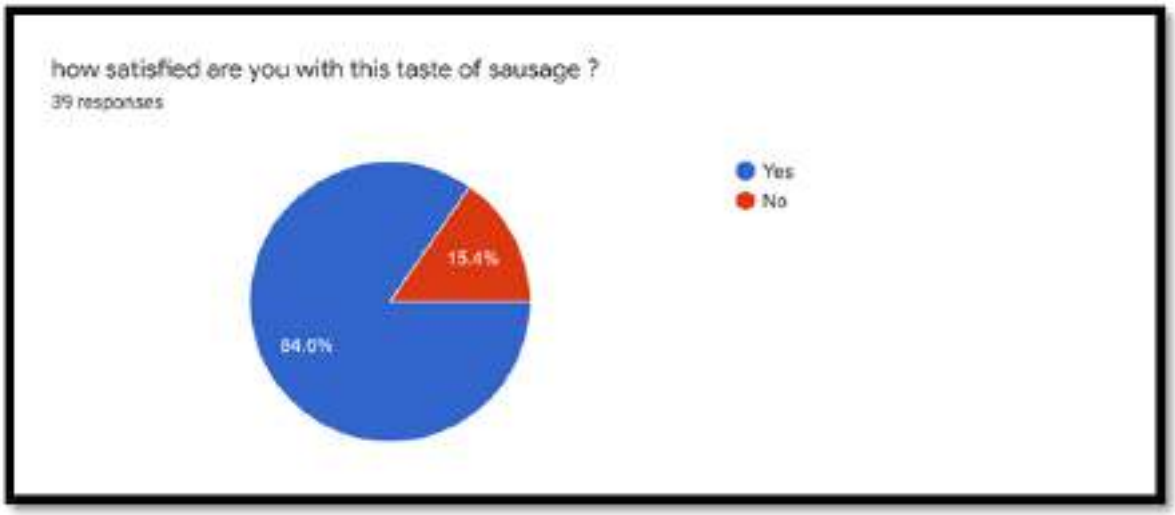
-Instrument Development (Questionnaire)

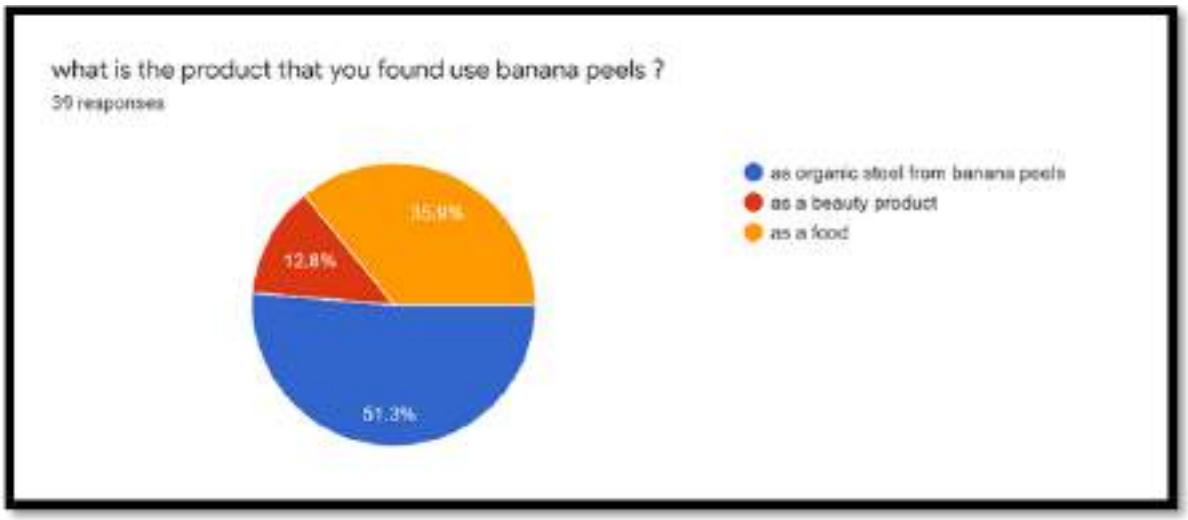
Section	Questionnaire	Respondent based on product
Section A (demographic)	Gender	40
	Age	40
	You as current employment status)	40
Section B (consumer preferred on product)	How many kg of bananas do you use a day?	39
	do you agree that banana peel can be used as a product?	40
	what have you done with banana peel before?	40
	In your opinion, what can you do with old banana peels?	40
	what is the product that you found use banana peels?	40
	does banana peel emit a foul odor that contaminates your area?	40
Section C (level of acceptance preferred by consumer)	does it smell pleasant?	40
	does it smell like regular sausage?	40
	how satisfied are you with this taste of sausage?	40
	does the look of a banana peel sausage pique your interest to eat?	40
	how satisfied are you with this appearance of sausage?	40




what have you done with banana peel before ?
40 responses
throw it away
pet food
others
25%
70%


does it smell pleasant ?
40 responses
Yes
No
7.5%
92.5%


how satisfied are you with this taste of sausage ?
39 responses
Yes
No
15.4%
84.6%



-Sampling

The population we focus on is based on respondents in the Kuantan area. We selected respondents who sell fried bananas or sellers who use bananas as the main ingredient. We use google forms to collect all the data that is easily available by the respondents. This Google contains a number of answers and questions that will be provided and can be recorded and collected. The total number of respondents is 40 people in the Kuantan Area.

4.0 FINDING (Data analysis)

Data were analyzed through the SPSS application after successfully collecting data. Data collection is taken through google form. The data collected were processed and analyzed using descriptive statistics through the latest SPSS software. In SPSS software, we will use histograms to analyze our products. This histogram chart will help us make the best choice for our product. Histogram charts are classified as tools for comparing variables. In the food and beverage industry, as well as in media presentations, histograms are commonly used. Bar charts, histograms on the other hand, are a good method of representing categorical data. They are also a great way to display category data.

5.0 DISCUSSION

Discussion of the finding is presented in this chapter. The findings from the study are used to discuss whether the proposed hypotheses are supported. All research questions will be answered subsequently and finally the achievement of research objectives are determined. Vendors are provided with managerial implications and recommendations, to enable them to draft appropriate strategic in gaining consumer intention to purchase gluten-free food products. Finally, the contributions of the study are discussed based on the or ethical, methodological, practical approaches and end with suggestions for future research.

6.0 CONCLUSION

Consumers will be more aware of the benefits of using Banana Peel Sausage a result of the creation of this Banana peel Sausage product, since they will be aware that Banana Peel Sausage nutritional value and will be discarded. This product has a lot of potential in the Malaysian food business since Banana peel Sausage are unique in that they contain nutritional components and no other product makes like this.

Furthermore, Banana Peel Sausage to be an industry leader in diversifying types of sausages. From the first week to last week, we have made this project a success. Overall, the implementation of this innovative product has been successful and meets the objectives of the project. In fact, respondents have given good feedback, indicating that this innovation has benefited students and lecturer

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XPERT TMy GAMES – TOURISM ONLINE GAMES

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ABSTRACT

Learning through digital tools is one of the learning techniques among students nowadays. By using gadgets such as smart phones, tablets, laptops, students can engage in new learning styles to complete their assignments and review for final assessment exams. Some of the problems identified while learning the course DTM10093 Tourism in Malaysia are lack of understanding in learning and lack of interest in learning sessions about the topic on traditional food, races and traditional clothing. The survey consisted of 102 respondents of tourism students at METrO Kuantan Polytechnic who had studied this subject from semester 1 to 5. The analysis of student preferences about this game shows that the highest mean score is for “the content of the game used in this application is fun or not” with mean score of 4.58 followed by “the concept of game design” (4.53) and the lowest is “whether the game used is suitable for tourism students”(4.48). Overall, average mean for student’s preferences toward Xpert TMy was high with the mean score 4.52. Most respondents agree that this product can be one of the teaching and learning tools inside or outside the polytechnic. Thus, it shows that this product can be used as a teaching aid to help tourism students learn in details about the topic on traditional food, races and traditional clothing. In conclusion, the objective of this study were achieved in order to help students enjoy learning the topic on traditional food, races and traditional clothing in DTM10093 Tourism in Malaysia. Nevertheless,

this product can be commercialized to be marketed if there are some improvements such as diversifying the game methods and also the necessary information so that more information about tourism can be produced. Hopefully Xpert Tmy can help to increase students' knowledge of the information they need to know in the field of tourism and be able to learn tourism courses in a enjoyable way.

Keywords: game-based learning, student's preferences, tourism course

1.0 INTRODUCTION

Learning through digital tools is one of the learning techniques among students nowadays and they were preferred to learn through game. Game was primarily developed for fun and entertainment in order to attract students to participate actively in class. According to Almaiah et.al (2018), learning through games or to be called mobile learning was one of the learning techniques to enhance the learning and teaching of the students and lecturers. This also proven that learning process on game applications become more common among students because they are easily adapt with technologies and indirectly will affect the learning outcomes. Therefore, the researchers developed Xpert TMy online game which is digital game-based learning that focus on subject DTM10093 Tourism in Malaysia after they identified some of students having problems in memorized this subject. The problems that have been found were first, less understanding due to need to read a long notes. Second, lack of interest in learning session due to learning techniques which are not attractive and interactive for students. Third, most of the students easily getting bored in learning certain topic such as traditional food. Thus, to overcome these problems, the researcher has set three objectives which is to create digital game for DTM10093 Tourism in Malaysia named Xpert TMy. Second, to identify student's preferences on Xpert TMy and lastly to measure student's understanding on information in Xpert TMy.

2.0 LITERATURE REVIEW

In twenty first century learning, blended learning is one of the teaching approach that combine two or more leaning approach such as online and face-to-face. In online learning, game based learning have been chosen by students due to more attractive and interactive. Based on Yamin and Ishak (2020), gamification in learning can increase student's motivation and interest as well as improve students' achievement. Thus, learning through games can help students to understand better and make learning more interesting.

Besides, the study conducted by Chan, Wan and King (2021) proven that game flow in the game-based learning affecting learning outcomes especially in cognitive dimensions. This study also suggested that application of games-based learning in academic knowledge should be consider the game flow in order to enhance cognitive domains in learning experience. Hence, game-based learning can help students to memorize tourism information because it can test their cognitive level either understand or not with the terms given in the games.

According to Kirstavridou et.al (2020) in their research on Types of Game-Based Learning in Education: A brief state of the art and implementation in Greece, the success factors of game-based learning approach were uniqueness, immediate feedback as well as need to discuss with students to promote learning in digital games in higher education. In terms of student's preferences about game-based learning, the study by Ibrahim et.al (2011) shows that 86% of students prefer to use games in learning compared in class and almost 80% of the students agree the educational games help them to think critically. It shows that games will makes the courses more interesting and easy to understand the theoretical courses because they need to remember the specific terms especially in tourism courses.

3.0 METHODOLOGY

The method used is quantitative, where questionnaires distributed to 102 respondents of tourism students in Polytecnik METrO Kuantan. The students were from semester 1 until 5 that have been learned tourism terms in almost of the tourism courses. The questionnaires tested on the student's preferences on Xpert TMy in terms of their preferences on information given in Xpert TMy. The Likert scale was applied from score 1 to score 5 (strongly disagree, disagree, neutral, agree and strongly agree).

In addition, the data collected were analyzed using the SPSS program by using descriptive statistics such as mean and standard deviation to answer each of the study questions addressed. Based on the Table 1, if the mean score show the range 1.00-2.33, it means the student's preferences on this product were on the low level. If the mean score show the range 2.34-3.67, it means student's preferences on this product were on the moderate level and if the mean score show the range 3.68-5.00, it means the student's preferences on this product were on the high level.

Mean score	**Level**
1.00 – 2.33	Low
2.34 – 3.67	Moderate
3.68 – 5.00	High

Table 1: Mean Score Interpretation

4.0 FINDINGS (DATA ANALYSIS)

The finding of this research is based on the student's preferences on information given in Xpert TMy: Tourism Online Game. The result of the research was carried out based on percentage and SPSS analysis to identify mean and standard deviation to answer each of the study questions addressed. The details of the data analysis as shown in the Table 2 and Table 3 below:

Table 2: Percentage of student's preferences on information given in Xpert TMy

No	Item	Percentage of YES & NO	
		YES	NO
1	Information given in online game	94.1%	5.9%
2	Pictures used were suitable	95.1%	4.9%
3	This game help students to find the information about Tourism in Malaysia	97.1%	2.9%
4	The concept of the game were attractive	92.2%	7.8%

Table 3: Mean and Standard Deviation of Student's Preferences

No	Item	Mean	Standard Deviation
1	The game provided in this application were fun	4.58	.571
2	The information provided helps the students to find information in DTM10093 Tourism In Malaysia	4.52	.593
3	This application was suitable for DTM10093 Tourism in Malaysia	4.48	.671
4	The concept of game used was suitable and interesting	4.53	.640
5	The logo used for the games was suitable for DTM10093 Tourism in Malaysia	4.50	.656
	Overall Average	**4.52**	**.626**

5.0 DISCUSSION

Table 2 show the percentage of student's preferences in terms of YES or NO on information in Xpert TMy. The highest percentage of YES statement was "This game help students to find the information about Tourism in Malaysia" which is 97.1%. The lowest was 92.2% on "The concept of the game were attractive". However, majority of students prefer YES statement for the Item 1 until 4 in Table 2.

Table 2 show the mean score and standard deviation of student's preferences on Xpert TMy. The highest mean score of student's preferences was Item 1: The game provided in this application were fun with the mean score 4.58 followed by Item 4: The concept of game used was suitable and interesting (4.53) and the lowest was Item 3: This application was suitable for DTM10093 Tourism in Malaysia (4.48). The highest mean score indicate that the types of game provided were fun due to variety of games such as match up, game show quiz, balloon pop and find the match. Therefore, the students will not get bored playing this game as well as improve their knowledge on traditional food, traditional cloth and races in Malaysia. Second, students feel that the game used was suitable and interesting because this game flow allowed students to learn tourism in a fun way to earn the game points. While the lowest mean score was this application was suitable for DTM10093 Tourism in Malaysia because it helps students need to memorize the information on traditional food, the traditional cloth and races in Malaysia while they were playing this game.

Overall, average mean score for student's preferences toward Xpert TMy was 4.52. It proven that average mean score of student's preferences to this product was high as refer to mean score interpretation. Average mean score was high because most of respondents agree that this product can be one of the tools of teaching and learning inside or outside polytechnic. Thus, it shows that this product can be used as a teaching aid to help tourism students learn DTM10093 Tourism in Malaysia especially the topic on traditional food, traditional cloth and races.

6.0 CONCLUSION

In conclusion, we have achieved our objectives to create digital game for DTM10093 Tourism in Malaysia named Xpert TMy in order to help students learning traditional food, traditional cloth and races in Malaysia. Accordingly, students can also learn while playing and will indirectly attract students to learn. Through this application, students will be able to get brief information about food, clothing and race in Malaysia. This study found that students can accept learning through games which much easier to understand than read the notes. There are few suggestions to improve this product by add on another subtopic on tourism Malaysia such as wedding celebrations and cultures. Second suggestion is keep on information updated regularly to ensure the users get the latest information about traditional food, traditional cloth and food in this game. In addition, Xpert TMy just not for tourism students only, it is also created for all use, to let the user familiar or improve their knowledge about information of tourism Malaysia as well as can learn tourism courses in a fun way.

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SESSION I 2022/2023

FOODIES LAW GAME BOARD

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ABSTRACT

Nowadays, games can assist students in discovering an enjoyable and impressive learning method. Due to the pandemic and Malaysian movement control order, education is now extremely difficult (MCO). The purpose of this study is to determine the effectiveness of engaging students through board games and to present learning theories that support the use of games in learning food law in a concise manner. This survey-based study included thirty students from Polytechnics Metro Kuantan. The questionnaire is used to conduct quantitative descriptive analysis on this study. The findings show that some educational games have been successfully used to assess their effectiveness on student engagement and have been briefed by learning theorists who support the use of board games in the food law course.

Keywords: educational, game board, students Polytechnic METrO Kuantan, food law.

1.0 INTRODUCTION

Educational games are very important because the success of game-based learning can be increased because students can increase their knowledge through these games. Educational games are the result of students playing while learning about the subject of food law and achieving a high level of understanding through these games. Students can learn from their mistakes because of their deficiency and failing in achieving learning goals. A board game based on food law is a game involving questions related to food law, some tools such as dice and cards equally penalties, immunity, points and store sites in a board game provided in a set of board game rules. The issue in this study is that the Food Law course is uninteresting because it teaches theory. As a result, many students are disinterested in the subject. Furthermore, interaction between students and lecturers in the classroom is insufficient. According to Squire and Jenkins (2003), games encourage collaboration among players and thus provide a context for peer-to-peer teaching and the emergence of learning communities.

Objective

This game aims to determine the effectiveness of engaging students through board games for the DTF50173 Food Law course. Furthermore, to brief present the learning theory that supports the use of games in learning food law. This is to evaluate the effectiveness of students understanding related to the food law course. Moreover, it is to improve students' understanding of the theory and facts in food law course.

2.0 LITERATURE REVIEW

An educational game uses an instructional method to help learners to gain knowledge by engaging them in a competitive activity with preset rules where this could be seen in the study of (Alexander M.Whittam and Whitney Chow, 2017). According to Jonny (2016), has stated as students have limited vocabularies, comprehension is being at risk which often lead to limited education that a student may acquire. In addition, according to another report by (Gonzalez-Diaz et al., 2020) its use improves learning efficiency by facilitating not only the practical application of multidisciplinary knowledge acquired in the classroom but also the development of essential soft skills for working in a firm, such as teamwork, critical thinking, or problem-solving.

Theory/Conceptual/Model

In an era when many students are drawn to games or simulations, this is the ideal time to use a game as a training tool. The use of games has become the latest phenomenon in an attempt to fully engage students in learning. Reid et al., (2012) contend that the use of simulation games provides a better learning platform than traditional teaching methods. Additionally, it may be deduced that game-based learning enhances students' capacity for learning. A board game is a crucial instrument for teaching people about all subjects through hands-on and mental skill and knowledge development. It is also very practical, effective, and pleasant for all ages. This is supported by that claimed it allows students to gain experience managing projects in order to improve their time management, human resource, and communication skills (Shahrul Azmi et al., 2016).

3.0 METHODOLOGY

Product Development

The DTF50173 food law lesson is intended for the game. The Canva programed was used to design this game. The goal of this game is to help students better assess how much they know about the subject matter. The questions on food law cover chapters 1 through 4. Due to the fact that this subject is only offered to students in semester 5, this game is only available to them. The generated board game can significantly to boost student performance.

Quantitative/Qualitative/ Mix Method (Questionnaire Survey/ Interview/ Both)

Sections A, B, and C make up the three sections of the questionnaire. SPSS version 21.0 was used to analyze the data. Additionally, information that was gathered, handled, and examined using the questionnaire filling procedure. The data will also be examined to see if students support using games to teach food legislation.

Instrument Development (Questionnaire)

The questionnaire approach was used to examine this board game. Numerous demographic questions, including those pertaining to age, gender, religion, and race, are included in the questionnaire. This information is additionally drawn from various populations and sample sizes in this game. Because only semester 5 of the course DTF50173 Food Law and Regulation is studied, this study is only for that semester. There are 30 students in the sample. The evaluation model for this study is a standardized questionnaire. The survey uses a five-point Likert scale, with the options being strongly disagree (1), disagree (2), disagree (3), agree (4), and strongly agree (5).

Sampling

This study employs a board game from a food law course as a tool for the Polytechnic Metro Kuantan students' on hospitality project. It is conducted on 30 respondents (DHF 5A and 5B) of Polytechnic Metro Kuantan students, enrolled in the DTF50173 Food Law course.

4.0 FINDING

Section A: Respondent Demographics

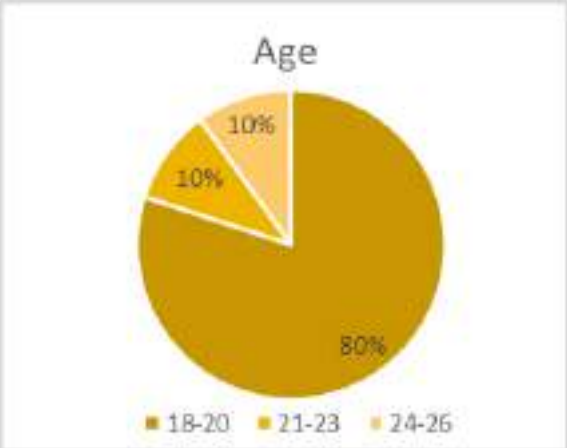

Figure 1.1 Age

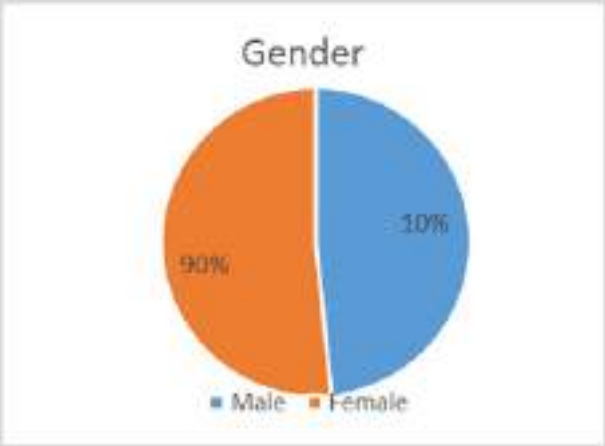

Figure 1.2 Gender

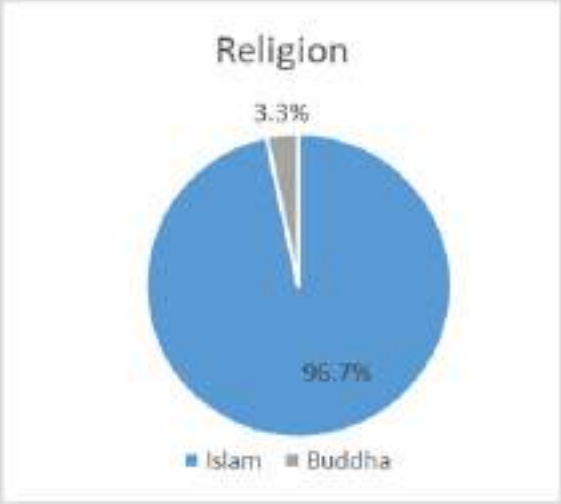

Figure 1.3 Religion

Figure 1.4 Race

Figure 1.5 Class

Section B: The Effectiveness Of Engaging Student Through Board Games

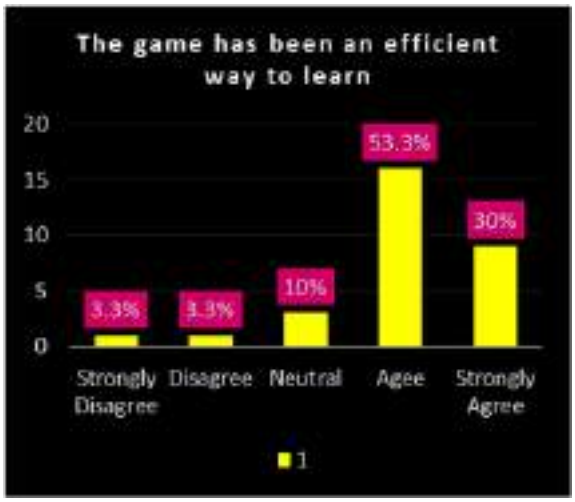

Figure 2.1 Graph of the game has been an game efficient way to lea

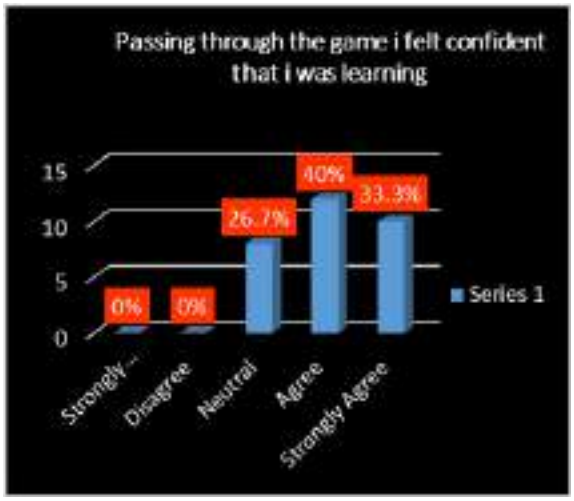

Figure 2.2 Graph of passing through the I felt confident that I was learning

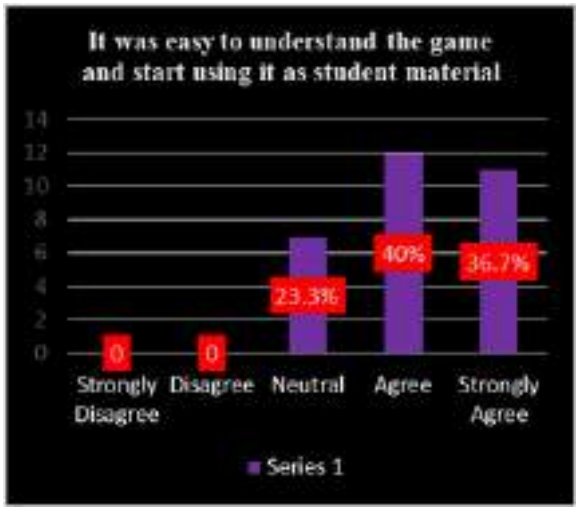

Figure 2.3 Graph of it was easy to understand the game and start using it as student material

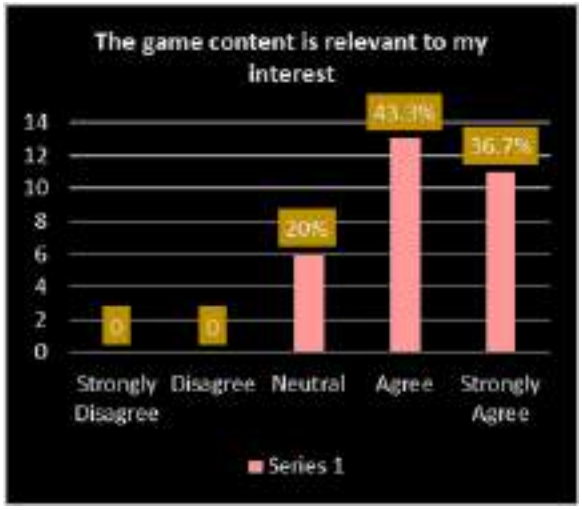

Figure 2.4 Graph of the game content is relevant to my interest

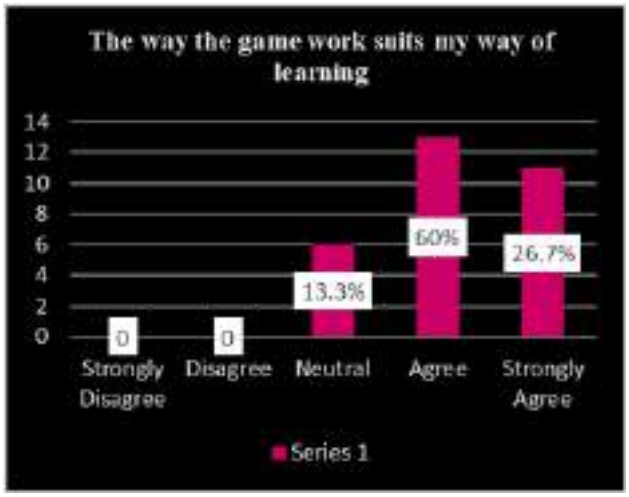

Figure 2.5 The game work suits my way of learning

Section C: Learning Theories That Support The Use Of Games In Learning Food Law

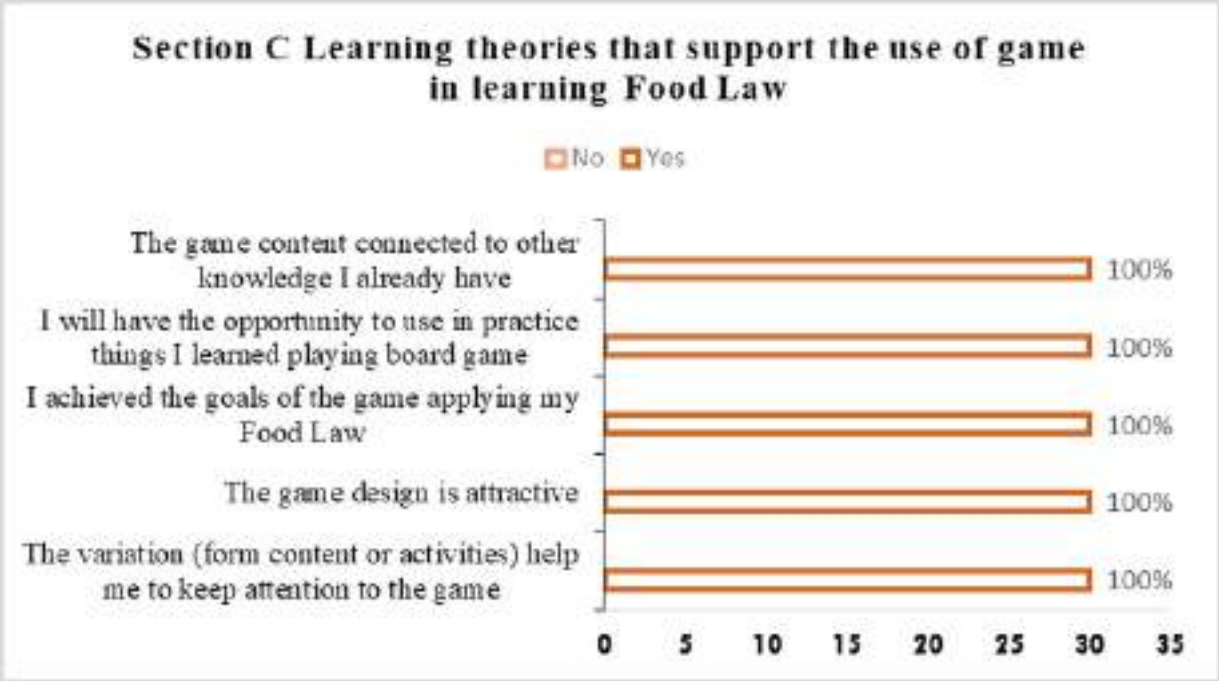

Figure 3.1 Graph of learning theories that support the use of game in learning Food Law

5.0 DISCUSSION

Based on the result, the Foodies Law board game have positive effect from respondents. This game has a huge impact on students because it can improve their knowledge on subject food law. Students also indicate that this game facilitates their learning because the questions in this board game related to assessment such as quizzes and tests. Furthermore, the Foodies Law game board is very helpful for students to review subject of food law. Moreover, students' achievement in this subject can be improved. Students are more likely to understand and learn in a fun way. Therefore, Foodies Law board game is the one way for students to acquire knowledge. Food Law is a challenging subject that requires memorization of fact. By designing board games that incorporate food legislation, can aid students in learning and memorization of these laws.

This board game has a very straightforward methodology because all students and lecturers can understand the questions, their respective responses, and the game's rules. Next, it can draw students' interest in studying the topic of food legislation. This makes it simpler for lecturers to educate because there are efforts that can grab students' attention in a classroom by using engaging teaching techniques. Therefore, it can help Polytechnic METrO Kuantan increase its course learning outcome (CLO) for students' performance in the assessment.

6.0 CONCLUSION

In conclusion, this game can improve students' skills and knowledge in the DTF50173 Food Law and Regulation course. In addition, the game was successfully carried out among the students. This board game showed the effectiveness of engaging student through course studied in semester 5 which is DTF50173 Food Law and Regulation. The game was improve as student were able to answer questions related to food law. Finally, this board game present learning theories that support learning in food law.

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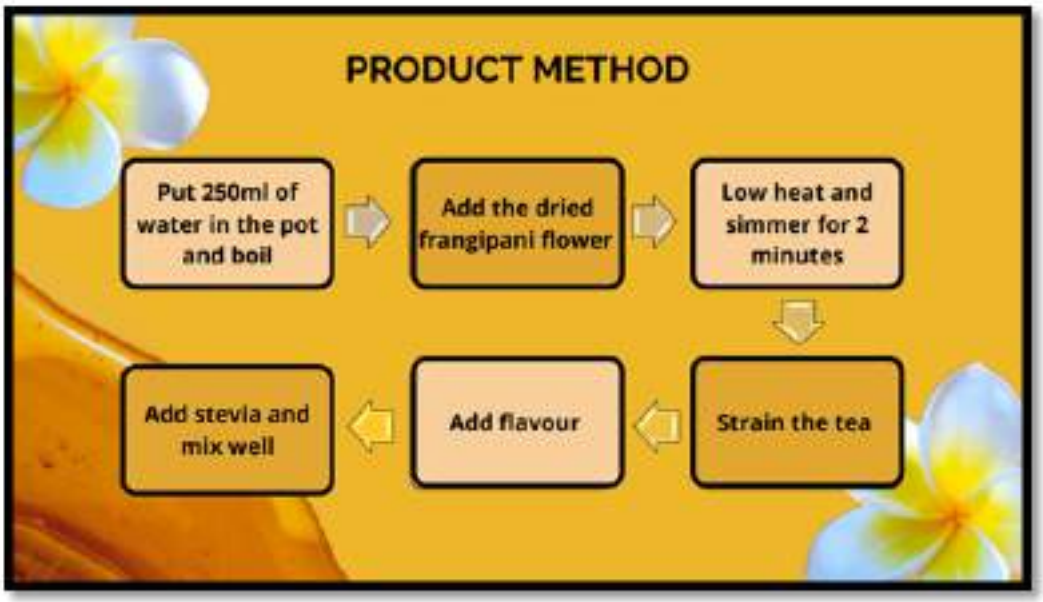
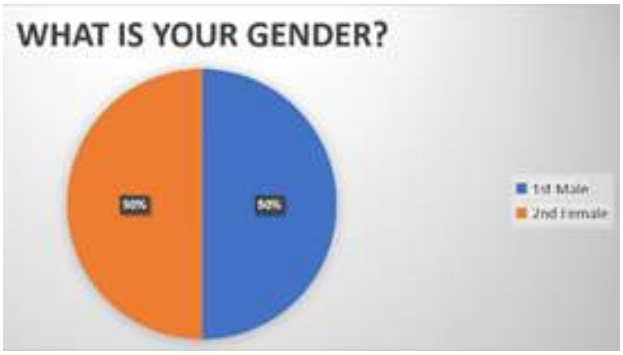
3.0 METHODOLOGY

This study applied the quantitative method, which is the collection of data through the use of questionnaires. The reason of quantitative methods was chosen to emphasize objective measurements and the statistical, mathematical, or numerical analysis of data collected through polls, questionnaires, and surveys. Questionnaires were distributed to 60 respondents from Politeknik Metro Kuantan and 40 respondents from our neighbourhood. The questionnaire is divided into three sections. First, Section A is designated to obtain general information relating to personal data of the respondents. Section B is about product characteristic and Section C is the product sensory. The primary data are obtained by questionnaire. Meanwhile, secondary data are collected from online articles, journals, books, example product from the market.

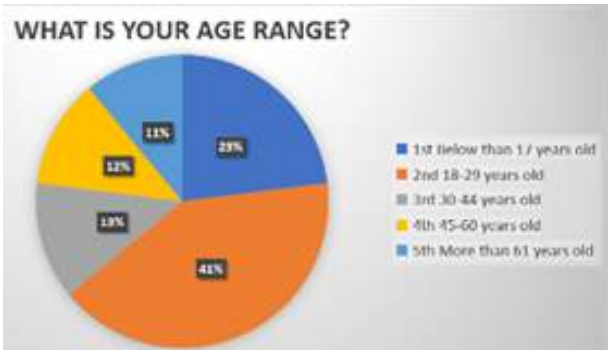
We will use pie charts to analyse our products that have been provided by the Kuantan Metro Polytechnic student, residents around Kuantan. By using this pie chart, it will make the right decisions for our products. It will also know the demand for frangipani flower tea. In a recent visual taxonomy of scientific communication, LucDesnoyers classifies pie charts as circular proportional histograms.1 such pie charts are frequently used in business and mass media presentations and sometimes in scientific publications. They may be easy for children to understand, especially when it is suggested that they see them as real pies. That said, pie charts are generally considered inadequate to represent quantitative information because they are difficult to read, interpret, and compare. (Beauty and the Beast, 2016)



4.0 FINDING (DATA ANALYSIS)



Based on the pie charts studied by gender, the most cited gender was by female with 50 percent (50 respondents) followed by 50 male respondents.



In term of age, respondent scores were most pronounced by respondent aged 18-29 years old at 41 percent (41 respondent), second highest was recorded for ages below than 17 years old at 23 percent (23 respondent), third highest was recorded for ages 30-44 years old at 13 percent (13 respondent) and fourth highest was recorded for ages 45-60 at 12 percent (12 respondent). For more than 61 years old was recorded at 11 percent (11 respondent).

NO	QUESTION	FORM RESULT BASED ON RESPONDENT SELECTED			
		PERCENT (YES)	FREQUENCY (YES)	PERCENT (NO)	FREQUENCY (NO)
1.	Do you like to drink tea?	99%	99	1%	1
2.	Do you ever heard about product based on *Kemboja* flower?	32%	32	68%	68
3.	Have you ever heard of *Kemboja* tea drink?	1%	1	99%	99
4.	Do you know the benefits of *Kemboja* (Frangipani) flower?	41%	41	59%	59
5.	Do you know 'YAANG'-*Kemboja* Tea Drink product contains natural ingredients?	77%	77	23%	23
6.	Are 'YAANG' -*Kemboja* Tea Drink products suitable for the whole family?	88%	88	12%	12
7.	Do you agree that 'YAANG' -*Kemboja* Tea Drink save energy and time?	92%	92	8%	8
8.	Do you agree that 'YAANG' -*Kemboja* Tea Drink promote a healthy ingredient?	92%	92	8%	8
9.	Is there 'YAANG' -*Kemboja* Tea Drink are have affordable price?	88%	88	12%	12
10	Do you agree 'YAANG'-*Kemboja* Tea Drink have potential and can be marketable in Malaysia?	91%	91	9%	9

NO	QUESTION	FORM RESULT BASED ON RESPONDENT SELECTED				
		STRONGLY DISAGREE	DISAGREE	NEUTRAL	AGREE	STRONGLY AGREE
1.	*KEMBOJA* (FRANGIPANI) FLOWER HAVE A LOT OF BENEFITS	0	0	19	32	49
2.	**YAANG** -*KEMBOJA* TEA DRINK EASY TO CONSUME	0	0	16	40	44
3.	**YAANG** -*KEMBOJA* TEA DRINK ARE SUITABLE FOR WHOLE FAMILY	0	0	9	40	51
4.	**YAANG** -*KEMBOJA* TEA DRINK CAN BRING ANYWHERE	0	0	11	41	48
5.	**YAANG** -*KEMBOJA* TEA DRINK CONTAIN HEALTHY INGREDIENTS	0	0	11	38	51
6.	I REALLY ENJOY **YAANG** -*KEMBOJA* TEA DRINK	0	0	17	32	51
7.	THE TASTE OF ORIGINAL FLAVOUR ARE ACCEPTABLE	0	0	8	36	56
8.	THE TASTE OF LEMON FLAVOUR ARE ACCEPTABLE	0	0	8	43	49
9.	THE TASTE OF HONEY FLAVOUR ARE ACCEPTABLE	0	0	10	48	42
10.	THE TASTE OF STRAWBERRY FLAVOUR ARE ACCEPTABLE	0	0	13	50	37
11.	THE COLOUR OF DRINK ARE ACCEPTABLE	0	0	11	48	41
12.	THE ODOUR OF DRINK ARE ACCEPTABLE	0	0	13	44	43
13.	THE PACKAGING OF DRINK ARE ATTRACTIVE	0	0	12	47	41
14.	THE LABELLING OF PRODUCT ARE ATTRACTIVE	0	0	1	48	51
15.	THE PRICE ARE AFFORDABLE	0	0	0	40	60

5.0 DISCUSSION

This study provides an overview of the attitude and perception of tea drinks among consumers. The expected popularity and taste of the tea drink is clearly evident. It is observed that consumers are very open when asked about new flavours or innovations for tea drinks.

The study also confirmed that this product is recognized to have high commercial value, therefore more efforts need to be made to increase its competitiveness in the market. Findings also found that different ethnic groups in Malaysia have different perceptions of this product.

Because these products are produced in different regions, the taste and flavour of the tea drink are not the same. Therefore, there is a need to produce standards to maintain the quality of products and preserve them for future generations. Product authenticity also needs to be preserved because previous studies have found that product authenticity is one of the most important features in local traditional food.

6.0 CONCLUSION

The business world is closely related to creativity and innovation. Our products are kemboja (Frangipani) tea drinks, most of the production of tea drink products are powder or ready to drink and regular tea drinks that are often found everywhere in stores. Without creativity and innovation, the business world will remain static without any innovation and change of a product.

Innovation makes a significant difference to the food business and fulfil consumer demand. It is generally accepted by economists that a large part of any country's economic growth is generated by new ideas and innovations. Food innovation offers great challenges and opportunities, but is essentially a risky business and strategic resource that can help food businesses to growth rapidly.

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DUTACEAE PELL

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ABSTRACT

Dutaceae Pell is an innovation product that uses citrus peel waste which is lemon and orange peel. This idea came because the disposal of fruit skins is the largest in Malaysia. It is not a good idea to dispose of fruit waste without the correct method because it can result in pollution and unwanted environment (Mahawar et al., 2020). Through this problems, the researcher has found that other than can be a good source of food additive, nanoparticle, prebiotic, pectin and as essential oil, the inherent bioactive compounds that present in citrus waste also good as dietary fiber. However, due to its richness in valuable compounds, citrus fruit waste viz. peels (flavedo and albedo), seeds, and pomace are considered potent bio-resource materials for various uses in the food and non-food. This study focuses on the ways of producing jam slices from citrus peels, however, the jam formula needs to be changed to produce the slices. Therefore, the purpose of this product is to reduce the disposal of this citrus peel waste as much as possible and further protect the Malaysian environment from uncontrolled fruit peeling. Through the innovation of new products, it can attract the attention of consumers, especially for students because this product is convenient and healthy. In conclusion, today's society is more easily influenced by something that is interesting and easy to use, thus the creation of this jam slice product can to some extent help those who work or have time constraints to prepare food.

1.0 INTRODUCTION

According to (Zema et.al, 2018) there is approximately 10 million MT of waste generated from global citrus production each year that had created a serious ecological issue. The largest percentage of citrus waste is from the peel and it is an environmental threat to many countries. The large number of peel wastes that produced from the industry are mostly thrown away and not converted into any useful products (Rafiq et al., 2018). About 120 million tonnes of citrus wastes are generated annually (Russo et al., 2021) and waste from the citrus industry is ranked among the highest when compared to other fruits in the food processing industry - Citrus 30–50%, pomegranate 40–50%, mango 30–50%, banana 20% (Parfitt et al., 2010; Chavan et al., 2018).These peels constitute an environmental menace in many developing and developed countries (Russo et al., 2021).

However, research activities are on-going in many countries on the possible utilization of the peels. The inability to convert these wastes to viable products of economic value has hampered the growth of the citrus industry in some regions of the world. Conversion of the wastes to energy has been the key focus for some countries (Ojewumi et al., 2019). Next, The huge amounts of wastes (especially peels) generated in the citrus industry are majorly discarded and not converted to any useful products (Rafiq et al., 2018). Considering the fact that citrus peels are an abundant source of polyphonic compounds with potentials for health benefits, many studies have been carried out on the peels in recent times (Ademosun et al., 2018).

The purpose of this study is:

1. To identify the level of acceptance of student IPTA at PMKu and POLISAS in Kuantan city towards citrus peel product.
2. To produce innovative product from citrus peel
3. To provide benefits and nutrients from citrus to the people who consume the product.

2.0 LITERATURE REVIEW

Lemon and lime peels disturb the environment as solid waste and make up about 40–50% of the total mass of citrus peels but are generally considered waste according to Balwinder Singh (June 2020). With the development of interest and consumption of citrus fruits, the level of peel waste also increases, leading to environmental burden. Disposing of fruit parts without proper treatment is harmful to the environment due to its undesirable and unsanitary nature (Mahawar et al., 2020). This residue covers the damaged part of the peel. Due to its large quantity and perishable nature, citrus peels are also a problematic waste material. Citrus peels invite microbes, flies, and produce mycotoxins, etc. Therefore, the use of citrus peel is necessary to be used as a product or food to avoid the occurrence of an unhealthy environment and not just an effort to increase income (Berk, 2016b).

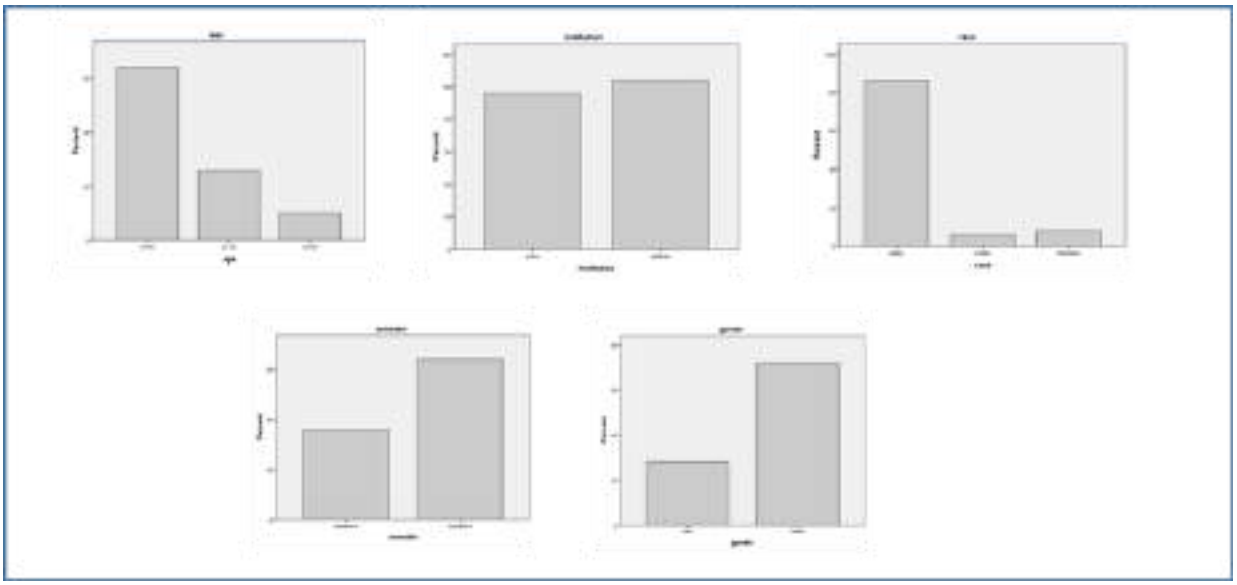
In addition, different parts of citrus residues can be widely explored in the food industry as additives in the preparation of confectionery products for industry or as a source of pectin, coloring or flavoring compounds. (Sharma, Mahato, Cho & Lee, 2017). Finally, as a powerful source of phytochemicals, citrus peels are used in the food, beverage, perfume, medicine and cosmetic industries (Wang, Chen & Lu, 2014). So, the rest of this citrus peel has many benefits that people don't care about. That's where we explain the benefits of citrus peels so that many people don't waste the benefits of citrus peels.

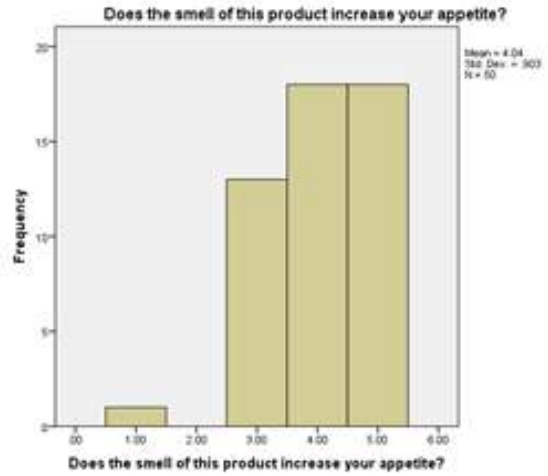
3.0 METHODOLOGY

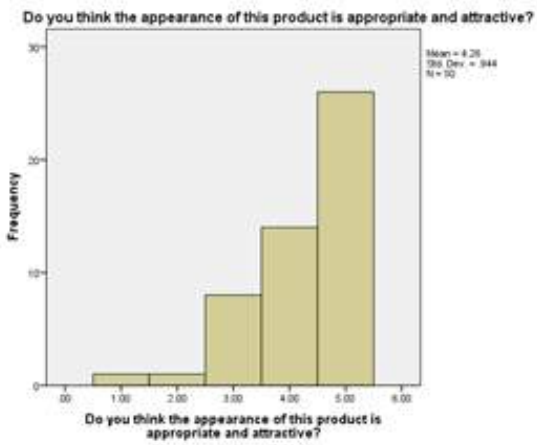
BIL	Process project
1	Prepared 500g of citrus peel consisting of orange and lemon peel
2	Clean wash and soak in warm water for 10 minutes
3	Cut the citrus peel into small pieces and boil on the stove with 800ml of water
4	Add sugar 400g, 4g of sweetener stevia, 10g of agar-agar powder, 10g of pectin powder, 10g citric acid powder and even 2 tablespoons of citrus juice.
5	Wait until it looks thick then turn off the fire and put it on the tray, compress it into square shape and chill in refrigerate
6	Cut it to size and shape and wrap it in plastic and seal it using a plastic sealing machine.

This study was conducted using quantitative methods. IPTA students from Politeknik METrO Kuantan (PMKu) and Politeknik Sultan Hj Ahmad Shah (POLISAS) in Kuantan were given a questionnaire via google form regarding their acceptance to the products. Respondent will answer their level of fondness for this product by using 5 Likert scale formats. Scale 1 refers to strongly disagree, scale 2 in turn refers to disapproval, while for a scale of 3 it refers to natural, then to scale 4 refers to agree and finally a scale of 5 refers to very agree. The questionnaire has 4 sections specifically section A, section B, section C and section D. The questionnaire related to demographics such as age, gender, race, semester and institutions. Besides for section B, C and D is related to objectives for this Dutaceae Pell. This survey was conducted for student in semesters 4 and 5 because they had learnt on sensory evaluation. Thus they are knowledgeable about evaluating a product especially in terms of smell, product appearance and taste. The sample size and student population is 50 people.

4.0 FINDING (Data analysis)





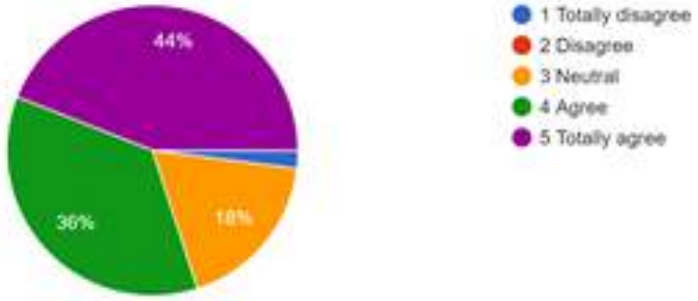


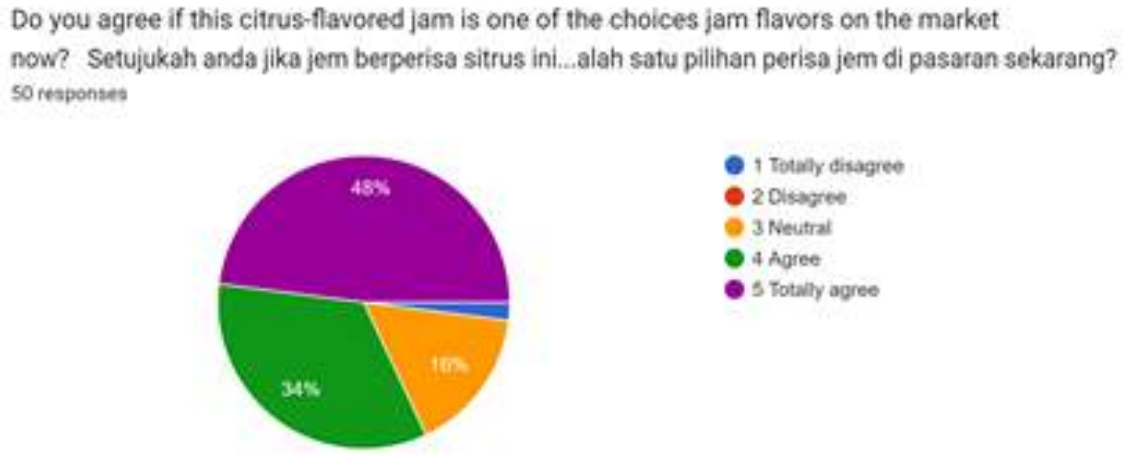
Did u believe that fruit peel waste is the highest waste in Malaysia? Adakah anda percaya bahawa sisa kulit buah adalah sisa yang paling tinggi di Malaysia?

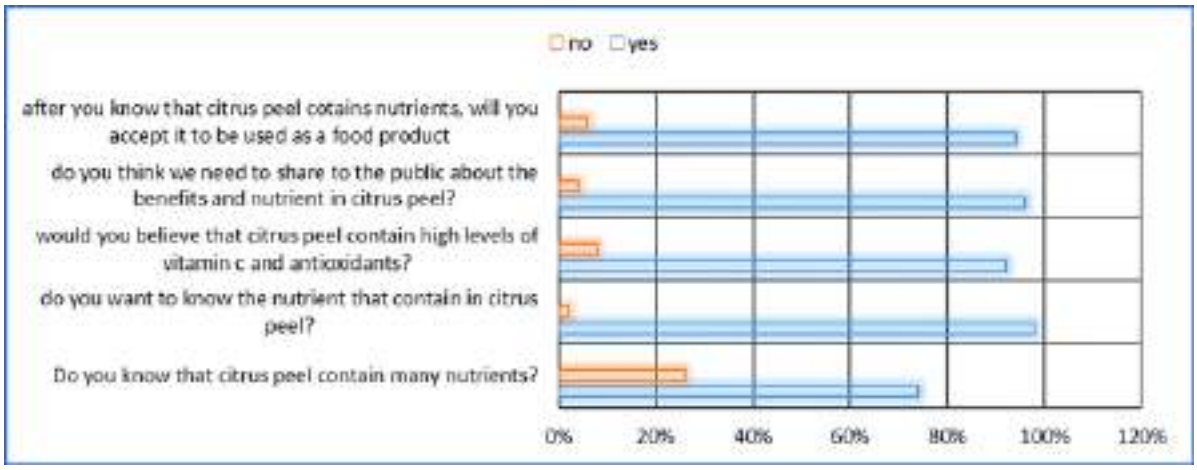
50 responses

Do you think this citrus peel is suitable to be used as a jam product? Adakah anda rasa kulit sitrus ini sesuai untuk dijadikan produk jem?

50 responses







5.0 DISCUSSION

Based on the respondent acceptance among PMKU and POLISAS student toward this Dutaceae Pell product is most of the respondent agree and accept the taste, flavour, appearance, smell and overall acceptability of this product. It show that this product has been well accepted by respondant that means the first objective has been successfully achieved. Respondents had agree that the citrus peel waste was turn into a valuable innovation product. Beside contribute to save the environment, this product also contain its own benefits from the citrus peel itself. In conclusion, this product has been successfully accepted by the students through sensory evaluation by trained panels, which are Food Service Halal Practice diploma students from PMKu and also students of Food Technology from POLISAS.

GO GRUNE TAPE

1RU+XGD%LQWL0 G$VUL 0 XKDP P DG,VP D $IL]L %LQ VP DLO $QL K6 KLUD %LQ LWD]DOL 6LWL
1 XU,Z DQL %LQWL1 DLU 1 DELODK + XGD%LQWL. DKDU

7RXULVP DQG+ RVSLWDOLW\' HSDUWP HQW
3RO\WHFKQLF0 (7U2 . XDQWDQ

QRUKXGD# SP NX HGX P \

ABSTRACT

7KH LQFUHDVH LQ IRRG Z DVWH WKDW KDV D QHJ DWLY H LP SDFW RQ WK H HQ YLURQ P HQ W WK DW LV Z RUU\LQ J QHHGV WR EH WDNHQ VHULRXVO\ 2 QH RI WKH E HVW Z D\ V WR P DQ DJH R R G WR Z HOO LV E \ FRP SRVWLQ J WKH Z DVWH WR D YDOXDEOH IHUWLOL]HU 7KH SUR G XFWLRQ R I H[LVWLQ J FR P SR VWLQ J FR P SOLFDWHG DQ G LWWDNHV D ORQJ WLP H IRU WKH Z DVWH WR GHFRP SRVH LQWR IHUWLOL]HU 7K LV UHVHDUFK DLP WR SURG X F FRP SRVW DSSOLDQFHV QDP HG * R * UXQH 7DS H Z K LFK LV D WS HF IFR P SRVW E LQ WK DW K D G LWLRQ DO HOHP HQWV LQFOXGHG Z DWHU UROOHU ILOWHU Z DWHU FR QWDLQHU DQ G FR P SRVW FDWFK P HQ W FR QWDLQHU 7K H LP SOHP HQWDWLRQ RI WKLV DSSOLDQFH LQ WKH 30 . X TNLWFK HQ DE HO WR IX OOO WK H RE MHFWLY H RI WK H UHVHDUFK LQFOXGH WR HQVXUH WKH 30 . 8 TV WX GHQWV DQ G VWDII DEOH WR P DQ DJH Z DVWH IU R P SDEULFDO FODVV KHOSV WR VLP SOLI\ WKH SURFHVV R I P DNLQ J FR P SRVW DQ G WR UHG XFH IR R G Z DVWH IUR P 30 . XTV NLWFKHQ ODE 7KLV VWXG\ XVHG WK H TX DQWLWDWLY H UHVHDUFK E\ GLVWULE XWHG TXHVWLR Q QDLUH P HWKRG WKURXJKRXW UHVSRQGHQWV DP RQJ 30 . X TV WX GHQWV WK H Q WK H GDWD DQ DO\]HG WK URX J K 6366 7KH UHVXOWV VKRZ HG * R * UXQH 7DS H FR QWULEXWHV S RVLWLY H HIIHFW WR P LQLP L]H WK H Z DVWH DQG WKH SURGXFW SHUIRUP HIIHFWLYHO\ %HVLG HV WK H S UR G XFW DQ IX OO HIDFLOLWDWH WK H S UR G XFWLRQ RI FRP SRVW DQG VKRUWHQ P RUH WLP H IRU OHI WR YHU R R G WR FRP SRVW

1.0 INTRODUCTION

7KH LQFUHDVH LQ WKH SRSXODWLRQ LQ 0 DOD\VLD LV WK H P DLQ IDFWRU LQ WK H LQ FUHDVH LQ IR R G Z DVWH) RRG Z DVWH WKDW LV QRW P DQDJHG Z HOO Z LOO KDY H DQ HJ DWLY H LP SDFW RQ WK H HQ YLURQ P HQ W $P R Q J WKH P DMRU LP SDFWV DUH JURXQG Z DWHU RU VX UIDFH Z DWHU S ROOXWLRQ DLU S ROOXWLRQ DQ G VRLO S ROOXWLRQ FDXVHG E\ RSHQ EXUQLQJ 2 QH RI WKH HDUOLHU DWWHP SWV WR X VH D V\ VWHP VDS SRUDFK IRU VROLG Z DVWH P DQDJHP HQW Z DV E\ &ODUN LQ &OHYHODQG 2 KLR &ODUN &ODUN IR X QG WKDW S RSXODWLRQ WUHQGV GHQVLWLHV DQG GZ HOOLQJ XQLWV G HQLWLHV K D D VLJ QLILFDQ W LP SDFW R Q VROLG Z DVWH P DQDJHP HQW : DVWH P DQDJHP HQW LV LP SRUWDQW WR VWD\ VDIH WK H Q YLURQ P HQ W IUR P WK H WR [LF HIIHFWV RI LQRUJDQLF DQG ELRGHJUDGDEOH HOHP HQ WV VHWWHQ LQ J Z DVWH 3UR SHU Z DVWH P DQ DJHP HQ W DOVR OHDG WR LP SURYLQJ KXP DQ KHDOWK VLQFH Z DVWH UHOHDVH GLR [LQ VDQ GRWK HU WR [LQ VDUH GDQJHURXV HVSHFLDOO\ Z KHQ WKH TUH GLIIX VHG LQWR WK H DLU S R I SHRSOH ZKHUH WK H 0 RUHR YHU WR [LF FKHP LFDOO\ IURP Z DVWH OHDNLQJ LQWR ERGLHV DQ G VWUHDP V RI Z DWHU FDQ DOVR EH KDUP IX O WR S R I SHR SOH Z KR FRQVXP H WKDW Z DWHU RQ D UHJXODU E DVLV $ Q RWKHU UHDVR Q Z K \ Z DVWH P DQ DJHP HQ W LV HVVHQWLDO LV LWV DELOLW\ WR ORZ HU SURGXFWLRQ FRVWV

7KH SUREOHP VWDWHPHQW IRU WKLV SURGXFW LV WKDW WR R ZDVWH FDQ Q EHHWDQ DIIG SUR SUOHG XWRI ODFN RI DZDUHQHVV UHJDUGLQJ ZDVWH PDQDJHPHQW WR PKRPH ,QDG GWLR QFR PSR VWLQJ WDNHV DOR Q J WLPH WR EHFRPH SODQW IHUWLOL]HU 7KLV LV EHFDX VH R R G VWLOO DFFR PSR VWV VOR Z\O

&OHDU REMHFWLYH ZDV UHFRUGHG WR HQVXUH WKDW WKH* R * UX Q 7DS H LV D JUHDW LQLWLDWLYH WR IDFLOLWDWH WKH SURGXFWLRQ RI FRPSRVW 7KH R EMHFWLY HV DUH
7R HQVXUH WKH VWXGHQWV DQG VWDII IURP ' LSOR PD LQ + DODO) R R G FDQ PDQDJH WKH ZDVWH IURP WKHLU SUDFWLFDO FODVV
7R VLP SOLI\ WKH SURFHVV RI PDNLQJ FRPS RVW
7R UHGXFH IRRG ZDVWH IURP 30 . XDQWDQ

2.0 LITERATURE REVIEW

7KH LVVXH RI ZDVWH PDQDJHPHQW DQG GHFOLQLQJ VRLO IHUWLOLW\ IRU H[DPSOH LQ 0 DOD\VLD ZKHUH WKLV FRXOG EH VHHQ LQ WKH VWXG\ RI 5HY (Q YLUR Q6FL %LR WHFK Q R O ZKHUH UHVHDUFKHU VWDWHG WKDW QRZDGD\V DJULFXOWXUDO XWLOL]DWLRQ RI PX QLFLS DO VROLG ZDVWH 0 6: LV R QH RI WKH PRVW SURPLVLQJ DQG FRVW HIIHFWLYH RSWLR QV IR U PDQ DJLQ J VROLG ZDVWH + R ZHYHU WKHUH LV DOZD\V D SRWHQWLDO WKUHDW EHFDXVH 0 6: PD\ FR QWDLQ V WR[LF SROOXWDQWV &RPSRVWLQJ RU YHUPLFRPSRVWLQJ RI RUJDQLF ZDVWH LV DQ DJHQG WR DLQ Y\ROR SURILWDEOH FRVWV 5XJJLHUL HW DO DQG * DMDODNVKPL HW DO VWDWH WKDW FR PSR VWLQJ KDV D DOR ZHU RSHUDWLRQDO FRVW GXH WR ORZ HU FDSLWDO DQG HQHUJ\ UHTXLUHPHQWV

7KH LVVXH RI ZDVWH PDQDJHPHQW IRU H[DPSOH LQ 0 DOD\VLD 0 DOD\VLD KDV H[SHULHQFHG DVLJ QLILFDQW FKDQJH WRZDUGV WKH \HDU ZKHUH WKLV FDQ EH VHHQ LQ 0 RK ZKHUH UHVHDUFKHU VWDWHG WKDW WKH FRXQWU\ VWLOO IDFHV WKH SUR EOHP R I ZDVWH PDQDJHPHQW ZKLFK LV WKH FR XQWU\V HQYLURQPHQWDO LVVXH WKDW PRVW SURPLQHQW LQ YLURQPHQWDO LVVXH VDUH DQ LPSRUWDQW DVSHFW IRU WKH FRXQWU\ WR EHFRPH D IXOO\ GHYHORSHG FRXQWU\ $V PDQXIDFWXULQJ DQG VHUYLFH EDVHG LQGXVWULHV VKRZ JURZWK WRZDUGV WKH HFR QR PLF JUR ZWK HQYLURQPHQW WKDW LQ VSLUHG WR VKLIW WKH HFRQRP\ WR WKLV VLGH ZKLFK LQ WKH IR R G LQGXVWU\ IR R G ZDVWH LV FR PPR Q) R U H[DPSOH LPSURSHUO\ SUHSDUHG IRRG WKDW LV QRW QHHGHG EHFR PHV ZDVWH 5RIIPDQ -D\DQWKDG HYL HW DO : LWK WKDW WKLV VWXG\ LV WR H[DPLQH EHWZHHQ XVHUV DQG QRQ RZOHGJH RI LQQRYDWLRQV WRZDUGV VXVWDLQDELOLW\

&RPSRVWLQJ LV DQ HIILFLHQW DQG HIIHFWLYH ZD\ WR FRQYHUW VROLG RUJDQLF ZDVWH LQWR IHUWLOL]HU ZKLFK FDQ EH UHWXUQHG WR DJULFXOWXUDO ODQG DQG GDWH WKH DPHQW PH UHG XFHSR OOXWLRQ $V UHSRUWHG E\ 7LDQPLQJ &KHQ 6KLZHQ =KDQJ DQG =HQ J ZLH<X DQ VROLG RUJDQLF ZDVWH FRPSRVWLQJ KDV QRW EHHQ ZLGHO\ XVHG ,WV GHWHUPLQHG E\ FR PSOLFDWHG IDFWRUV DQG QR QH RI WKHP LV WKH ORZ OHYHO RI XVH RI FRPSRVWLQJ SUR GXFW ZKLFK ZLOO SUHYHQW WKH SHUDFWLYH RI XSVWUHDP FRPSRVWLQJ

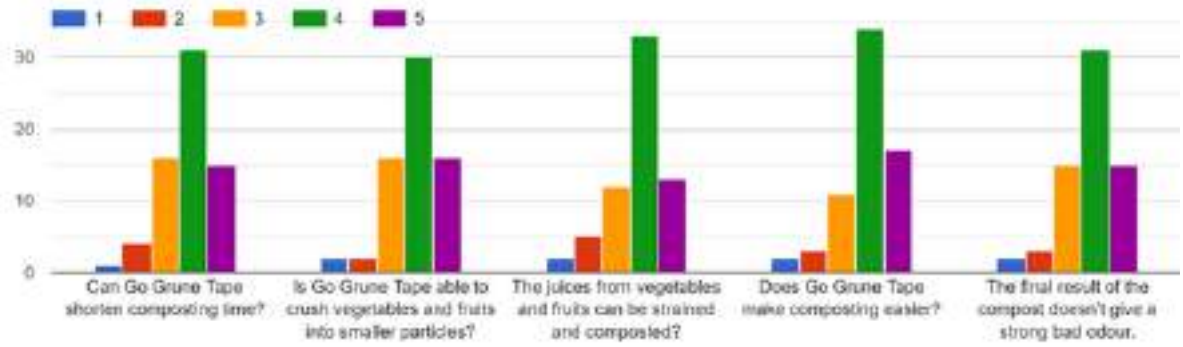
3.0 METHODOLOGY

7KH ILUVW VWDJH ZDWH PDWHULDO IURP 30. XVNLWFKHQ VXFK DV H[FHVV YHJHWDEOHV DQG IUXLWV ZLOO EH SXW LQWR D ELQ DQG ZLOO EH FUXVKHG XVLQJ D JULQGHU 7KLV JULQGHU LPSOHPHQWV RRGQ PRWRU SRZHU ZKLFK LV VWDUWLQJ WKH WULJJHU WR PRYH WKH JULQGHU 7KH UHVXOW RI WKH JURXQG SURGXFW EHFRPHV VPRRWK DQG ZLOO UHPRYH ZDWHU ,I WKLV ZDWHU LV OHIW LW ZLOO EHFRPH URWWHQ DQG GLUW\ 7KHUHIRUH WKHUH LV D VHFRQG OHYHO ZKLFK LV WKH ILOWHU 7KLV ILOWHU ZLOO VHSDUDWH WKH JURXQG PDWHULDO IURP WKH ZDWHU 7KH UHVXOW RI WKH UDQJH ZLOO EH WUDSSHG LQ WKH ILOWHU 7KH ZDWHU ZLOO VWDJQDWH LQ WKH FRQWDLQHU RQ WKH WKLUG OHYHO ,Q WKH WKLUG VWDJH WKH FRQWDLQHU ZLOO EH DGGHG ZLWK DSSOLDQFH 7KH SLSH ZLOO FKDQQHO WKH VWDJQDQW ZDWHU LQWR WKH GUDLQ RU WKH SURSHU SODFH 7KLV LV EHFDXVH WKH SLSH LV DGMXVWDEOH DQG IOH[LEOH 7KH GULHG SURGXFW ZLOO EH SODFHG LQ D FRQWDLQHU RQ WKH ORZHU OHYHO 7KH UHVXOWV RI WKLV URWDWLRQ ZLOO EH FRYHUHG ZLWK VRLO 7KH UHVXOW RI WKH QH[W JURXQG SURGXFW ZLOO EH OD\HUHG RQ WRS RI WKH VRLO DQG OHDYH EH FRYHUHG ZLWK VRLO 7KLV VWHS ZLOO EH UHSHDWHG XQWLO WKH WRS OD\HU LV VRLO DQG WKH FRQWDLQHU LV IXOO DQG WKHQ LV FORVHG XQWLO 7KLV VWHS IROORZV D RQH WR RQH UDWLR ZKLFK LV RQH FURS DQG RQH VRLO :H FDOO WKLV VWHS WKH OD\HULQJ PHWKRG

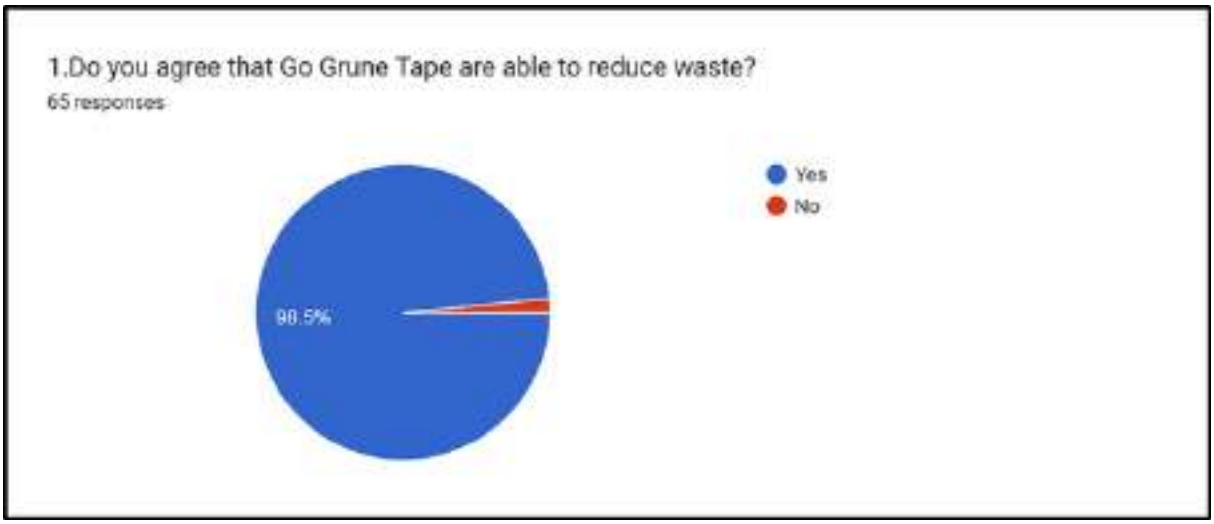
7KLV UHVHDUFK LV FRQGXFWHG XVLQJ TXDQWLWDWLYH PHWKRG ZKHUH GDWD DQG LQIRUPDWLRQ DUH REWDLQHG IURP TXHVWLRQQDLUHV 7KHQ WKLV UHVHDUFK VWXG\ ZDV XVHG IRU D VXUYH\ DERXW WKH EHQHILWV RI FRPSRVW ELQV IRU 30. XVHUV WR LGHQWLI\ WKH JRRG FRQWHQW KHUH LQ VRLO DQG WKH JRRG LQ WKH H\HV RI WKH SXEOLF $GGLWLRQDOO\ WKLV VWXG\ DOVR DLPV WR LGHQWLI\ WKH OHYHO RI DFFHSWDQFH RI 30. XVWXGHQWV WRZDUGV * R * UXQH LQQRYDWLRQ

6DPSOLQJ

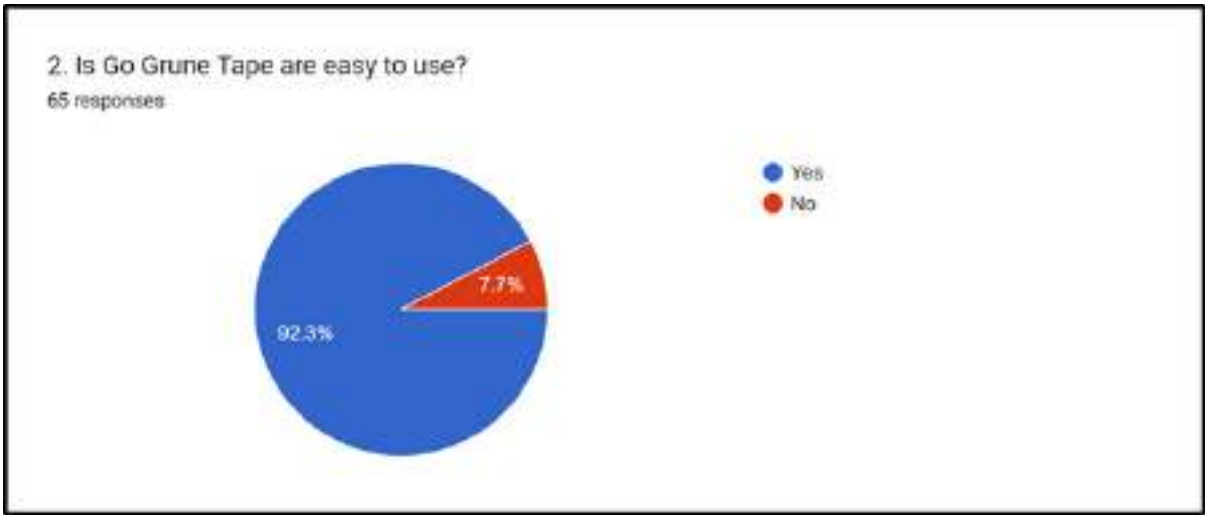
4.0 FINDING (Data analysis)



%DVHG RQ JUDSK DERYH LWVKRZ V JR * UX Q 7HDS HSHUR PUDQ IFI LWVR VK HUHT XUHP HQ WVDV D FRP SRVWDSSODQFH UHVSRQGHQWV DJ UHG * * 7 FDQ K ES VR UHG XHZ DVWMI UR P3UDFWFDO ODE 0 HDQZ KLOH P RUH VKDQ UHVSRQGHQ WDJ UHG VK VLS RJ G XFBQ FUX K VK HZ DVWMLQ VP DOO SDUWFOH VR KHOSV LWVKRUWQ VKH FRP SRVWVP H 2 Q\O R IUHVS R QQGWGNDJ UHG * * 7 G RVQMV JLYH D VWURQJ EDG RGRUGXULQJ FRP SRVWSUR FHV



$ FFRUGLQJ VR VKH SLH FKDUWDERYH UHVS R QQGWDJ UHG * * 7 DE HOVR UHG XHZ DVWMVLQ IF P RUH VKDQ RI VKH Z DVWM FROHFVMG LQ VK HN VEK EQ FDQ E HX MG LQ VK HFR PSR WS RJ FHV E \ VXLQJ * * 7 7 KLVP DNHV VKH HF[FHVJ DUEDJ HKVDVL G XSFG HGJ XHG



92.3% respondents agreed GGT is easy to use. Meanwhile only 7.7% disagreed with this statement. The performance of the product is easy to handle and SOP of the product simple and easy to understand.

5.0 DISCUSSION

Based on the respondent's acceptance among PMKU students towards GGT, the upper past of the GGT needs to be improved to prevent pests from entering the compost section. The top cover is necessary for this machine to be neat and safe from pests and odors. In addition, the excess water from the shredded waste needs to be drained well. Since, the excess water will drip into the prepared container. This is to avoid bad smells during composting process.

6.0 CONCLUSION

The production process of Go Grune Tape may take a long time but it can provide benefits to users in the long run. This project considered as high cost project but worth to invest since it will offer good solution to our environment. The implementation of GGT will create awareness towards the students and staff of PMKu to involve in go green activity by reducing waste from practical class. Besides, it helps to reduce cost over to treat the waste by reducing pollution. Further research need to be done in order to improve the function and performance of the machine to make it fit for domestic and commercial used. This product innovation will attract people's interest especially to reduce food waste and sustain the environment.

7.0 REFERENCES

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TEMMIX FRUITY NUTS POWDER

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ABSTRACT

TEMMIX Nut powder is a food based on fruits and legumes such as tempeh, almonds, green apples, and dates that are processed into powder by drying by baking in the oven that contain many nutrients and proteins without additives. The main flavor in TEMMIX is tempeh, so we conducted this study to see outsiders' perception of tempeh products that have been improved and renewed with various flavors. The objective of this study is to produce healthy food and drink products made from tempeh, so we combine tempeh with other fruits so that we can identify the advantages of the product because many people do not know about the benefits and properties found in tempeh. In addition, to make this product last longer and be easy to eat, we use aluminum foil to pack our food. The determination of the formulation to produce tempeh products has been carried out through this study using three problem statements which are due to the appearance, smell, and taste of tempeh being less attractive, so not everyone likes tempeh. In addition, many people do not realize that tempeh contains good nutrients for the body. In addition, today's society has the problem of time constraints that make it difficult for them to prepare nutritious food and drinks. In conclusion, people nowadays practice an unhealthy diet that contains MSG, additional flavors, and high sugar intake in food and drinks. So, we created this new product so that it can help the community apart from maintaining health, they can also save time.

1.0 INTRODUCTION

Problem Statements

- Many people do not know that this tempeh contains good nutrients such as antioxidants.
- It is difficult to prepare nutrition drinks with various mixes like this due to time and cost constraints.

Objective

- To produce healthy snack products made from tempeh
- To identify the advantages over TEMMIX FRUITY NUTS POWDER
- To make this product more durable and easier to eat.

2.0 LITERATURE REVIEW

Related topic

Most people do not like to eat tempeh. Tempeh has many good properties. Therefore, with our innovation, we turned the tempeh into a powder, and we mixed it with other foods to attract people, especially people who don't like tempeh, to try our new product. In addition, our tempeh powder product can be consumed by all ages because we use raw materials that can provide healthy nutrients for the body without any additional seasonings/flavors. This tempeh gives energy to our body because tempeh is made from soybeans that contain high protein and is suitable for all ages. Not many people know that this tempeh is generally made from soybeans and this tempeh has significant health benefits for intestinal health, protection from cardiovascular disease, certain cancers (eg breast and prostate) and menopause health (including bone health).

Theory/Conceptual/Model

Based on our search for information, we found that there are many properties and benefits of tempeh that can benefit consumers. We found that tempeh contains substances iron, antioxidant flavonoid can lower blood pressure which is good for those with high blood pressure and has antioxidant properties, preventing cancer. In addition, it can prevent the problem of excessive nutrition (because of lack and excess of nutrition) along with various related diseases, both infection and degenerative and its high calcium content, tempeh can prevent osteoporosis. In other words, tempeh is good for bones.

3.0 METHODOLOGY

Product Development

1. Wash all ingredients
2. After washing, cut apples, dates and tempeh into smaller pieces to facilitate the drying process
3. Then, add the three ingredients and bake in the oven
4. When the ingredients are dry, put the ingredients that have been baked earlier into the blender for the grinding process
5. After it is finished grinding, the powder should be separated for the weighing process of all the ingredients that have become powder
6. Then, mix the powders according to the number of grams that have been prepared
7. Finally, mix all the powders that have been weighed according to grams earlier. into sachet packaging.

Quantitative/Qualitative/ Mix Method (Questionnaire Survey/ Interview/ Both)

This questionnaire has 4 parts namely Part A, Part B, Part C, Part D and Part E. We use SPSS version 21.0 for this data search. In addition, this data is to ensure that the results of the questionnaire that has been made to the respondents will be analyzed correctly and accurately. Next, this data can also see whether the respondents like this product or not.

Instrument Development (Questionnaire)

This product was analyzed using the questionnaire method. This method is implemented using quantitative method using questionnaire method. Questionnaire were distributed to respondents by a Google Form. There are various demographic questions in this survey, including ones on gender, age, semester, race, and religion. We used respondents from semesters 4 and 5 to determine whether they approved of the product or not.

Sampling

For the sampling, the respondents were selected randomly from class DHF and DUP four and five. The student's background is the Diploma in Halal Practice Foodservice at Polytechnic METr0 Kuantan. The size sample and student population are 60 people.

4.0 FINDING (Data analysis)

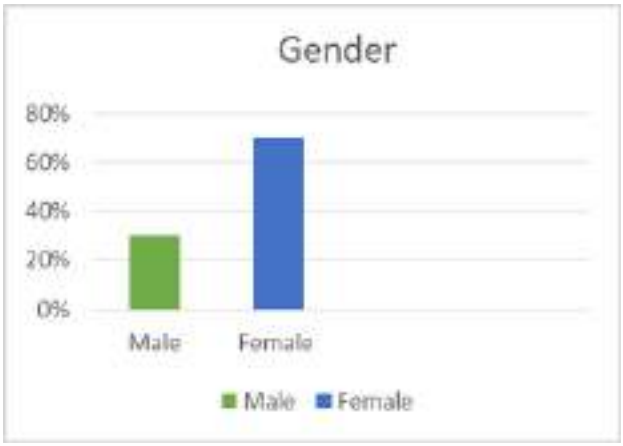

Figure 1.1 Graph of Gender

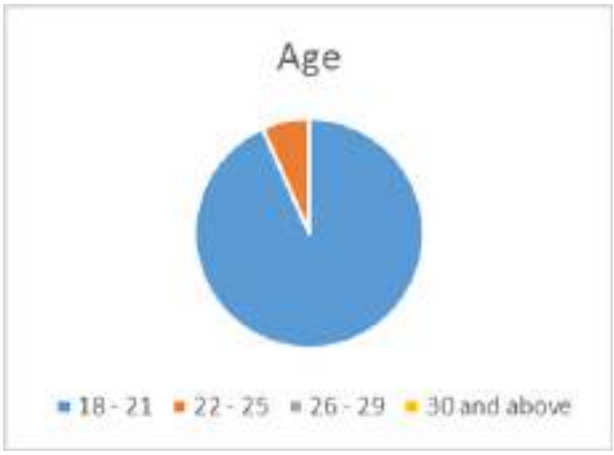

Figure 1.2 Graph of Age

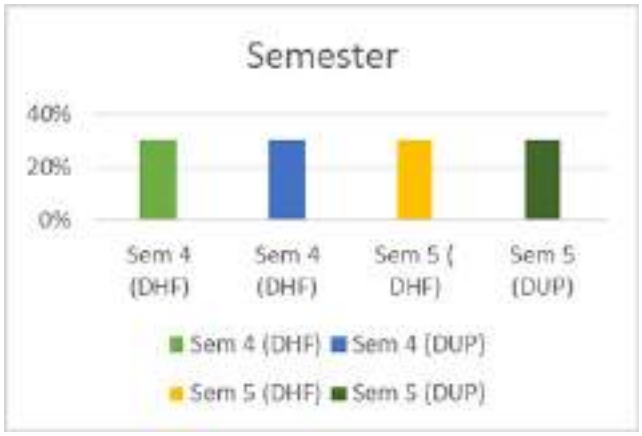

Figure 1.3 Graph of Semester

Figure 1.4 Graph of Race

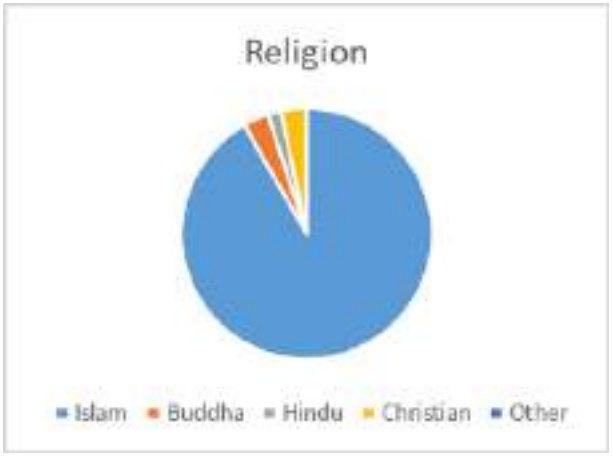

Figure 1.5 Graph of Religion

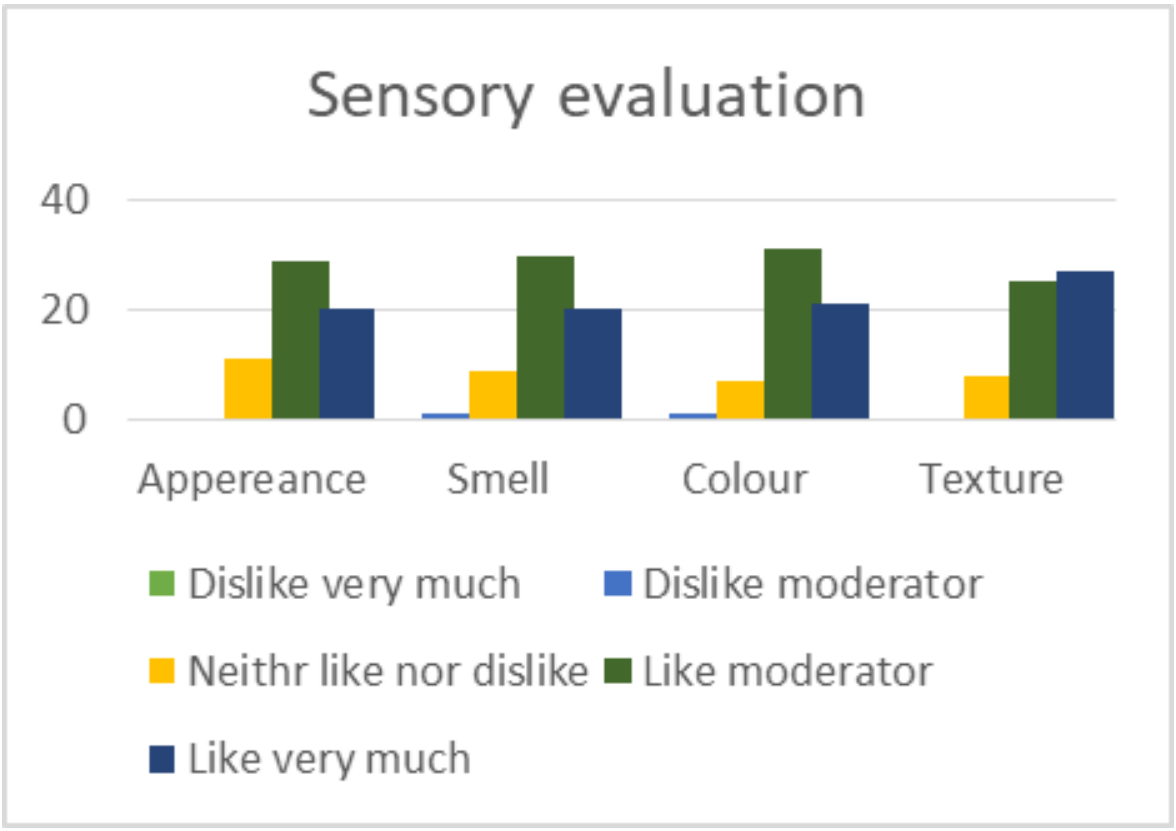

Figure 2.1 Graph of Sensory Evaluation

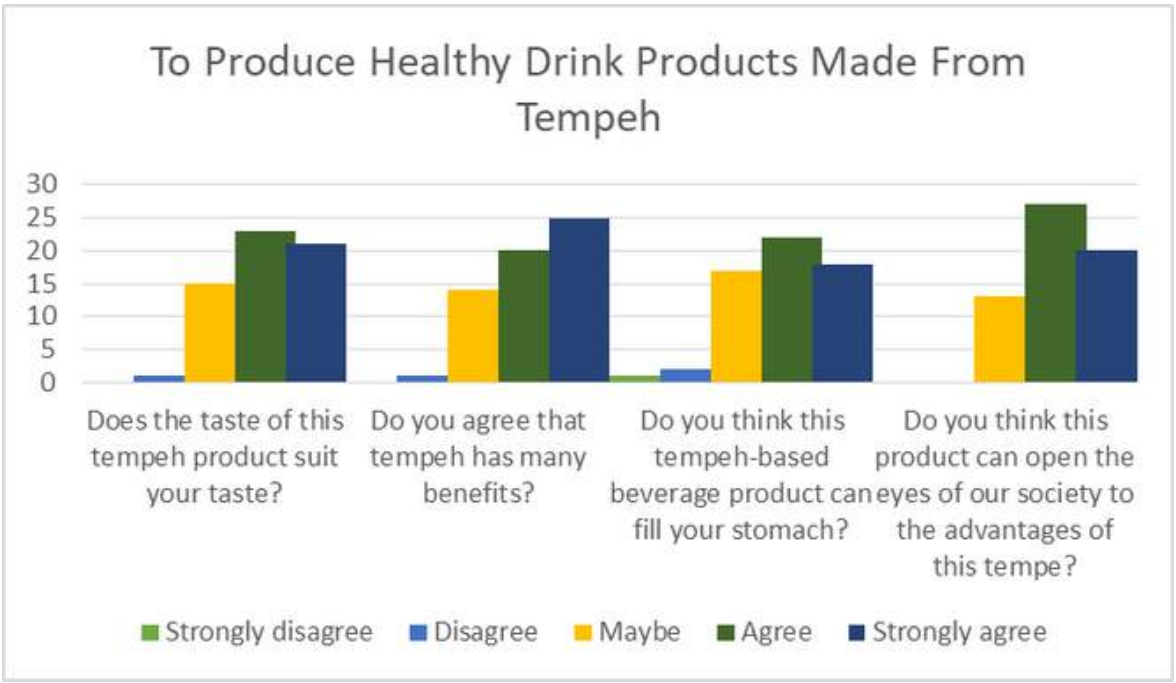

Figure 2.2 Graph of To Produce Healthy Drink Products Made from Tempeh

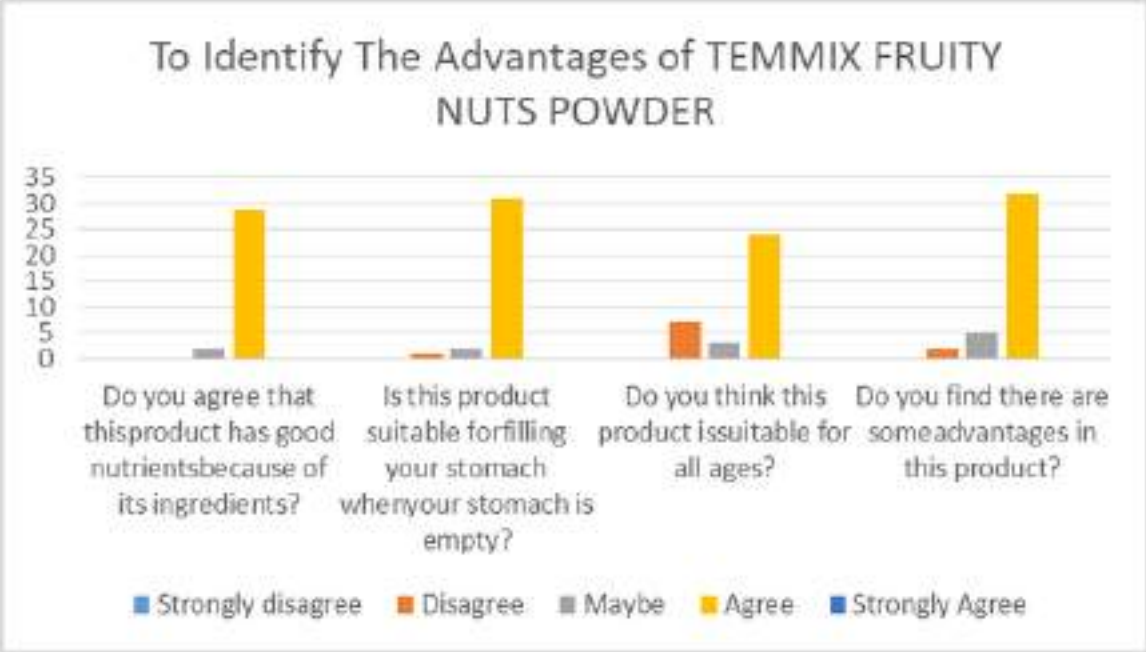

Figure 2.3 Graph of To Identify the Advantages of TEMMIX FRUITY NUTS POWDER

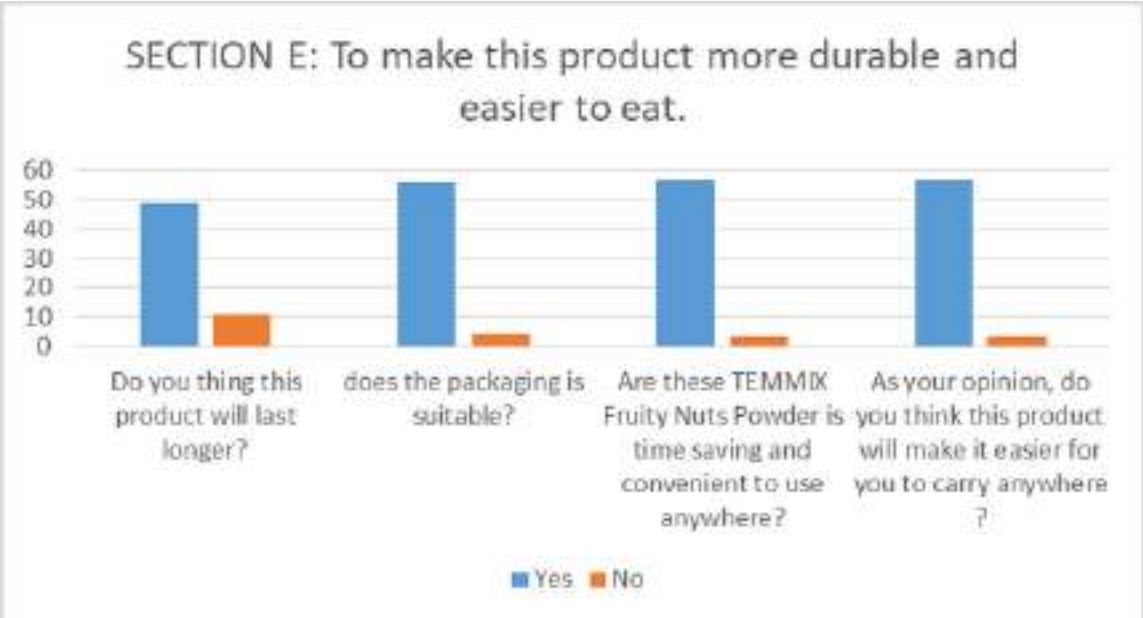

Figure 2.4 Graph of To Make This Product More Durable and Easier to Eat

5.0 DISCUSSION

Modifications to product quality and packaging should be made when all information from respondents has been collected. Product quality needs to be improved because information is collected through questionnaires. In addition, improve the market strategy to produce this product in every market in Malaysia. We also need to develop strategies for cooperation and be aware of regional market demands. Next, we need to market this product on various broadcast media channels and social media such as Facebook, Instagram, TikTok and so on. This can make the community out there know the existence of this product through social media and broadcast media that has been created. So, chances are this product is advertised more widely, it will receive a big reaction. In fact, the price of the product is reasonable and comparable to other products that have market rates.

6.0 CONCLUSION

In conclusion, this product can provide knowledge about tempeh and other ingredients such as green apples, dates and almonds. In addition, people who don't like tempeh will feel attracted because of its goodness.

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The Effectiveness of Kitchen Rust Remover on the Demographics of the study material using simple Analysis Empirical Approach

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ABSTRACT

A study was conducted to solve various types of rust in kitchen equipment. The danger of rust can cause tetanus that can be infected by bacteria that can damage the nervous system. In this study, organic ingredients are combined into a unique formula to eliminate the effects of rust, including salt, vinegar, lemon and baking soda. The purpose of the study was to see the acceptance of selected respondents on the effectiveness of this product from a panel of 50 consisting of metro polytechnic students and the general public. a mean of 4.04 was obtained indicating a good acceptance of this product. However, there is a suggestion that the product packaging be renewed and the product logo be given a new look that stands out more.

1.0 INTRODUCTION

Cleanliness in the kitchen and kitchen equipment is the most important aspect in producing quality and safe food products. According to Wang, (2011) The total weight of the waste metal materials and equipment on corrosion in the world is large, which occupied 20%-30% of the annual total product. In our country, we suffered losses for hundreds of millions of dollars because of steel rust. Referring to Jonathan Waldman, (2015) states the lifespan of products can also be impacted by rust, as they may need to be fixed or replaced if the rust gets too bad. The cost of raw materials is rising, therefore by preventing rust in the first place, the quantity of unneeded waste is decreased. After all, raw materials must be utilized to replace and repair any damaged buildings. Equipment damage necessitates more time and money to fix or replace, which drives up expenses. After extensive rusting, a piece of iron may no longer be able to support the weight it once could because rust weakens metal by reducing its mass. Rusted buildings, equipment, or other appliances that haven't been maintained seem unsightly and unappealing and can harm a company's or brand's reputation. Additionally, this may have a detrimental impact on the producer company's and user's confidence. As a result the guidance of our products, you can decrease rust problems in the kitchen and equipment waste. Apart from that, the objectives and importance of the project are also discussed which reveals the problems of rust form on the kitchens facilities that wants to solve. As referred to Sgms enal (2018) The danger of using rusty cooking equipment will be harmful to the health of consumers and the occurrence of cross-contamination of the food dishes.

Now a day a lot of cleaning material used to wash rust stains that are formed and most of them use chemical process sources. It was found that the use of chemicals for detergents can leave traces on the skin. This project will introduce a new formulation base on washing soap that is skin-friendly using organic ingredients, but acts to wash away rust so effectively. This product is more emphasized by organic ingredients. This product was created to facilitate the work of kitchen users such as mothers and others. Rust is also often a topic of community conversation because rust is something that can be harmful to health and can also bring death to society. This product is safe to use by the public because it does not pose any danger to the user. Next, this product is said to be safe to use because it can remove rust that is dangerous to the community. Therefore the community can avoid diseases from rust.

Nowadays, rust is often a topic of conversation in the surrounding community because there are too many problems, one of which is the problem of kitchen equipment frequently rusting. Rust can cause various problems, for example in terms of structure, it can cause fragility, thus endangering the safety of users. Various washing soaps have been sold in the market nowadays. However, washing soap to remove rust is difficult to find in the market. Normal washing soap cannot remove rust from kitchen appliances. Rusty equipment will be harmful to health such as toothache, tetanus and others. So with this product, the problem of rust will be solved

2.0 METHODOLOGY

A study design conducted to serve as a guide in assisting researchers in the process of collecting, analysing and interpreting the result of research conducted. Here are the methods of research in this study were;

Quantitative method that using experimental method in which data is in the form of measurable numbers.

The collected data were processed and analysed using descriptive statistic by the latest version of SPSS.

a) Sampling & Data collections method

A sample is a subset of individuals from a larger population. Sampling is choosing the group from which we will actually collect data in our research. The sample was taken using Google Forms, which ensured that the respondents were Kuantan Metro Polytechnic students and the public consisting of the DHF listing and the public in the target population had an equal chance of being selected to be included in the survey. The total number is 60 people and the sample size obtained based on the sampling margin table is 50 people. As for the data collection method, the method is implemented using quantitative methods through the use of questionnaires. The questionnaire was distributed to the respondents via Google form. There are two parts in the questionnaire, namely section 1 and section 2. section 1 contains answers to demographic questions, namely age and gender. For section 2, there are questions containing user preferences for our products. In this section, the question of study is about the awareness and goodness of our products. In this section, try to see how consumers receive the products based on goodness, effectiveness and overall.

b) Data analysis methods

The collected data was processed and analysis using descriptive statistics through the latest SPSS software. In SPSS software, we will use charts to analysis our products. This chart will help us make the best choice for our product which is kitchen rust remover.

2.1 PRODUCTION PROCESS

First of all, cut the lemon and remove the seeds. then squeeze the lemon juice into a container. Then mix the vinegar, bicarbonate of soda and salt into the container containing the lemon juice. After that mix the ingredients until they are combined. Then add a little colouring from pandan to increase the attractiveness of the product. Finally, when all the ingredients are mixed, put the ingredients in the bottle and it's ready to use.

Figure 2.0 materials in making

Figure 2.0 equipments in production

3.0 RESULT & DISCUSSION

The study was successfully assessed from 60 respondents who had answered properly from the questionnaires given to them, based on sample from students of the Diploma in Foodservice Halal Practice from the Politeknik Metro Kuantan. A total of 50 respondent were chosen to be testing respondent who can thoroughly test the product based on goodness, effectiveness and overall.

3.1 ANALYSIS OF RELIABILITY

Reliability statistics

Cronbach's Alpha	N of Items
.848	14

Meaning that the questionnaire is appropriate for evaluating the respondent's ability to answer the question. This number of 0.85 indicates a high-quality inquiry and an honest response from the respondent. Because they see the value in selling their product.

3.2 ANALYSIS OF MEANS

3.2.1 Mean of Product Functional

		N	Mean	Std. Deviation	Minimum	Maximum
1.Produk ini dapat menyelesaikan masalah karat air yang sering berlaku pada singki atau peralatan dapur	Male	22	3.91	.811	2	5
	Female	28	3.93	.813	2	5
	Total	50	3.92	.804	2	5

		N	Mean	Std. Deviation	Minimum	Maximum
1.Produk ini dapat menyelesaikan masalah karat air yang sering berlaku pada singki atau peralatan dapur	Male	22	3.91	.811	2	5
	Female	28	3.93	.813	2	5
	Total	50	3.92	.804	2	5
2.Produk pencuci untuk menghilangkan karat dipasaran tidak mampu untuk menghilangkan kesan karat air pada singki atau peralatan .	Male	22	3.91	.811	3	5
	Female	28	3.57	.920	2	5
	Total	50	3.72	.882	2	5
3.Produk ini menyumbangkan kebaikan kepada pengguna tanpa mengalami genjala gatal pada kulit	Male	22	4.09	.684	3	5
	Female	28	4.04	.922	2	5
	Total	50	4.06	.818	2	5
5.Produk ini menjimatkan masa pengguna, hanya perlu berus diatas permukaan barang yang berkarat	Male	22	5.36	6.215	3	33
	Female	28	4.14	.756	2	5
	Total	50	4.68	4.152	2	33

		N	Mean	Std. Deviation	Minimum	Maximum
6.Servis yang disediakan menepati kehendak asas bagi pengguna	Male	22	4.09	.750	3	5
	Female	28	4.07	.813	2	5
	Total	50	4.08	.778	2	5
4.Produk ini dapat menjimatkan kos peralatan dapur	Male	22	3.95	.844	3	5
	Female	28	4.21	.787	2	5
	Total	50	4.10	.814	2	5
7.Kemudahan produk ini mengurangkan pembuangan peralatan dapur dan singki seterusnya menjimatkan kos operasi	Male	22	4.00	.690	3	5
	Female	28	4.07	.813	2	5
	Total	50	4.04	.755	2	5
8.Peningkatan ekonomi setempat menguntungkan	Male	22	4.00	.873	3	5
	Female	28	3.96	.793	2	5
	Total	50	3.98	.820	2	5

		N	Mean	Std. Deviation	Minimum	Maximum
9.Produk ini sangat dinantikan oleh pelanggan yang mementingkan budget rendah tetapi cepat	Male	22	3.95	.722	3	5
	Female	28	4.11	.832	2	5
	Total	50	4.04	.781	2	5
10.Prodak ini membuatkan saya ingin membelinya lagi	Male	22	4.14	.774	3	5
	Female	28	4.04	.793	2	5
	Total	50	4.08	.778	2	5
11.Penggunaan produk dari bahan organik yang telah dihasilkan sebagai produk pencuci yang mesra kulit	Male	22	3.91	.610	3	5
	Female	28	4.14	.848	2	5
	Total	50	4.04	.755	2	5
12.Rupa bentuk produk ini selesa digunakan	Male	22	4.05	.722	3	5
	Female	28	4.04	.838	2	5
	Total	50	4.04	.781	2	5

		N	Mean	Std. Deviation	Minimum	Maximum
13.harga produk ini murah dan berguna	Male	22	4.14	.774	3	5
	Female	28	4.07	.900	2	5
	Total	50	4.10	.839	2	5
14.Produk ini mampu berada dipasaran setanding dengan produk lain	Male	22	3.86	.774	3	5
	Female	28	4.18	.863	2	5
	Total	50	4.04	.832	2	5

According to the research question, the study's findings revealed that nearly 100% of the respondents agreed since they received a mean reading of 3 or above. On the 4 and 13 question, the mean reading are the highest and approach 4 and above. The next question likewise receives a mean reading of 4 above. Respondents were also satisfied with the effectiveness of the kitchen rust remover product.

3.3 ANALYSIS OF CHI-SQUARE

3.3.1 This product can solve water rust problems that often occur sinks or kitchen appliances 'Age'

Table 2.0 show the correlation between age to question this product can solve water rust problems that often occur sinks or kitchen appliances

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	11.007[a]	6	.088
Likelihood Ratio	13.236	6	.039
Linear-by-Linear Association	3.539	1	.060
N of Valid Cases	50		

a. 9 cells (75.0%) have expected count less than 5. The minimum expected count is .52.

According to chi-square test from our result's questionnaire, there are significant different with value 0.088 through age. Even though this was the third item on our questionnaire form, (75.0%) of respondent predicted a score of less than 5. The expected minimum total was 0.52, whereas question 1 was discuss about this product can solve water rust problems that often occur on sinks or kitchen appliances by customer so that's mean people or respondent are agree about the question. Most respondent in section 1 age range agree with a new product they have never tried before, so they may compare it to a previous product. But there is also of the opinion that our product can go further and can be marketed internationally. And we also may be able to achieve the targets we have set. Our product is the first and only one designed especially for small and medium businesses. This product may also be helpful in the kitchen sector.

.3.2 This product can solve water rust problems that often occur sinks or kitchen appliances 'Gender'

Table 3.0 show the correlation between gender to question this product can solve water rust problems that often occur sinks or kitchen appliances.

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	.115[a]	3	.990
Likelihood Ratio	.115	3	.990
Linear-by-Linear Association	.007	1	.932
N of Valid Cases	50		

a. 2 cells (25.0%) have expected count less than 5. The minimum expected count is .88.

According to Chi Square Test from result questionnaire for this product can solve water rust problems that often occur sinks or kitchen appliances. This is because below than 0.05 means that the respondents were agreed that the kitchen rust remover has fine texture. The result is female are strongly agree than male. This kitchen rust remover using organic ingredient so when using kitchen rust remover does not hurt the skin. This show why female agreed with the product. But there is also of the opinion that our products can go further and can be marketed internationally. And we also may be able to achieve the targets we have set. Our product is the first product that may be marketed in Malaysia. This product may also be helpful in the kitchen sector. Our product is a target for cleaning activities. This product also can involve in foodservice, can be used in a long time because our product is made with the high quality.

3.4 ANALYSIS OF FREQUENCIES

Table 4.0 This product can solve water rust problems that often occur on sinks or kitchen appliances

Produk ini dapat menyelesaikan masalah karat air yang sering berlaku pada singki atau peralatan dapur

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Not agree	2	4.0	4.0	4.0
	NOT SURE	12	24.0	24.0	28.0
	agree	24	48.0	48.0	76.0
	strongly agree	12	24.0	24.0	100.0
	Total	50	100.0	100.0	

Table 4 show the level of this product can solve water rust problem.48.0% respondent were agree this product can besolve water rust problem on sinks and kitchen appliances. 4.0% respondent selected not agree for this questionnaire.It is true what was said by Wang, (2011) The total weight of the waste metal materials and equipment on corrosion in the world is large, which occupied 20%-30% of the annual total product. In our country, we suffered losses for hundreds of millions of dollars because of steel rust.

Table 5.0 This product provides benefits to the user without experiencing itchy symptoms on the skin.

Produk ini menyumbangkan kebaikan kepada pengguna tanpa mengalami genjala gatal pada kulit

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Not agree	2	4.0	4.0	4.0
	NOT SURE	9	18.0	18.0	22.0
	agree	23	46.0	46.0	68.0
	strongly agree	16	32.0	32.0	100.0
	Total	50	100.0	100.0	

Exhibiting the surveys of the individuals who answered our questionnaire form. 4.0% respondent were not agreeing product provides benefits to the user without experiencing itchy symptoms on the skin. So, the total respondent were strongly agree with this statement were 32.0% it is because this product provides benefits to the user without experiencing itchy symptoms on the skin.

Table 6.0 The use of products from organic ingredients that have been produced as skin-friendly cleaning products.

Penggunaan produk dari bahan organik yang telah dihasilkan sebagai produk pencuci yang mesra kulit

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Not agree	1	2.0	2.0	2.0
	NOT SURE	10	20.0	20.0	22.0
	agree	25	50.0	50.0	72.0
	strongly agree	14	28.0	28.0	100.0
	Total	50	100.0	100.0	

Table 6 show the level of this products from organic ingredients that have been produced as skin-friendly cleaning products. 2.0% respondent were not agreeing that this products from organic ingredients that have been produced as skin-friendly cleaning products. So, the total respondent were agree with this statement were 50% it is because the products from organic ingredients that have been produced as skin-friendly cleaning products.It is true what was said by Vincent Cheong Jia Wei (2012) some substances and chemical products that can affect health and have serious effects on humans. The Swot Analysis of Kitchen Rust Remover was conducted with very simple summarize.

S - safe to use and can be used by adults or children.
O - This kitchen rust remover is high of quality.
W - Our weakness is do not last long when exposed to sunlight.
T - Competition between other companies due to the comparison of rust removal detergents.

4.0 CONCLUSION

In conclusion, there is a need to increase the production of innovative washing products to suit the needs of society. In addition, cleaning products that can remove rust are very useful to society because rust can be harmful to health. in addition, cleaning products that use organic ingredients can also protect users because they do not harm the skin. Finally, cleaning products that can remove rust that are organic can reduce the disposal of kitchen appliances or sinks that have rust problems.

4.1 RECOMMENDATION

In the future, kitchen rust remover will going to have a lot of improvement as more people will start using the product. Updates to improve variety of product will need to be done packaging, logo and many more. After the product launched, we will conduct survey in order to get respondent perspective towards the product. From there we will get more ideas on how to improve the product in any way conventional and in convenience to further aid the customer. In addition, if the product is to get overwhelming acceptance domestically, we will consider launching the product internationally so that the whole world would have the chances to remove rust on kitchen equipment and sink.

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DAITY SUPERBB

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ABSTRACT

Daity Superbb is healthy drink that is compatible with today's social life. Various types of viral drinks or instant drinks available in the market. However, the benefits or benefits of the drinks sold are not known. Therefore, Daity Superbb is highlighted to help with the consumption of drinks that are proven to be healthy and nutritious. With the busyness of today's consumers, they do not have enough time to produce food and drinks with high nutritional quality. In addition, there are a few consumers who are not fond of taking dates despite their proven benefits. This is due to the less encouraging texture, smell and colour. Daity Superbb is produced to know the overall benefits of the ingredients used. In addition, this beverage product can promote healthier drinking habits. This study also aims to create a recipe formula that is suitable for Daity Superbb. This drink product is suitable for all ages because it is made from natural ingredients without artificial preservatives. With the presence of Daity Superbb will help fans of viral drinks in the market to reduce the habit of drinking drinks that are high in sugar. Taking Daity Superbb will educate consumers to be more concerned with the benefits of their daily food intake. This study is a quantitative study which is based on the results of previous studies. A total of 60 questionnaire will be distributed for students of Diploma in Halal Practice Food Service. This figure is based on Krejie & Morgan's table, 1970. Overall, Daity Superbb can compete with drinks in the market. But it depends on individual choice. By choosing Daity Superbb will increase the benefits obtained from natural ingredients that are used directly.

1.0 INTRODUCTION

Problem Statement

After we go through the research and observation we found that, many people now especially working people, students and people who are active throughout the day do not have time to prepare nutritious food or drink because of the lack of time to prepare it. In addition, most instant and viral drinks are becoming the choice of the public, especially students who always want to try something new without thinking about the sugar content in it. Next, there is a group that does not like Sunnah food which is dates. Based on observations and studies around the students gave the same response where the appearance of the date did not attract interest and the texture of the date itself had a crunchy taste.

Objectives

The objectives of this study are below:

1. To study the health benefits of Daity Superbb.
2. To promote healthy drinking habits.
3. To develop a new recipe formulation of Daity Superbb.

2.0 LITERATURE REVIEW

Related Topic

Introduction of instant drinks, many people enjoy consuming them even every day without thinking about the sugar content in the drinks. From there, Daity Superbb was created to be promoted as a drink that is nutritious for the human body and can give daily energy to active people and is suitable for people who want to diet. By using natural ingredients and also Sunnah food can provide more good nutrition for the human body.

Theory/Conceptual/Model

By using this product, we want to highlighted the main our objectives and add on a realistic reason to easy for student to adapted what's the main point we are going through. The major of production this product by choosing the ingredients well to proceed in this product. Via our research, we found that many people especially students, they do not like to take a Sunnah food because they don't know well of the benefits the food. Daity Superbb is produced from ingredients that contain various benefits in it that many people do not know about and it actually helps a lot in supplying energy and also for people with digestive problems. With this, the research that we have collected from journals and also articles that are written with the research that they have conducted on this ingredient.

3.0 METHODOLOGY

Product Development

1. Wash the dates until they are clean.
2. After that, grind the dates.
3. On the barley side, boil the barley until soft.
4. Cool it for a while.
5. After that, grind the barley until soft.
6. After that, dry the ground barley in a dryer.
7. After the barley is dry, grind the barley until it becomes a powder.
8. After finishing that part, prepare other ingredients such as water, fructose and also citric acid.
9. Mix all the ingredients and mix until combined.
10. After that, put it in the bottle that has been attached with the product labelling

Quantitative/qualitative/mix method (questionnaire survey/Interview/Both)

The questionnaire was given to 60 respondents from Kuantan Metro Polytechnic. The questionnaire is divided into three parts. Part A is set to get am information related to the respondent's personal data. Part B is about habits that encourage drinking. While part C is sensory evaluation. To calculate the score for each product each descriptor was assigned a score value: strongly disagree (1), disagree (2), neither agree or disagree (3), agree (4), strongly agree (5).

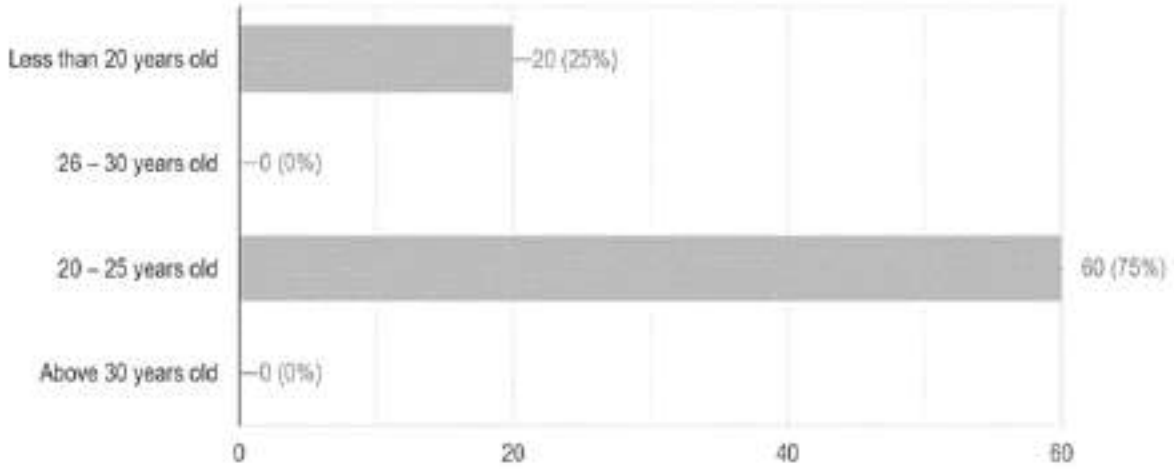
Instrument Development (Questionnaire)

The method chosen for this study is the quantitative method which is collection data through the use of questionnaires. The reason why researchers use this method is because quantitative methods emphasize objective measurement and statistical, mathematical or numerical analysis of data collected through opinion polls, questionnaires, and surveys. The primary data is obtained through questionnaires. Meanwhile, secondary data is collected from online articles, journals, books, packaging samples from the market. We use plat form Google Form We use the google form platform as a facility for students to answer all questions related to Daity Superbb.

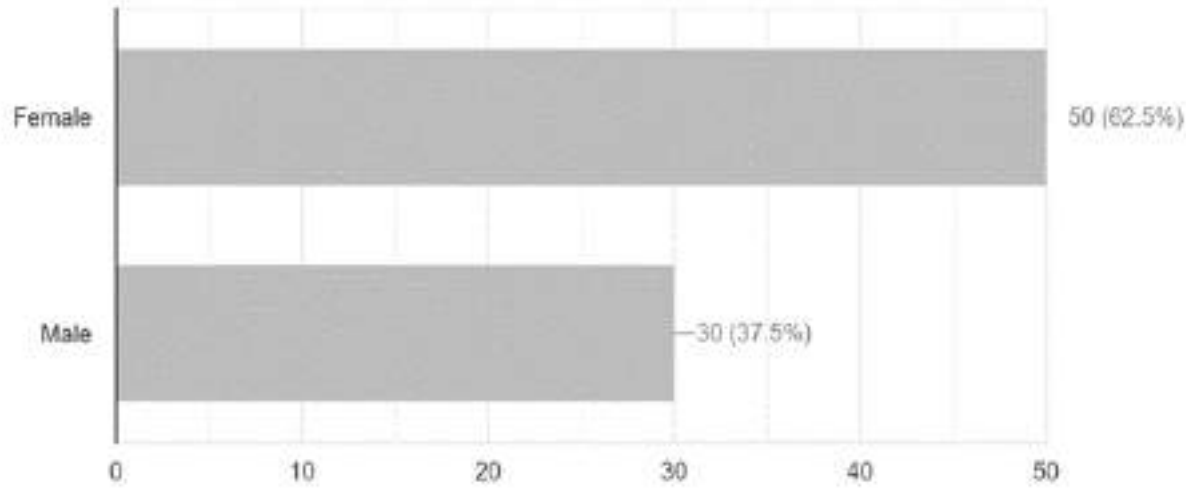
Sampling

For all the samples produced have been given to the desired target which is among PMKU students. The samples given are in small amounts to give an opening to students to recognize and learn how to practice this product. The sample is given in a form that is easy for students to accept by shaking it first and can drink it. Samples given through the sensory methods they use to respond to our products. Sensory analysis is very important because it can help us to improve the taste, smell and colour of our products. The sample was drawn by using Google Form.

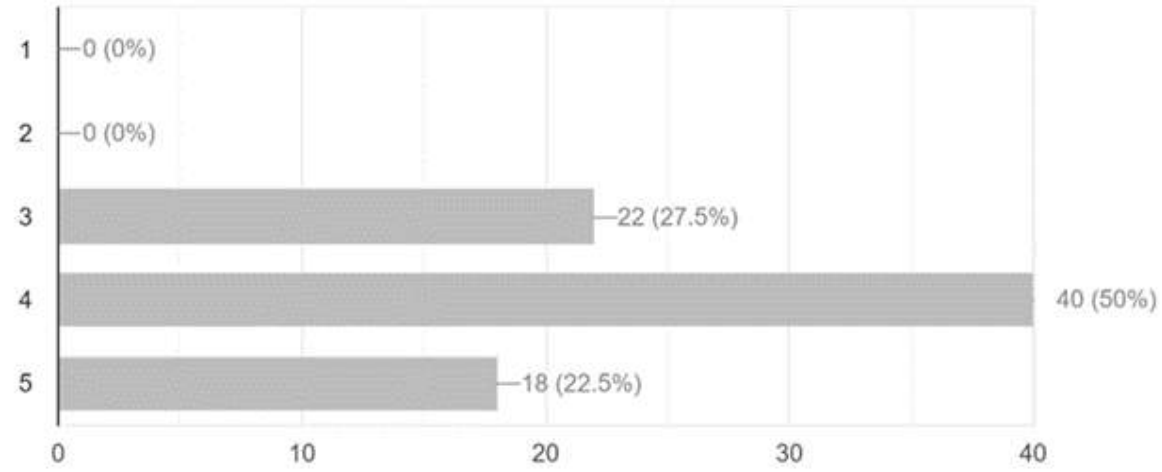
4.0 FINDINGS (Data analysis)



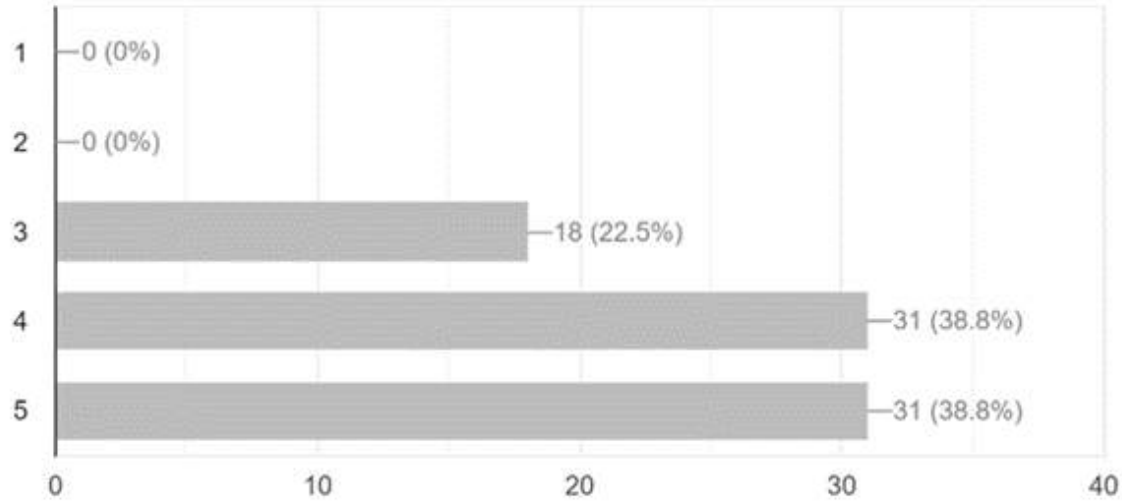
Graph 1.1: Graph of Age



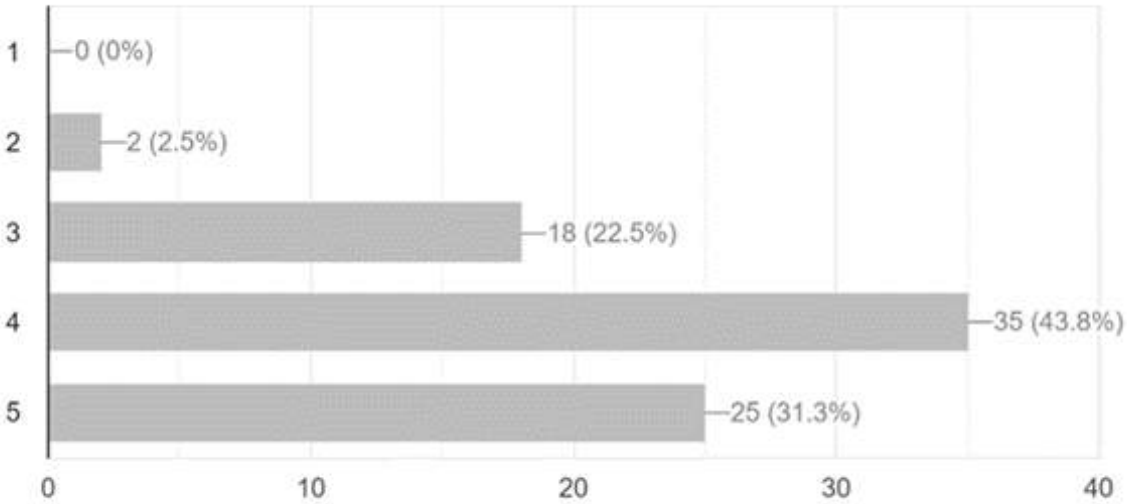
Graph 1.2: Graph of Gender



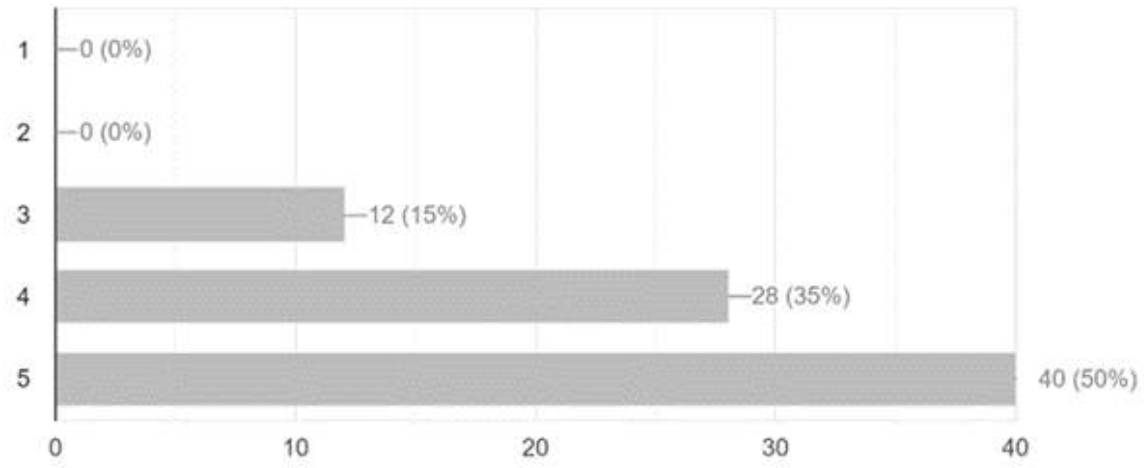
Graph 1.3: Daity Superbb serves excellent drink taste.



Graph 1.4: Daity Superbb is a nutritional drink.



Graph 1.5: Daity Superbb consistently serves standardize portion.



Graph 1.6: Daity Superbb is good for healthy

5.0 DISCUSSION

By using a method such as google form like this, it can make it easier for us to collect as much information that can help in modifying and also making improvements that need to be done based on the taste of PMKU students. Not forgetting also with the sophistication of technology now that is able to market our products in cyberspace is also able to highlight the existence of our products which is now becoming more and more popular for PMKU students. Many facilities have been highlighted on our product just to make it easier for users.

6.0 CONCLUSION

In conclusion, there is a lot of knowledge that can be highlighted to the public about the benefits of dates, barley and not forgetting additives such as fructose and citric acid which help in controlling the taste and are also able to supply glucose without calories. Each natural ingredient has its advantages that we need to know in creating a formula that is able to be effective to improve a good health style.

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YOUMEE INSTANT NOODLE

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ABSTRACT

This Youmee product is an instant noodle produced by waste material. This product was created to make it easier for PMKu students and staff who are busy and don't have time to cook and was created to provide various nutrients to users. Instant noodles are also often the topic of public conversation because they can have bad side effects if they are often practiced such as kidney and liver pain. In addition, the increase in the removal of onion skins is also an issue due to the large consumption of onions in places to eat such as in shops, canteens and others. Therefore, this innovative product is said to be safe if used because it reduces the side effects to the user, thus providing more nutrition to the user. This product is tested in terms of taste, texture and consumer acceptance of noodles. Analysis of 50 respondents answering all the questions, more students liked this noodle compared to the staff at PMKu. This is because more students don't have time to cook and need this youmee to eat.

1.0 INTRODUCTION

The purpose of this study is to make instant noodles that are in high demand in the market more nutritious. Youmee products are made from onion skins and carrots. Using these two ingredients can make our products more nutritious than other instant noodles. Onion skins are usually thrown away has its own benefits. Onions are also rich in antioxidants, especially in their outer layers, a (Nicastro et al., 2015) suggests. Many people eat onions for their prebiotic properties, which can ease digestion and promote a healthy microbiome in your colon. Onions have a sulfur component as well as nutrients such as selenium and vitamin C, according to a (Sidhu et al., 2019).A possible solution to use dry onion skin could be to use it as a source of valuable food ingredients such as insoluble dietary fiber, minerals (especially calcium and potassium), and highly bio-accessible and in vitro bioavailable flavonoids with well-documented antioxidant and anti-inflammatory abilities.(Michalak-Majewska, Złotek, et al., 2020). Instant noodles are generally used up in Asian nations. Instant noodles seem to have started in Japan in the 1950s and today, are created in more than 80 nations around the world.

Accommodation and practicality are critical components adding to its expanding fame. Besides this all ultra-processed foods including instant noodles containing artificial food colors, flavorings and certain preservatives have adverse effects upon children. Children with ADHD are advised to avoid all food that may contain preservatives such as BHA, BHT, TBHQ and sodium benzoate.(Sikander et al., 2017).

This research is aiming to create a product based on instant noodles. Noodles are one of the staple foods in many Asian countries. Instant noodles have become a globally recognised food, and global consumption is increasing. Instant noodles are well-known for their nutritional value, flavour, safety, convenience, low cost, and long shelf life. The instant noodles, or "YOUMEE," that we want to make are made from waste materials as well as vegetables such as onion skins and carrots. Youmee is an instant noodle cup that includes noodles and tomyum seasoning. Youmee is a product that will provide nutrition while also making it easier for buyers, particularly PMKU students and employees. Youmee noodles are made from onion skins, so this product helps to reduce food waste while also providing nutrition to consumers. The onion is a common cooking ingredient, but the onion peel is usually discarded because it is useless. As a result, we decided to create a product out of onion peel that has some hidden benefits.

Problem statement are food waste has become more and more common, such as onion, watermelon and orange where the skin is discarded and only the contents are taken. Onions can also contribute in terms of food waste where, onions are the main ingredient used in cooking but the skin is thrown away and causes a lot of waste, although there are many advantages in the onion skin where we can reuse it.

In addition, the problem faced is among students and employees at PMKU, where fast food is the food of choice. As is known, fast food has less nutrition which if excessive in the consumption of fast food can contribute to the deterioration of health. For example, there are students who are admitted to hospital because they choose fast food that lacks nutrition over food that is more nutritious such as instant noodles.

The purpose of this project is to reduce the problem of food waste, namely onion skins. As we know onion skin has many properties such as being able to improve the body's immune system, can control diabetes, can help your heart and more.So it is better to reuse it as fertilizer, food and so on in this way and at once can solve the problem of food waste that is rampant.

In addition, the purpose of this project is also to help students and employees at PMKU to always stay healthy. As we know, fast food is their preferred food such as instant noodle. So, we want to innovate this instant noodle into a healthy instant noodle that can provide nutrition from the onion skin to students and employees at PMKU. (Michalak-Majewska, Teterycz, et al., 2020) (Michalak-Majewska, Teterycz, et al., 2020. The importance of this study is to expand the knowledge of PMKu students and staff about fast food that contains many nutrients from onion skins. Red onion skin contains many active compounds that are beneficial for health, one of which is quercetin which has the benefit of overcoming hyperglycemia, anti-inflammatory, antioxidant and even anticancer. (Sidhu et al., 2019) .As we know this onion skin can also reduce the risk of cancer, heart disease and diabetes. (Misna & Diana, 2016).In addition, this study also aims to further expand the diversity of food in the food industry and give the opportunity to PMku students and staff to taste instant noodles. YOUMEE" which has been innovated by us.

2.0 LITERATURE REVIEW

Food waste is a serious problem for the food processing industry, especially when it represents the loss of valuable sources of nutrients and phytochemicals. Increasing consumer demand for processed foods poses the problem of minimizing waste by converting to useful products. In this regard, onion residue (Allium cepa) (Celano et al., 2021) which mostly consists of dried onion skins is a rich source of flavonols with a high percentage of aglycone forms, while the anthocyanin content is limited to red varieties (Celano et al., 2021) Onion skins, being inedible, are quickly removed before being processed and sold, but are not suitable as animal feed or landfill disposal due to their composition and smell, thus representing the main waste of onion processing. Because of that we plan to innovate the onion peel into an edible product. But we also use carrots as a nutritional supplement. There are many nutrients obtained from onion and carrot skins. Among the benefits found in the onion skin is very rich in antioxidants, fiber, vitamins A, C, E and heart-friendly flavonoids. It is said that onion skins are proven to be beneficial for boosting immunity and promoting heart health and maintaining blood sugar levels. Next, carrots contain various nutrients and antioxidants along with vitamin C, and this will improve the immune system. Regular consumption of carrots creates a protective shield for the body (Singh et al., 2021) The way to make youmee is to use 40% wheat flour, 50% shallot skin, and 10% carrot. Youmee will produce the same technique as me soon other in the F&B industry which includes boiling and drying.

Instant noodles are very popular with people of all ages as a popular food for the reason that noodles are delicious, practical and filling, especially for children. Apart from being delicious, instant noodles are also easy to find anywhere. The characteristics of instant noodles such as taste, nutrition, convenience, safety, longer shelf life and reasonable price have made them popular. Important quality factors for instant noodles are color, taste, and texture, cooking quality, rate of rehydration during final preparation, and presence or absence of rancidity after long storage. Instant noodles produced from wheat flour have many advantages and potential to improve nutrient intake, have high retention of most nutrients, and cause little or no change in sensory characteristics(Food, 2020).Next, instant noodles cannot be practiced because of incomplete nutritional content, even though it is filling (Hardiyanti et al., n.d.) recommended consuming instant noodles once a week. Also said to consume instant noodles a maximum of once a week and should be added with various vegetables, tomato pieces and eggs as protein. The specialty of youmee is a product that is innovated from onion skin and also has other contents such as carrot, where onion skin and carrot have their own vitamins that can provide nutrition to the user where taking nutrition in food is very important for the body to remain energetic. In addition, this Youmee product can also help reduce the rate of onion skin disposal because innovation products made from onion skins must use onion skins to fulfill the innovation ingredients such as in addition to being able to make noodles, they can also make paper from onion skins.

3.0 METHODOLOGY

The quantitative method, which collects data through the use of questionnaires, was chosen for this study. Because quantitative methods emphasise objective measurement and statistical, mathematical, or numerical analysis of data collected through polls, questionnaires, and surveys, researchers use this method. The questionnaire was distributed to 50 Kuantan Metro Polytechnic students and staff. Because they can be quickly created and can cover a wide range of topics, questionnaires are a common type of research among researchers. Information about the respondent can be kept private by using the questionnaire. Respondents are able to react to inquiries in a relaxed manner without experiencing any anxiety or worry. A face-to-face questionnaire will be handed to respondents to complete. The Statistical Package for the Social Sciences will be used to analyse and evaluate the data after it has been obtained (SPSS). There are two sections to the questionnaire. Section A is intended to collect general information about the respondent's personal data. Part B is about the instant noodles that we created. Questionnaires are used to collect primary data. Secondary data is gathered from online articles, journals, books, and market packaging samples.

The sampling design is completed in order to obtain feedback from PMKu students and staff. Sampling will be accomplished by administering a face-to-face survey, the results of which will be analysed. Furthermore, our sampling is limited to the PMKu area. This allows us to determine whether the community likes or dislikes the products we have created. Furthermore, through this sampling, we can improve the product to meet the tastes of the community. Overall, providing this sampling will allow us to determine whether the majority of the community likes or dislikes this product.

A Research Instrument is a tool used to collect, measure, and analyze data related to your research interests. These tools are most commonly used in health sciences, social sciences, and education to assess patients, clients, students, teachers, staff, etc. A research instrument can include interviews, tests, surveys, or checklists (Columbia University, 2021). To calculate the score for each question we have provided are:

Very disagree =5, Disagree =4, Moderated =3, Agree =2, Very agree =1

All data can be easily collected by creating a research instrument. These data will be saved and analyzes for future improvement. Furthermore, numerous product trials have been conducted to ensure that youmee is tasty and well-accepted. Furthermore, the evaluation carried out to create the product youmee is by forming it into a noodle shape and drying it so that it resembles the instant noodles available on the market. This evaluation is repeated several times to achieve the desired shape.

Ingredients

	Wheat flour		Dried Shrimp
	Suji flour		Shallots
	Onion skin		Fish Sauce
	Lemongrass		Lime Leaves
	Dried chilies		Tamarind Juice

Product Development

Packaging

4.0 FINDING (Data analysis)

Youmee trial products have been conducted to collect data and feedback to meet user preferences. Therefore, we have produced 2 types of youmee products with different sizes of noodles, small size and large size. The results of the findings have proven that the small size noodles of youmee products have received the highest votes. However, on the 3rd attempt we failed to produce a good noodle texture. On the 4th attempt we found the necessary elasticity but it didn't last long after a few seconds of being soaked in water. Product Youmee has lasted for a month after the fourth attempt.

After the evaluation has been made by an industry jury. They encourage our products to be marketed because the majority of people do like instant noodle food because it is easy for them. It is because our products are based on noodles that many will buy or like. The strength of our product is that we have many benefits because we use natural ingredients without any preservatives which causes our instant noodles (Youmee) to have many benefits. And Also the ingredients of this product have a lower cost and are easily available in Malaysia. For example we use onion skins and flour which are easily available because these products are always used. For that we may have an opportunity to compete and be marketed like other instant noodle products. The threat to us is that it is difficult to compete due to well-known brands such as Maggi, which is one of the largest manufacturers of instant noodles. With that, we will strive to improve our products so that they are comparable to other products.

Descriptives

		N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
						Lower Bound	Upper Bound		
FLAVOUR	STAFF	5	4.80	.447	.200	4.24	5.36	4	5
	STUDENT	46	4.80	.453	.067	4.67	4.94	3	5
	Total	51	4.80	.449	.063	4.68	4.93	3	5
TEXTURES	STAFF	5	3.20	1.789	.800	.98	5.42	1	5
	STUDENT	46	3.63	1.356	.200	3.23	4.03	1	5
	Total	51	3.59	1.388	.194	3.20	3.98	1	5
SMELL	STAFF	5	4.40	.548	.245	3.72	5.08	4	5
	STUDENT	46	4.39	.802	.118	4.15	4.63	2	5
	Total	51	4.39	.777	.109	4.17	4.61	2	5
COLOR	STAFF	5	4.20	.837	.374	3.16	5.24	3	5
	STUDENT	46	4.54	.690	.102	4.34	4.75	3	5
	Total	51	4.51	.703	.099	4.31	4.71	3	5
APPEREANCE	STAFF	5	4.20	.837	.374	3.16	5.24	3	5
	STUDENT	46	4.57	.720	.106	4.35	4.78	3	5
	Total	51	4.53	.731	.102	4.32	4.73	3	5

Figure 4.1 Statistic analysis for sensory evaluation

Analysis of 50 respondents answering all the questions, more students liked this noodle compared to the staff at PMKu. This is because more students don't have time to cook and need this youmee to eat. This Youmee also suits the taste of students at PMKu.

ATTRIBUTES	STAFF	STUDENT
FLAVOR	4.8	4.8
TEXTURE	3.2	3.63
SMELL	4.4	4.39
COLOR	4.2	4.54
APPEARANCE	4.2	4.57

Figure 4.2 Analysis

5.0 DISCUSSION

In conclusion, my product (youmee) has many advantages or benefits that are not known to the public. For example, red onion skin is a source of vitamin A, vitamin C, vitamin A and other antioxidants. Red onion skin also contains flavanoids, especially quercetin. This content has anti-inflammatory and antioxidant properties. Therefore, it is not surprising that this onion skin can provide its own nutrition. Youmee is also produced with tomyam seasoning that will give a good taste and reduce the taste of onion skin. Based on this, researchers know that this youmee product can provide other uniqueness than instant noodles that in the market. In addition, the instant noodles that are available in the market today have some disadvantages because they use various preservatives and msg that can affect health. The study by seven researchers from Universiti Putra Malaysia (UPM), Universiti Malaya (UM) and the University of London found that none of the instant noodles in the Malaysian market can be categorized as low-gram, very low-salt or salt-free foods. The study published last May also found that about 40 percent or more of the 250 instant noodle products that were studied, did not display the salt or nutritional content of their respective products. But it is different from our instant noodle products (Youmee) because they do not use any msg or preservatives. Based on this, we know that leftover food is edible and safe to eat. Furthermore, in Malaysia, there is no longer any instant noodle product that is based on onion skin. The ingredients used to make youmee are from ingredients that have received a halal certificate from JAKIM because it is a brand that has been commonly used in their daily life such as wheat flour. The price is also affordable and we are sure this product will find its own place in the market. Finally, we hope that our products will become popular so that we can expand our brand overseas and be accepted by all consumers. We also hope that people can fully support our products and encourage our products to continue to improve. We will also constantly improve our products so that they are compatible with existing products in the market.

6.0 CONCLUSION

In conclusion, Youmee is made from onion skin which can provide the necessary nutrition based on the nutrients found in onion and carrot skins. Therefore, taking Youmee products is good and can reduce the risk of disease. Youmee products are also suitable for children as well, just as much as for adults. In addition, making noodles from onion skins can provide awareness about the disposal of onion skins thus providing knowledge and creativity in innovating onion skins. For recommendation, the researchers have to studied a few recommendations and improvement about noodles especially when it comes to texture of the noodle. Firstly, can use another method to make the noodle as before the research using dried method as to shape of the texture the noodle, but the other way, the researcher can use frying method to shape the texture noodle. Noodle is a common choice for everyone. So to look forward for the future, we need to improve the packaging of the paste for this instant noodle as it is a way to make our product better and acceptable for everyone. With these recommendation for this time, maybe we can be the best product within the time being.

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FRUITY JAM SLICE

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ABSTRACT

This jam slice product is a product produced by apples and honeydew. We created this product to make it easier for users such as students, housewives and working people to prepare breakfast in the morning. And this product is also created to provide good nutrition to the user. In addition, apples and honeydew have good properties. Among the benefits of apple is that it is very rich in vitamins A, B and C which are very good for the skin. The benefit of honeydew is that it contains vitamin C, minerals and also contains collagen for body health. Therefore, this innovative product is safe to eat because it reduces side effects in the body and provides more nutrition in the body to the user. In fact, this product was tested in terms of taste, texture and consumer acceptance of our jam slice product. The method that we used to study is by using a quantitative method. This quantitative method was using a in questionnaire to collect data. We were using a Google form contains some answers and questions that will be provided and can be answered easily by the respondents. After that, all the data from the respondents will be recorded and collected. By converting a breakfast meal might be a brilliant idea for some entrepreneur who busy with their work. Lastly, the objective in this research has been achieve successfully.

1.0 INTRODUCTION

-Problem Statement

The problem faced in wanting to produce this fruity jam slice product is because of the problem faced by our society who do not have time to have breakfast in the morning. As we all know, many people have trouble eating breakfast among adults who are busy with work. They don't have time to prepare breakfast because they are busy to go to work. If we don't have breakfast in the morning, this will cause us to be lethargic, unmotivated to do work and so on. The bigger your body, the more body mass you have to move, so your body will produce more heat. Therefore, we should have breakfast in the morning even if we don't have time or are very rushing. Next, health problems can also be reduced. Not many people can produce fruity jam slice products using this local fruit.

-Objective

The project we are implementing aims to make it easier for users to make breakfast on time. As we know, many residents in Malaysia do not have time to have breakfast in the morning due to time constraints. In addition, to identify the community's acceptance of sliced fruit jam products and ease the burden of many people. This product is also for us to identify consumer trends towards sliced fruit jam products in preparing breakfast. As well as to develop healthy fruit innovations that can save users time and energy.

2.0 LITERATURE REVIEW

-Related topic

In producing the fruity jam slice product we use ingredients that are easy to find anywhere such as in supermarkets. The ingredients we use to contain their own benefits and benefits. Among the ingredients we use are honeydew melon, green apple, sugar, honeydew essence, citric acid, and arabic gum. In the production of this product, we measured and weighed the ingredients according to the correct mold to obtain good product results. And every stage of the production of this product, we have gone through many failures to get the best production. Next, we were able to successfully create our own products that are comparable to products on the market. So the creation of this jam slice can help ease the work of everyone who doesn't have time to prepare food or breakfast. Hope that the products we highlight can be accepted by all parties regardless of children, teenagers, or adults

-Theory/Conceptual/Model

Jams are rich in sugar and a good source of energy. Since they are high in calories, weight loss seekers and diabetics should use jams sparingly. That said, even though jams and jellies may provide some benefits, they're high-sugar products, and consuming too much sugar may lead to weight gain, cavities, heart disease, and type 2 diabetes. Jams tend to look somewhat chunky even in the jar, and it is often possible to see pieces of fruit or tiny seeds in the spread. Jams are coarser and thicker in texture and contain more of the actual fruit pieces than the jellies do. They are rich in flavor and have a spoonable texture perfect for topping homemade bread. Since making homemade bread can be a hassle, this is hard to avoid. But what you can change is the jelly, jam, or margarine. As it turns out, according to medical doctors and naturalistic nutritionists, as well as university researchers and numerous medical studies done all across the globe, fruit jams, and preserves, provide our bodies with beneficial quick boosts of energy and in fact, are only about half the calories. Since jams contain sugar, they quickly mix with the blood and give energy. They also relieve heart pain. They prevent sweating due to internal diseases. Stay healthy by consuming natural jams.

A study on the chemical and sensory properties of jam from osmotically dehydrated pineapple slices. jam is made from dried pineapple slices (with or without osmotic dehydration), fresh pineapple, and pineapple slices that have been osmotically dehydrated (4 hours), dried in an oven (60 Celsius 27 hours), and rehydrated at 90 Celsius. (Beatrice, 2013). The health of schoolchildren is a priority because school children are vulnerable to malnutrition and infectious diseases. Choosing food and avoiding nutritious food such as vegetables and fruits makes it less sufficient for fiber and vitamins. This study aims to determine the rate of strawberries with the addition of a few percent of sugar to the content of vitamin A and fiber produced from the sliced jam. This study used a Randomized Block Design. The treatment given is (Nuraeni, B Sustriawan, A Proverawati, 2018). The results of the study showed that the proportion of strawberries and the addition of sugar had a significant effect on the content of vitamin A and fiber. Selected sliced jam products have a dietary fiber content of 6.025% and vitamin A. (Nuraeni, B Sustriawan, A Proverawati, 2018).

3.0 METHODOLOGY

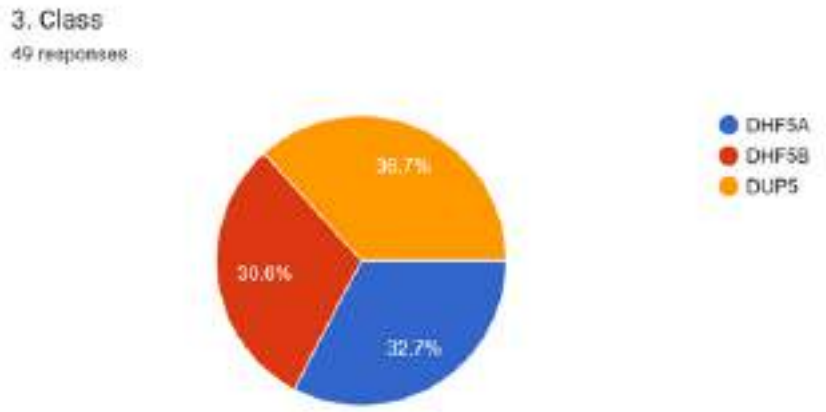
-Product Development

·Wash the green apples and honeydew until clean, and remove the skin.
·Next, grind all of the previously cut fruits.
·Pour the ground ingredients into a hot pan.
·Then mix until a little dry.
·After that, add sugar, aerobic gum, citric acid, and honeydew essence.
·Mix until the mixture is thickened and the texture is a bit lumpy.
·Then pour on the tray and cool for 15 minutes in the chiller.
·After cooling, make slices and wrap in plastic.
·Finally, put in 5 slices in the box that has been labelled with the product.

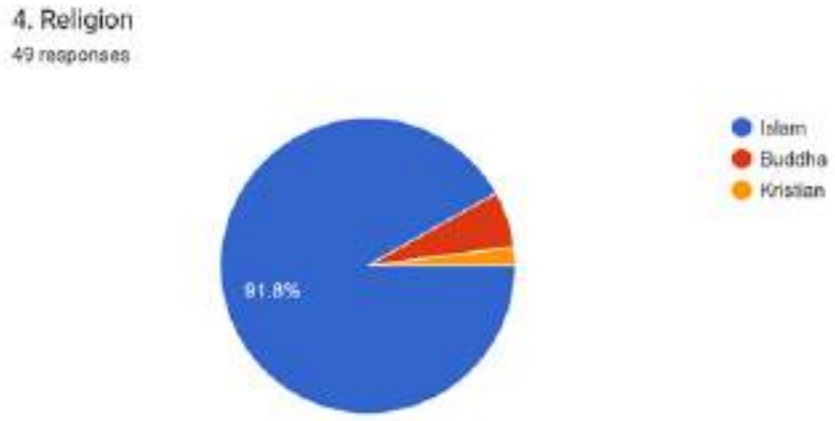
-Quantitative/qualitative/mix method (questionnaire survey/Interview/Both

The questionnaire was given to 49 respondents from Kuantan Metro Polytechnic. The questionnaire was divided into three parts. Section A is designated to obtain general information related to the respondent's personal data. Part B is about encouraging habits to eat these products. Part C is the sensory evaluation is to calculate a score for each product, each descriptor is given a score value: strongly dislike (1), dislike (2), partially dislike (3), neutral (4), partially like (5), like (6), very liked (7).

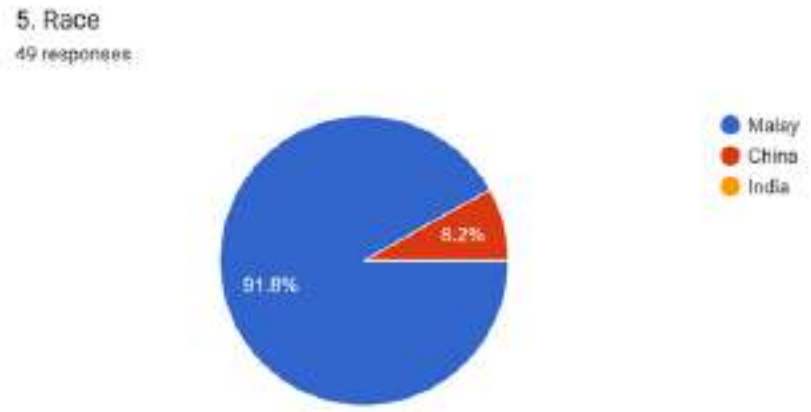
Pie chart 2: Respondent's gender



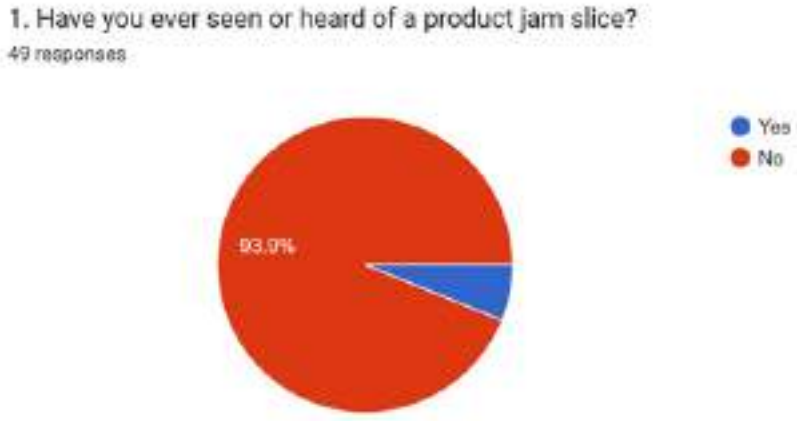
Pie chart 3: Respondent's Class



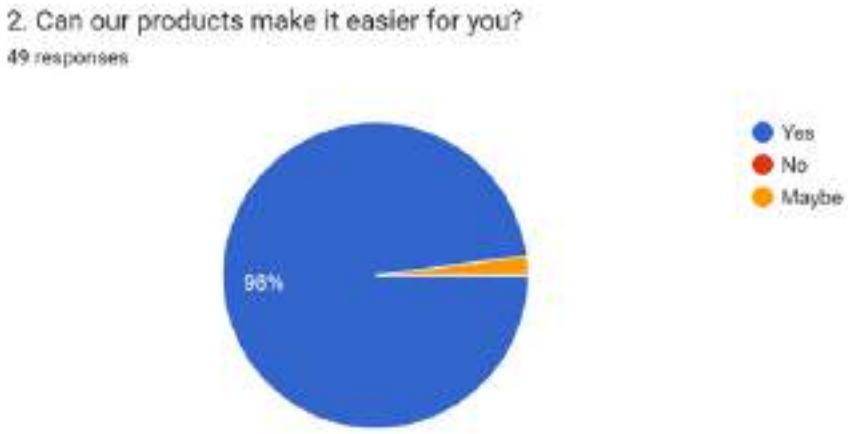
Pie chart 4: Respondent's Religion



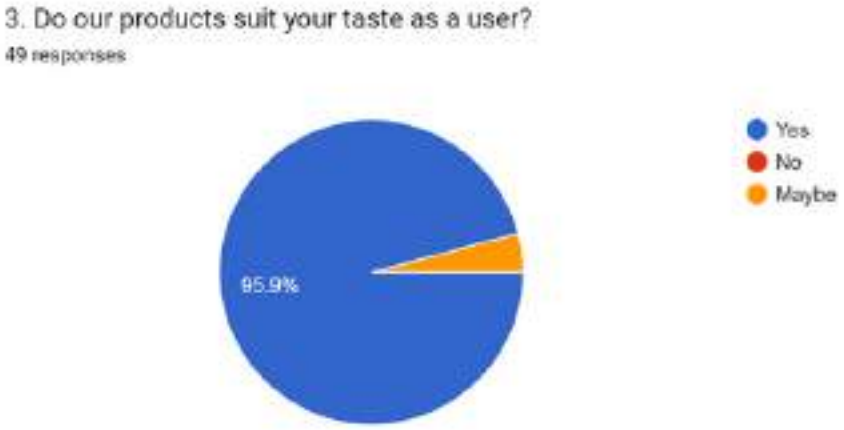
Pie chart 5: Race



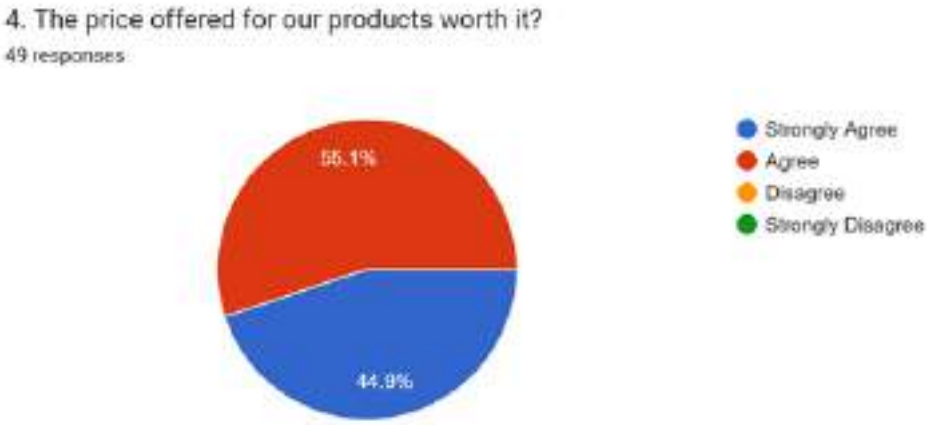
Pie chart 6: Respondent's knowledge



Pie chart 7: Respondent's about can our products make it easier



Pie chart 8: Respondent's about taste



Pie chart 9: Respondent's about price

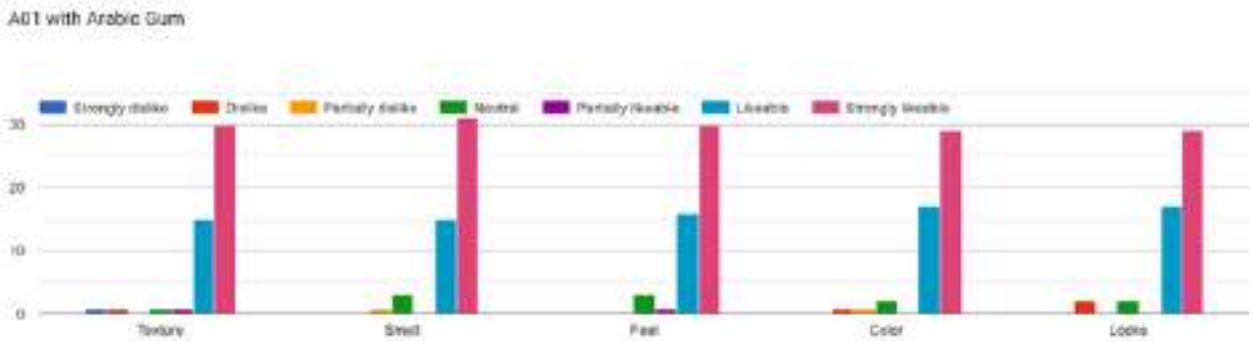


Figure 10: Shows respondents satisfaction based on their categories

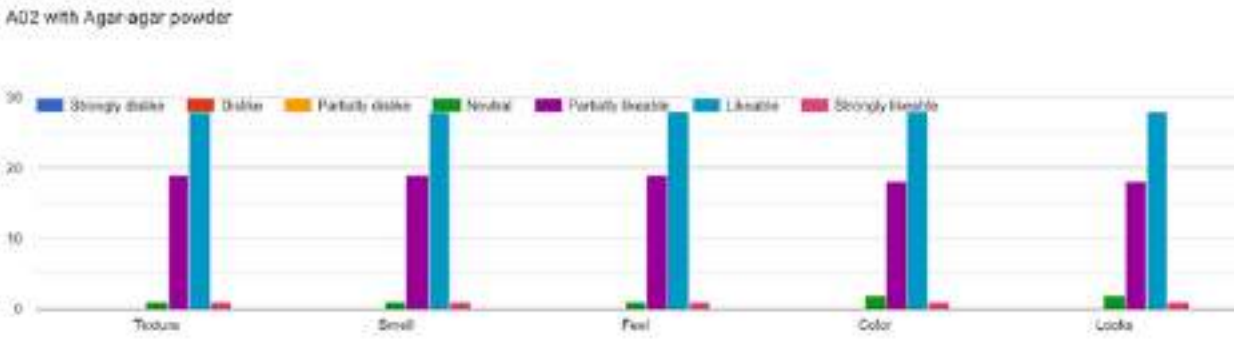


Figure 11: Shows respondents satisfaction based on their categories

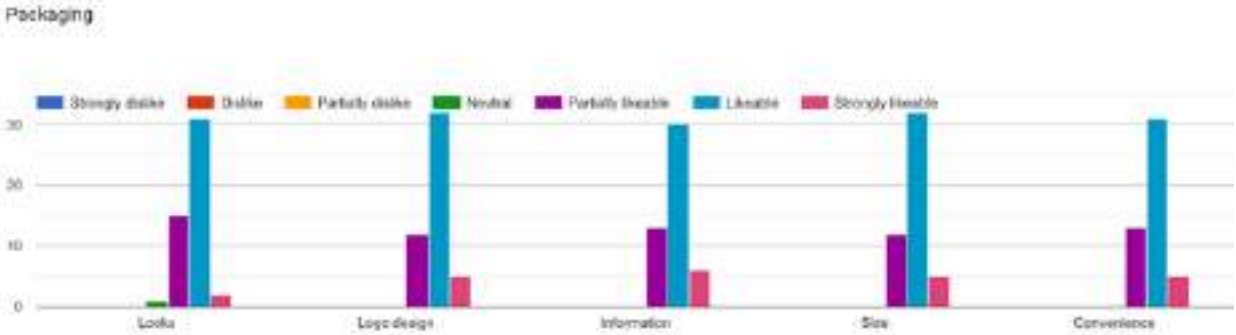


Figure 12: Shows respondents acceptance toward product packaging

5.0 DISCUSSION

In producing fruit jam slices we use ingredients that are easily available anywhere such as in supermarkets. The ingredients we use contain their own nutrients and benefits. Among the ingredients we use are honeydew melon, green apple, sugar, honey essence, citric acid, and arabic sugar. In the production of this product, we measure and weigh the ingredients according to the correct mold to get good product results. And every stage of production of this product, we have gone through many failures to get the best production. Next, we managed to create our own product that matches the products on the market. So the creator of this jam slice can help ease the work of everyone who doesn't have time to prepare food or breakfast. The products we highlight can be accepted by all parties regardless of children, teenagers, or adults

6.0 CONCLUSION

In conclusion, finding jams that have low sugar content and are safe to consume in large quantities is quite difficult because the jams out there have too much sugar and are very sweet. Overall, in the background chapter of the study, the problem statement, the objective of the study, the scope of the study, and the importance of the study have been discussed to overcome the problems of this product for users who face time problems and provide nutrients from our products. Objectives and problem statements are very important to set before we create a product. Our products will not see the benefits if they do not have a logical objective. Therefore, with new formulas and innovations, we hope that the products we produce can achieve the objective of our project, which is to save time.

BRAILLE CLASSIC GAMES BOOK

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ABSTRACT

Braille Classic Games Book is a product published to provide information and reading material to the visually impaired to obtain information about one of Malaysia's national heritages, which is traditional games. The main purpose of publishing this book is because there is limited book of traditional games in braille in the market. This was also supported by one of the respondents from Malaysian Blind Foundation based in Brickfield. The braille book is complete with information about traditional games that are popular from the three main ethnic groups in Malaysia which are Malay, Chinese, and Indian. The History, the rules as well as technique to play each game were also briefly explain using simple languages to ensure precise understanding. This book is also equipped with diagrams that have been braille. Three objective have been outline for this study. First, to give an alternative for blind person to get information about traditional games. Second, to create awareness among communities, government agency and private sector towards Malaysian traditional games for the blind. Third, to sustain Malaysian traditional games. Qualitative approach was chosen for this study and a total of five respondents from Malaysian Blind Foundation were interviewed.

Keyword : Blind; traditional game; braille

1.0 INTRODUCTION

Malaysia is a multicultural country and is known for its tourism industry. The uniqueness of Malaysian traditional games is one of the cultural aspects to promote tourism industry in Malaysia. Besides, there are various reading materials such as novels, magazines, broacher and even books that explain the facts about the places. However, there are lacks of production on braille books that focus on traditional game.

On top of that, the blind individuals are not given enough explanations and information about traditional games. People with disabilities such as the blind also have the right to obtain information about national heritage such as traditional games. If the group of blind people is not given attention for them to get information they will also be left behind. Therefore, as a concerned society, this innovation will help the blind to obtain information and knowledge about the country's heritage such as traditional games. Traditional games are becoming extinct in the face of modernity. Younger generation nowadays, lack of knowledge and exposure about traditional games. With this efforts the younger generation especially the blind can learn about traditional games and this one of the solution to preserve the culture. Three objective has been outlined which are; to give an alternative for blind person to get information about traditional games; to create awareness among communities, government agency and private sector towards Malaysian traditional games for blind and to sustain Malaysian traditional games.

2.0 LITERATURE REVIEW

Malaysia has a variety of unique races and ethnicities. Tourists who come to Malaysia like to gain knowledge and learn about the customs, lifestyle, traditional food of that race. Besides that, Malaysia is also rich in various traditional games found in the Malay, Chinese and Indian races. At the same time, traditional games are also related to tourism because they are part of Malaysian heritage, and it is a certainty as Malaysians to maintain this valuable heritage.

According to Kamus Dewan Bahasa dan Pustaka edition fourth “Traditional” relating to, characteristic of, or according to tradition: in old literature style of language and patterned technique. a society that practices a way of life that has been passed down through generations; the traditionality of the state or traditional nature: that is what is praised and adored by foreigners.

Malaysia is a nation rich in culture and heritage because of its multi-racial society that consists of different ethnic groups. Part of this rich cultural heritage are the various traditional children’s games that have existed for a long time, such as Congkak (filling the wooden board), Batu Seremban (tossing the stones), Sepak Takraw (kicking the rattan ball), Gasing (spinning top), Wau (kite flying) and many more. However, with the development of digital technologies and the impact of globalization, traditional children’s games that were once very popular in our society are now slowing fading away.

Most people who are "blind" have at least some usable visions that can help them move in their environment and do things in their daily lives. For blind people, they need help in terms of information and assistance to enable them to participate in enjoying nature and cultural heritage.

The blind people need a book or material in braille in order to get information. It is a system of writing for the blind that uses characters made up of raised dots. It is a form of writing, which was invented by Louis Braille.

Therefore, it would be better to produce innovative tourism products to help this group because of the lack of reading materials with factual concepts about the heritage found in tourism. Almost people are aware of traditional games, but not everyone is aware of how to play or the rules to follow. As a result, this braille book is the most recent innovation with a dual function, namely, normal text and braille text printed on top of the normal text to allow normal people to read it. This braille book contains information about traditional Malays, Chinese, and Indian games. This is also an innovative way to promote Malaysian heritage and preserve Malaysian tourism.

3.0 METHODOLOGY

The method that has been chosen is the qualitative method which is data collection through interviews and observation. Emphasis on qualitative methods allows to explore ideas and further explain quantitative results. While quantitative data collection retrieves numerical data (what, where, when), qualitative data, often presented as narratives, collect individual stories and experiences. Primary and secondary data were used for this research. Primary data is a type of data that is collected by researchers directly from main sources through interviews, surveys, experiments. Besides, primary data are usually collected from the source where the data originally originates from and are regarded as the best kind of data in research. Secondary data is the data that has already been collected through primary sources and made readily available for researchers to use for their own research. It is a type of data that has already been collected in the past.

For this study data has been obtained through an interview conducted at Malaysian Blind Foundation which located in brickfield Kuala Lumpur with five respondents involved to gain insight into the braille book products produced. All the interviewee hold different position in the organization, therefore they view are from difference perspective starts from top management to technician as well as member of the foundation.

Question develop based on the objective for this study. During interview session all interviewee were asked the same question and all respond were recorded using recorder and some respond recorded manually.

4. 0 FINDING

This study using qualitative method. Sets of interview questions that cover all the objective that wanted to be achieved were prepared. During the session, the interview were recorded with the permission of the participants throughout the session. The interview lasted about 30 to 50 minutes. At the same time, interviewer jotted down note in order to assist in the accuracy and transcription. Then the data obtained were transcripts. The process of analysis was conducted manually without using any software.

For the first objective which aim to give an alternative for blind person to get information about traditional games, most interviewee agreed that this book will give them benefit in term of giving alternative source form them to get information, especially in traditional game. One of the respondent mentioned as follows;

"In my opinion, it is definitely appropriate to publish this book because this is an alternative for blind people to get information sources. Besides, if we have been publishing braille books, there is still no braille book that has information about traditional games. Therefore, I very much agree with this project to publish a braille book. I'm sure this book will also bring many benefits to the readers".
(Source ; Respondent 1)

Another respondent also added;

" I also agree because not all of us know about traditional games. There are some traditional games that we do not know".
(Source; Respondent 2)

Furthermore, this book also can be distributed to special education school as reading material or even can be add to their syllabus. One respondent respond as below;

"In my opinion, these books can also be placed in Special Education Schools as learning resources and reading materials for students".
(Source; Respondent 3)

"Furthermore, this book can be used in co-curricular classes for students at school during co-curricular class periods. I am sure that the students will enjoy learning about traditional games because no child dislikes games. Following that, we can see the students' abilities in traditional games."
(Source; Respondent 4)

Second objective for this study is to create awareness among communities, government agencies and the private sector towards Malaysian traditional games for the blind. The question given is related to whether it is important to ensure that traditional game information reaches people with disabilities? The next respondent gave the opinion that it should be important for this information to reach the blind people because this is a source of knowledge for them. These supported with statement from the respondents as follows;

"There are many facilities available only to normal people, but fewer for People with Disabilities (OKU). We don't want to seek society's sympathy because we can live our daily lives independently. It's just that the community is sometimes overlooked. With this innovation i'm pretty sure will create awareness among stakeholder".
(Source: Respondent 1)

"There is a lot of progress and development made specifically for normal people but forgetting to make improvements and also development and make also for the visually impaired people. Small changes will at least make some improvement"
(Source: Respondent 2)

"The group of people with disabilities is often overlooked by society. I'm hopping that with this little effort will can be ".
(Source: Respondent 5)

The third objective for this study is to preserve Malaysian traditional games which received positive respond by the interviewee. It is important to ensure Malaysian not to forget their culture because it is a national treasure. Exposure need to be natured since in the early age to ensure they value the culture. The innovation of Braille Classic Game Book will bring new generation especially the blind familiar with own culture and at the same time will preserved them. These inline with the responds given by the respondants;

"For me it is very appropriate for us as Malaysians to preserve our heritage so that it is not forgotten".
(Source :Respondent 1)

"I agree if we don't preserve our heritage like traditional games. The younger generation will not know that our country has a unique traditional game. If they don't know, how can they be interested".
(Source: Respondent 2)

"I also agree that this book is published because, not only the younger generation will not know about traditional games, but even society can also forget about traditional games because of the increasingly advanced and modern era."

Another respondents added;

"I also agree, if we don't preserve our heritage, who else will dignify it. Therefore, I strongly agree to publish this book"
(Source: Respondent 4)

"Heritage such as traditional games should be dignified because they symbolize our culture. Therefore, we should be proud of our unique art heritage, we should sustain this heritage in tourism"
(Source: Respondent 5)

5.0 DISCUSSION

According to the findings for this study, Braille Classic Game Book received very positive feedback from all the respondents which reflect all three objective can be achieved. The innovation of this book will definitely give people with disability (blind) an option in searching information regarding traditional game. Before, they might be just listen to a radio or other hearing material, but this time they have alternative way which is reading using braille book. The creation of this book also will enhance all stake holder in putting more effort for this particular group in reaching information about culture. Furthermore, awareness might enhance all party to collaborate in term of idea and budget to produce more braille book in future. Continues effort will foster culture sustainability in making sure all generation especially to the blind to get information about Malaysian traditional game.

6.0 CONCLUSION

In conclusion, this innovative product is very useful in assisting the blind in obtaining and accessing information about Malaysian heritage. Braille Classic Games Book reveals information about traditional games. Through the production of this product also proves that promoting and preserving tourism can be done in various ways. Furthermore, the national heritage will always be preserved, and the younger generation will be able to carry on the tradition in the future.

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SUSTOCATION TOUR APPS

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ABSTRACT

The SUSTOCATION TOUR APPS is an idea proposed to contribute an innovation product for tourism industry and to help the students who are studying DTM 50174 Tourism Project. The SUSTOCATION TOUR APPS has been through many stages in idea consulting, before the idea, a study has been make to identify the problems during their learning in DTM50174 Tourism Project. Based on the study conducted the data analysed to create a product info the suitable products and its fill of information that is needed by other people. With SUSTOCATION TOUR APPS the students and other peoples can learn easily about attractions related with Sustainable Tourism and also can drew their interest in attractions Malaysia. Furthermore, this product can be as educational tools in students learning and also can gain more knowledge about our product. SUSTOCATION TOUR APPS can also be introduced in the next generation to preserve the sustainable places in Malaysia.

1.0 INTRODUCTION

SUSTOCATION TOUR APPS collaborate with travel agency in Kuantan which is Za Nusantara Travel and Tours Sdn Bhd and in help with Tourism Malaysia to create this sustainable tourism package. This package will be in around Pahang such as Cherating Turtle Sanctuary, Taman Negara Jerantut, Pekan, Sungai Lembing and others. The tourists can get to know more about activity to focus more on sustainable tourism and at the same time also can ge to know more about the culture and tradition of Orang Asli such as in Taman Negara Jerantut. Other than focusing in Taman Negara Jerantut, there are also a place in Pahang which is at Cherating. In Cherating there so many things to do that related with sustainable tourism such as we can visit Natural Batik Village, Turtle Sanctuary Village and the beach in Cherating is so beautiful so that people can enjoy the scenery of the beach in Cherating.

Problem Statements

1.Sustainable tourism is less practiced among Malaysians because they lack knowledge about what is sustainable tourism and the impact of tourism sustainability to the whole tourism system.
2.There are not many travel agencies that provide packages related to sustainable tourism, causing people in Malaysia to be less interested and unaware that such tourism exists.
3.Lack of awareness regarding the importance of sustainable tourism among both tourism providers and customers.

Objective

1.To raise awareness about sustainability tourism importance and help promoting sustainable tourism practices.
2.To maintain a high level of tourist satisfaction and ensure meaningful experience to the tourists.
3.To encourage respect for different cultures and create economic with infrastructure development regarding some potential attraction places.

2.0 LITERATURE REVIEW

Nowadays, young generation always go holiday, but they didn't know about the places that relate with sustainable tourism which will be included nature, culture, environment and economic. More people like to go holiday at places that have entertainment and attraction. But in sustainable tourism, they also have attraction places that full of nature and certain places have culture and know the importance of conservation and preservation on animals or plants. We also want to offer this package to people so that they can be more aware and can gain more information of sustainable tourism.

From this method, offer the package of sustainable tourism can make people become more interested because this kind of package is rare to found in Malaysia. In Malaysia, they only going vacation to city, beach, and entertainment place. For young generation, they like to do things like that because they can satisfy themselves by shopping, eat things that going viral in city and enjoy the scenery at beach.

This kind of vacation, ecotourism also they can enjoy the scenery and they also can know more about nature at our forest. They can see things that can be hard to find at other places such as wildlife, endangered plants, and others.

This application made us realize the importance of sustainable tourism. The importance of sustainable tourism is included with protecting the environment, natural resources, and wildlife. Then, it is also providing socio-economic benefits communities who live in tourist destination. Other than that, we can conserving cultural heritage and creating authentic tourist experiences like we said above to give them awareness about the culture and nature around Pahang. From this package of vacation, we can create an inclusive and accessible tourist opportunities by bringing tourists and local communities together for mutual benefits.

3.0 METHODOLOGY

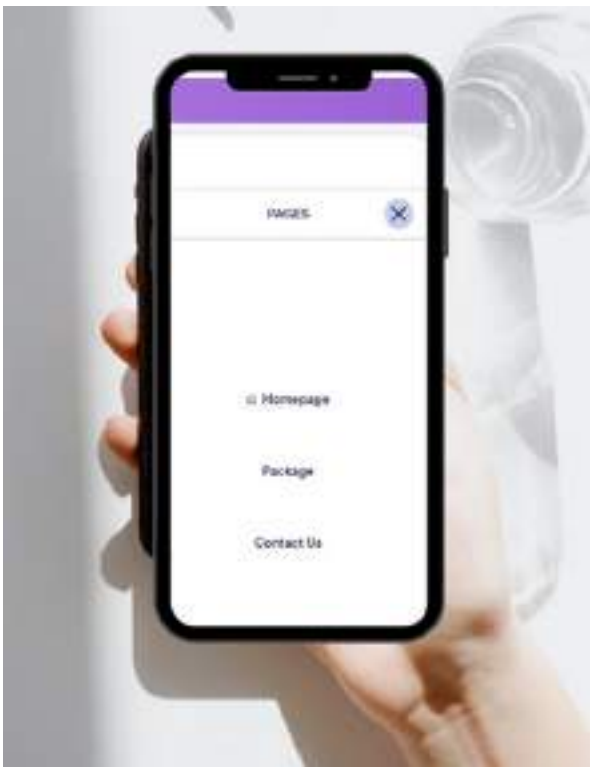
Our group decided to make a website as one of our projects to promote sustainable package collaborate with the travel agency. This website will contain some of travel package that relates to sustainable for example a package to Taman negara and get to know the existence of Orang Asli tradition in Rompin, Pahang. The tourists can learn while they are on vacation and practicing on the sustainable activities. The tourists can have a talk with Orang Asli and know about their lifestyles, how they survive living in rural areas, routine food and many more. In addition, this sustainable package also can create more job opportunities to Orang Asli community like guiding them for jungle trek and fishing. It's not only about gaining profit from this package but it also can growth back tourism economy.

Research Design

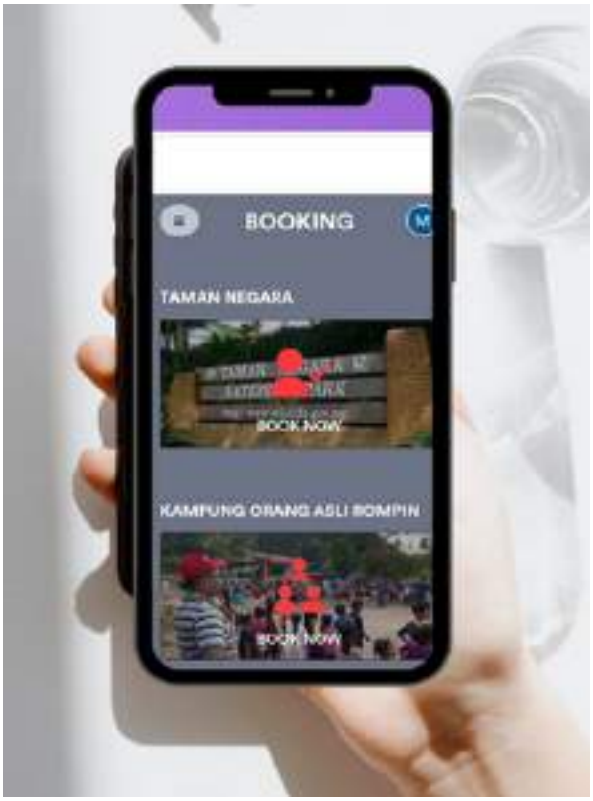
Collect data and to summarize the findings based on information provided by students.The methods that we use for this project is quantitative in which we gather the information and data to determine either the clients will purchase this package or not. We conducted the data collection via various method for this project, either from primary source or secondary source which are;Book and Brochure. We gather all the books and brochure we found to gain more knowledge about the sustainable place and the culture.We also provide a questionnaire as the main source of data collection especially for Tourism Management Students. For this project, we choose quantitative method where the entire information and data collected to make sure whether the clients will be interested on this kind of package

Sampling and Population

Based on Krejcie and Morgan's (1970) table for determining sample size, for a given population of 50, a sample size of 44 respondents would be needed to represent a cross-section of the population. The project used quantitative method where 50 number of respondents were selected among regular customer of Za Nusantara Travel & Tour.


PAGES
Homepage
Package
Contact Us

SusToCation Tour Apps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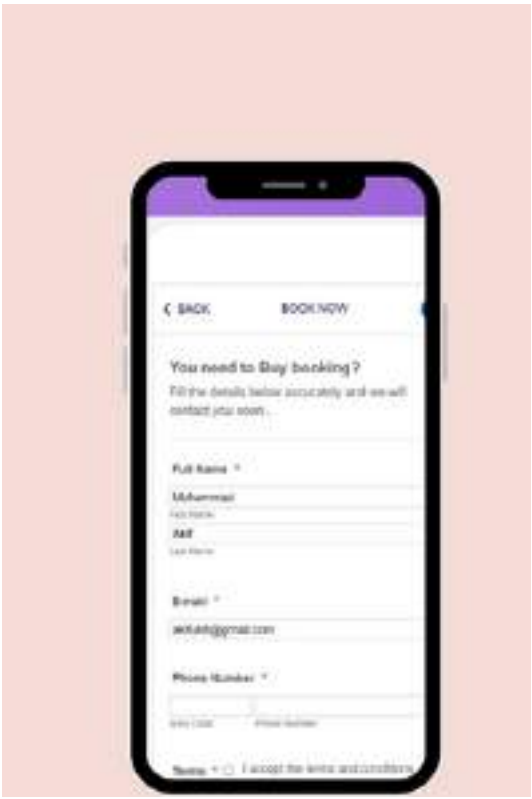

BACK
BOOK NOW
You need to Buy booking?

4.0 FINDING (Data analysis)

For this chapter, the main study is that will provide the feedback and opinion on the overall research objectives. This data analysis is the process of processing raw data and extracting actionable, relevant information that can helps our product. The procedure helps reduce the risks inherent in decision-making by providing useful insights. These also to help us know if the product can satisfy people or not. It is better for us to analyze the overall data, because we can get more accurate data and know what better what our customer is targeting to our product.

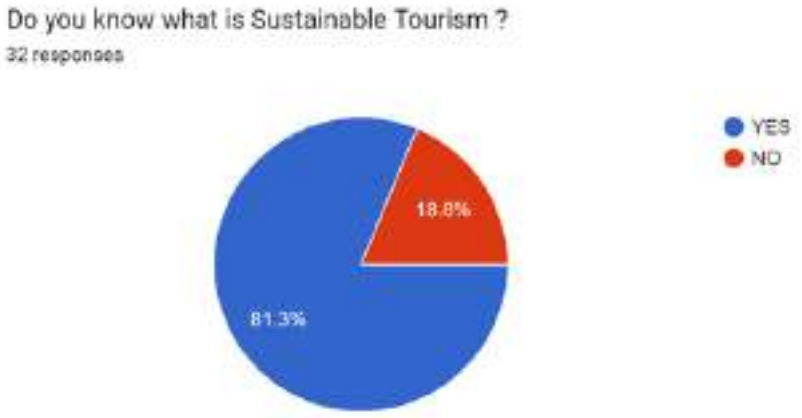
As mentioned in the previous chapter, the method we use is quantitative method where we will gain and gather the information from the questionnaire, we gave to regular customer of Za Nusantara Travel & Tours. This is because quantitative method has several types of research, and one of the types of research is survey research. Survey research make it easier for us to make comparison by group. Other than that, survey research requires that respondent who answer the survey is “randomly” sampled. Therefore, quantitative is mostly collecting numerical data to explain a particular feedback and opinion. In the data collection process of the research survey technique was used. In this study the survey that consists of two parts, and was tested in the Kozak & Rimmington, 2000, Kozak, 2001and Öztürk, 2004 studies.

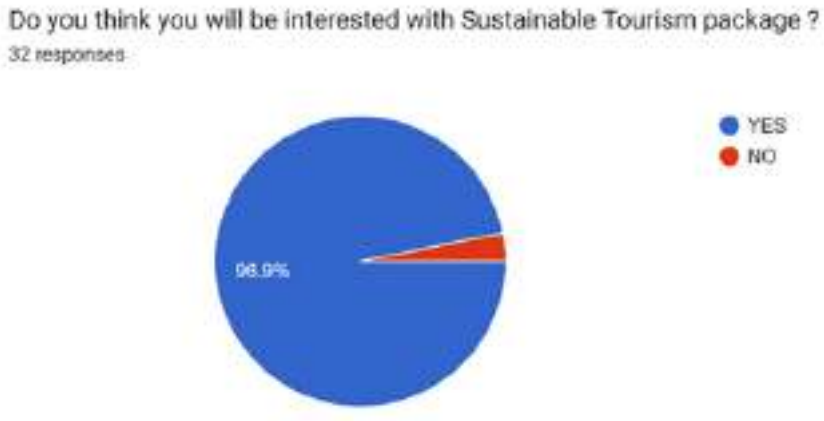
The data analysis is based on our project objectives. The survey questions are also based on the project objectives. There are three main objectives for our product. Which is, to give awareness about how important sustainability tourism and to help promoting sustainable tourism practices. Which mean, from our product people can see the information about sustainable tourism at the places and how they can aware the important of sustainability related to tourism industry while having a trip or holiday. There are a few respondents agreed that this application is the new alternative for them.

Then, all the respond we got from the survey is balance which is they have their positive side and negative side about our application. But for all the answers we got is giving their best opinion about our application. The customer that fill the survey is all excited about application that we want to develop because for them, they said it is hard to find the places that can relate to sustainable and they didn’t know the places that they has go before also related with sustainable tourism.

Below is a few answer we got from our survey about customer's opinion to our application;
"This app made it easier for me to find my vacation place."
(Respondent 1)
"I can find the best vacation place for my holiday with my family and friends while doing useful activities"
(Respondent 2)
"This aplication provides an interesting place and makes things easier for others"
(Respondent 3)
"I can directly book the package through the apps that included the detail of package, activities and itinerary"
(Respondent 4)
"It will help me find the best vacation in interesting places and their prices it the cheapest one"
(Respondent 5)

These are percentage about the knowledge related with Sustainable Tourism that customer who is fill the survey.



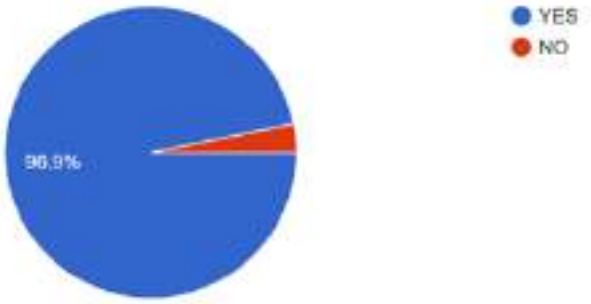


Do you think that SusToCation Tour Apps can help people to know more about the places related with Sustainable Tourism?

32 responses

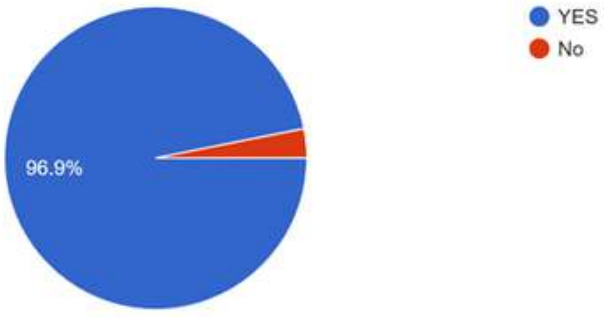
Is SusToCation Tour Apps application very effective to help and give awareness to people about Sustainable Tourism ?

32 responses



Do you mind to download an app on your phone ?

32 responses



SusToCation Tour Apps is created for people to know more about the places that we provided in our package, also the information related with sustainable tourism. The benefits found in our application is to give awareness and knowledge to people about how sustainability can relate with tourism industry. Therefore, there will be various places will be included in our package, and the places we choose is around Pahang. It is because to focus more places with full of nature in Kuantan, Pahang. Besides, people can know even in Kuantan City also have a place of nature and can relate with sustainability. Moreover, our places are all related with indigenous people, culture and more. There will be various age groups among people in Pahang who will try to book and purchase the package, such as if teenagers around 20-25. This will make young people know more about sustainability in tourism instead of holiday in the city and can make they interested to our package.

From this discussion, this new application provided for make it easier for people can help them to get know more about nature and culture in Kuantan, Pahang. On top of that, one of the important things in this discussion is to give a chance to people enjoy their holidays and at the same time aware about sustainability in tourism. It is either for people from outside Kuantan or even inside Kuantan to realize it.

5.0 DISCUSSION

In this chapter, it can be said that the facilities provided in this application can satisfy customers and the results of this study are in line with the study from Kozak, (2001) and Salleh, et. al (2011). Besides that, we designed this application for tourists to find their best vacation package that relates to Sustainable in Playstore. This application has the function to book travel packages related to sustainable tourism directly to the Za Nusantara email. This makes it easier for tourists to request about the food provided, for example some tourists who have allergies to certain foods can request to Za Nusantara. Before making a reservation, tourists need to fill out the registration form provided in the application because this makes it easier for Za Nusantara to get information about customers to make reservations such as buses. However, we also have a data that peoples didn't satisfied with our application and it can affect to people didn't want to try and use our application that we provided.

As mentioned before in previous chapter, the main objectives of this product to give awareness about sustainability in tourism. So that, in our application we put all the information about the places, activities and the prices that will be include transportation, food and others entrance fee. This will be easier for them, because at the same time they want to book our package, they already got the information about the places that we offer in our package. From overall data, it is also had positive feedback which is people will be use our application in the future to book again using this application. Therefore, they will suggest to others for using our application and try the package they have tried before.

6.0 CONCLUSION

Our application we create is SusToCation Tour apps is something new to travel agency to create new sustainable package for tourists so they will be more aware to sustainable activities like planting the mangroves while enjoying birdwatching at Cherating, get to know how to save turtles by visiting Turtle sanctuary and enjoy watching the fireflies while gain knowledge on how the fireflies live and which area they can easily see. This type of attraction will attract more tourists to join the sustainable package and practice sustainable in their daily life. It will also maintain a high level of tourist satisfaction and create meaningful experience to the tourists. This application also can promote the sustainable package to local people and they will be more aware about the importance of sustainable in tourism industry for them and their future generations.

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RE-BOOK: EXPLORING BANJAR ETHNICITY

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ABSTRACT

Going through the age of modernity, with the influence of other races in the world, our young generation tends to ignore our own race and culture. Not to mention the Banjar ethnic group in Malaysia has a small group. They are more interested in the culture out there than our own culture which includes the culture of minorities. As Malaysians, each of us is responsible for preserving our race and culture. Due to the problem, we decided to create an e-book consisting of history, culture, Banjar ethnic language and other interesting content. We collect information about the Banjar ethnicity through questionnaire. This questions searched Banjarese information and e-book characteristics preference from Diploma Tourism Management students of Polytechnic METrO Kuantan (PMKu). Researchers creates e-book using QR codes. The product can be accessed by anyone through their own advanced electronic devices. Meanwhile, the objective of this e-book is to educate younger generation the knowledge of Banjar ethnicity and to preserve the Banjar language which is increasingly being forgotten and taken for granted. In addition, the advantage of this product is that it is eco-friendly, easy to access and beneficial to the public, especially tourism management students, this product can be used as a reference material for their studies.

1.0 INTRODUCTION

United Nations World Tourism Organization (UNWTO) define tourism as a social, cultural and economic phenomenon which entails the movement of people to countries or places outside their usual environment for personal or business/professional purposes. Through travel, people experience amazing experience and culture exchange happened indirectly. Culture is a reflection of a community or nation. It gives you a sense of belonging, especially in language. Language evolves with the culture as an intimate product of the way those within the society communicate. Despite that, as time passed culture and tradition slowly forgotten because of globalization, technology, a rapidly changing economic landscape and others factor. Hence, we as human being need to preserve all the culture especially our own culture.

The theme for our final year project for this semester is about sustainability and we have chosen to preserve the tradition and culture of Banjar ethnic in Malaysia. We create an e-book titled "Exploring Banjar Ethnic" for our final year project hoping that our e-book user would benefit the Banjar ethnic culture and, language information. The purpose of our e-book is to let the community in Malaysia know the existence of the Banjar ethnic group in Malaysia and younger generation of Banjar descent to know more about their traditions and culture.

Problem Statement

Malaysian is lack of information about Banjarese ethnic. This can be seen through one article from merdeka.com on 16 August 2021. In this article it is said that one of their tradition which is “Bausung Penganten” is slowly forgotten since fewer people practice it because it requires high cost to prepare. An article from Berita Harian on 21 February 2019 wrote Banjar people is ashamed to admit they are Banjar people. As Malaysian, each of us has responsible to sustain our races and culture. Due to the problem, we decide to create an e-book that will consist of history, culture and language of Banjar ethnic. We as researcher, hope that through this book everyone will know the existing of Banjar ethnic and their culture.

Research Objective

1. To educate the younger generation about Banjar ethnic
2. To sustain Banjar ethnic languages
3. To create an e-book about Banjar ethnic

2.0 LITERATURE REVIEW

Ethnic

Relating or belonging to a group of people who can be seen as distinct or different because they have a shared culture, tradition, language, history, etc.

Culture

Culture, derives from the Latin colere, which means "to nurture," refers to the patterns of human behavior and the symbolic frameworks that give those patterns meaning and relevance. "Systems of symbols and meanings that even its authors question, lack fixed boundaries, are continuously in motion, and interact and compete with one another" is how cultures can be understood.

i.Traditional Clothes

A folk costume (also regional costume, national costume, traditional garment, or traditional regalia) expresses an identity through costume, which is usually associated with a geographic area or a period of time in history.

ii.Traditional food

It is foods and dishes that are passed on through generations or which have been consumed for many generations. They are traditional in nature, and may have a historic precedent in a national dish, regional cuisine or local cuisine.

iii.Prohibition

A taboo or taboo (English: taboo borrowed from Samoan: tapu) is a strict prohibition of an action based on the belief that such an action is too holy or too cursed to be performed by ordinary people, with the threat of punishment by supernatural powers.

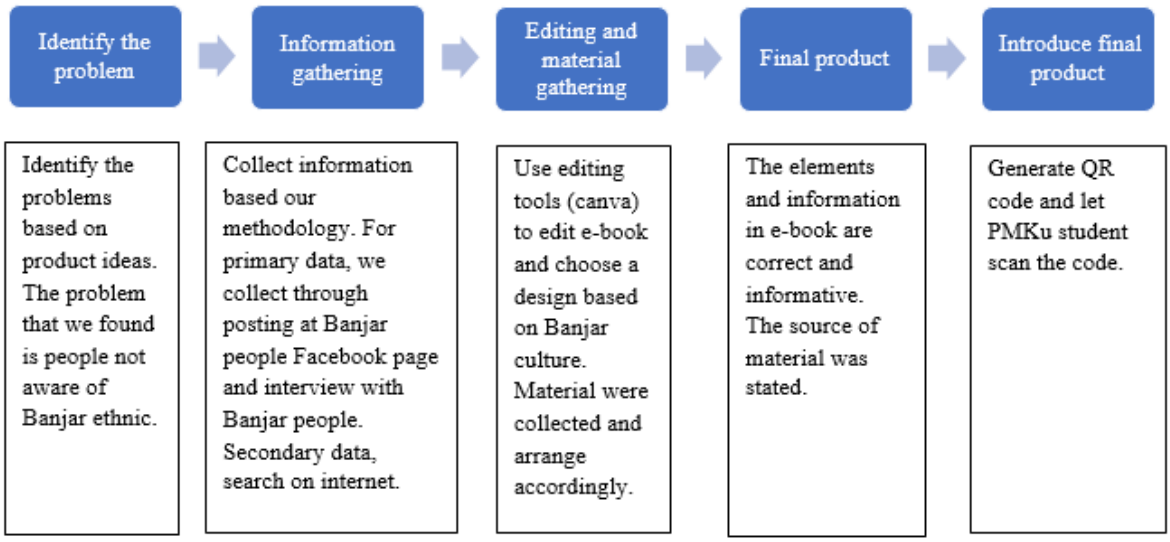
iv.Language

Henry Sweet, an English phonetician and language scholar, stated: "Language is the expression of ideas by means of speech-sounds combined into words. Words are combined into sentences, this combination answering to that of ideas into thoughts."

Sustain the Ethnic

This product is created to introduce the Banjar ethnic group that is being forgotten by the current generation. This is one of the ways to sustain Banjar ethnic that being forgotten. Especially the ethnic culture and tradition.

3.0 PROJECT DEVELOPMENT



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Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.754	.715	5

Table 4.1.1 Awareness of Ethnic Banjar

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Reliability Statistics

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Table 4.1.2 Opinion on e-book

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DORQH P D\ QRWP DNH WKH YLVLWRU GDUN WR XLVP 7K HP DLQ DWWDFWR QWR D G UN OR EWR QLV LW
KLWRUIFDOYDOXH UDWKHU WKDQ LW DWRFLDWR QZ LWK G EWK DQ GX IHULQ J1 H[WWK VL)HDUOHW
YLGHR FRQFHSWLV KHOG QRWRQO WR EHDEOH RV N Q R Z XEWPHR QVHGDWK K WH EQ OWR GSHO
IHHOWKH SHUVRQV KLWRU WKH SDLQ DQG Z K DWK HH[S HHQ IFG G XLQ JWK HS EN R IG EWK $ Y VLW
KHUHZ RXOG QRWEH FRP SOHWZ LWKRXWD WR SDWK H0 HP RUDO5 RR PVR UP RUH ON HDP X MX PLQ
WKH IRUP HUEDWWU IDFWRU EXLOGLQJ +HUH YWLWR VU K YDHKVHR S SWRQWL RVDWVHDIOR NU R R NW D
WKH SKRWRV DQG YLGHRV RI WKH EUXWDOW

,1752' 8&7,21

' DUN WRXULVP LV DOR NQRZ Q DV 7KDQD WR XLVP DV LQ 7K DQ WR V EOFN WR XLVP P R EUG
WRXULVP RU JULH WRXULVP KDV EHHQ GHLQ GHDV WR XLVP WK DWLQ Y YR MOWDY EH WR SOFHV
KLWRUIFDOO DWRFLDWG Z LWK GHDWK DQG WDJ HG \+R Z YHH DOWK R X 0 KOO\ VLD K DOR WR IG UN
WRXULVP VLWV WKH DUH QRWLQWUQDWRQDOO UHFR J QHG DQ GDE HOWR DWWDFWWK HLQ HWQ WR QOD
WRXULWW %UDLWZ DLWM /HH D 7K HOFN R IVX S SWRDQ GFR OOE RDWR QIUR P WK H
JRYHUQP HQWERGLFV SXEOF DJHQFLHV WDY EH DJ HQ IHV DQ GWR X RS HDWR VU DUH WK HUHDVR Q V
%KXL DQ HWDO &DYOHN 1 DUJ XGHWK DWR EH VX WDLQ EHO DQ \Q ZH WR XLVP
SURGXFWWKRXOG EH DJJUHWLYHO SURP RWG Z LWK FR PP X QOHIR WIUR PDOOE R HG UHODWG WR
WKH WRXULVP LQGXWW

Therefore, our project Fearless 360 video were aims to highlight and promote the concept of Dark Tourism in Malaysia. The word Fearless, that used in our project title because it brings the meaning of free from fear. When it fits the theme of our project, it will be defined as being no fear when visiting dark tourism. Majority people don't know or have never heard about the existence of Dark Tourism. In fact, dark tourism actually is a unique way of traveling in the tourism industry. Through this 360' Fearless video, the tourists held not only to be able to know about someone's death, they can also deeply feel the person's or places history, the pain and what people experienced during the peak of death.

As in the case of Penang War Museum in Penang. The Penang War Museum is the largest war museum in Southeast Asia. This location records the sad and tragic story of the British army to defend the Straits of Malacca from Japanese attack coming from the South channel. This museum is a military fort designed by the British in the 1930s. The museum houses a gun range, an anti-aircraft firing pit, a soldier's sleeping quarters, a cook house, a lock-up and a command center. Here, visitors have the opportunity to take a closer look at the photos and videos of the brutality.

The objectives of this study to do a research user acceptance about dark tourism according to video 360 Fearless in Malaysia.

2.0 LITERATURE REVIEW

According to the report, the average video length is at 11.7 minutes. Music content generally had the shortest video length among all categories on the platform, with an average length of 6.8 minutes per video. (L. Ceci, 2021).
As has been previously review shows that, the combination of personal growth visitors of dark tourism museums would like to receive, and an aspect of motivation in a game, provides a high opportunity of learning. (Shustova, V. 2021). Previous research has focused almost exclusively on ways to promote dark tourism through gamification.
Malaysia should notice the growth of dark tourism industry in the West, Europe and even Australia. Their young tourists have been venturing into something the mass tourists avoid.

Then, it is not surprising that Malaysian youth will eventually follow the trend since this theme is increasingly popular among them. They have more courage and interest in new things and death is not exceptional let alone in tragedies, disasters, violent and any dark side under the umbrella of heritage tourism context. (Ahmat, N., Ariffin, H., & Hamid, N. A., 2021).

The Dark Tourism experience might yield positive benefits of physical and mental experiences and educational introspection that are emerging in the past years. Numerous disaster relics have appealed to visitors and have become popular tourist attractions. Dark Tourism is gradually agreed upon and accepted by visitors and has become a hot topic in the travel industry. (Chang, T. Y., 2014)

The Dark Tourism is a form of tourism that is not unanimously accepted by the whole society, but in spite of this fact, the practitioners of dark tourism is a viable segment. Indeed the concept that defines dark tourism is none other than death, and perhaps this is why it will always be a segment that will not be attracted by this form of tourism. (Kulcsár, E., & SIMON, R. Z., 2015)

3.0 METHODOLOGY

The research methodology covers the methods and approaches used to achieve the objectives and goals of the study. The research methodology makes our project more systematic and the study journey more directed in achieving the objectives. We have systematically planned the research . Methodology and strategy used to obtain information and data about the dark tourism in Melaka, Malaysia through specific methods. This chapter will also discuss in detail some important points in the methodology and strategies used in completing this study.

A study design is an action plan that shows in detail how a study is conducted. It also serves as a guide in assisting researchers in the process of collecting, analyzing and interpreting the results of research conducted. Here are the methods of research in education.

There are one (1) main approach to research problems which is quantitative method; This study uses quantitative techniques that are driven through a combination of experimental data collection methods, visit research the dark tourism site in Melaka, Malaysia and observation.

In this study, the method used is data quantitative method. Quantitative methods emphasize objective measurements and the statistical, mathematical, or numerical analysis of data collected through polls, questionnaires, and surveys, or by manipulating pre-existing statistical data using computational techniques. （Robert V. Labaree，2009）. We have use quantitative method as our project data collection method. The quantitative method will go though by questionnaires and it’s were distributed to respondents via Google Forms. The questionnaire is divided into 3 parts, Part A, Part B and Part C.

Respondents are Academic staff and students from Polytechnic Metro Kuantan. The total number of respondents is 50 selected from the Krejcie & Morgan format to evaluate and comment on this product. They will be instructed on the study's objective and their right as respondents to find how their feelings and think about our product.

4.0 ANALYSIS

DARK TOURISM					
	N	**Minimum**	**Maximum**	**Mean**	**Std. Deviation**
Are you afraid of dark tourism?	250	3.0	5.0	4.720	.5317
Are you afraid of dark tourism?	250	3.0	5.0	4.720	.5317
After watching this 360 video, you're interested in dark tourism.	250	1.0	5.0	4.460	.8068
After watching this 360 video, you have a better understanding of dark tourism	250	2.0	5.0	4.260	.8216
After watching this 360 video, you have absolutely no fear of visiting the Dark Tour.	250	1.0	5.0	4.240	.8155
After watching this 360 video, you think dark tourism can be widely promoted in Malaysia.	250	2.0	5.0	4.180	.7938
You are afraid because of the unknown experience of dark tourism?	250	2.0	5.0	4.220	.8088
In your opinion, is dark tourism a place about death?	250	2.0	5.0	4.220	.7836
In your opinion, is dark tourism a place about tragic place?	250	3.0	5.0	4.500	.6416
In your opinion, is dark tourism a place about war?	250	2.0	5.0	4.380	.7195
There are many dark tourism in Malaysia goes undiscovered	250	3.0	5.0	4.500	.6095
Valid N (listwise)	250				

The table above shows the mean and Standard Deviation. According to table,the mean for variables are major 4.0 and above which states that the opinions of respondents statement are positive. The question of 'Are you afraid of dark tourism?' has the highest mean with 4.720 and with a standard deviation of 0.5317. This indicated that some respondents were

terrified of dark tourism. Furthermore, is the question of 'There are many dark tourisms in Malaysia goes undiscovered'. With the mean of 4.500 and with a standard deviation of 0.6095. Respondents believe that there is a lot of dark tourism in Malaysia.

Besides that, the following question has the same mean value as the previous one, which mean is 4.500 with its standard deviation of 0.6416, and the question is 'In your opinion, is dark tourism a place about death?'. According to the respondents, dark tourism is a place about death. Next, is followed by the question of 'After watching this 360 video, you're interested in dark tourism.' , which mean is 4.460 along with its standard deviation of 0.8068. Its shows the respondence feel interested in dark tourism after they watching our project.

Furthermore, it following up with the questions of 'In your opinion, is dark tourism a place about war?', which mean is 4.380 and standard deviation of 0.7195. According to the respondents, dark tourism is a place about war. Besides that, the question of 'After watching this 360 video, you have a better understanding of dark tourism' with the mean of 4.260 also the standard deviation of 0.8216. Indicating that the respondents have a certain understanding of dark tourism.

In addition, the question of 'After watching this 360 video, you have absolutely no fear of visiting the Dark Tour'. with the mean of 4.240 along with standard deviation 0.8155. Respondents felt less intimidated in the face of dark tourism after watching our project. Next, the question of 'In your opinion, is dark tourism a place about death?', which mean is 4.220 and standard deviation of 0.7836. According to the respondents, dark tourism is a place about death.

Besides that, the question of 'You are afraid because of the unknown experience of dark tourism?', which mean is 4.220 along with standard deviation 0.8088. The unknown experiences of dark tourism can terrify respondents. Lastly, the question of 'After watching this 360 video, you think dark tourism can be widely promoted in Malaysia.', which mean is 4.180 along with standard deviation 0.7938. This shows that respondents believe that our project can widely promoted dark tourism in Malaysia.

Descriptive statistics describe, show, and summarize the basic features of a dataset found in a given study, presented in a summary that describes the data sample and its measurements.

360 VIDEO					
	N	**Minimum**	**Maximum**	**Mean**	**Std. Deviation**
I feel interest watching 360 videos	250	3.0	5.0	4.560	.6695
I intend to watch 360 video to pass my free time	250	3.0	5.0	4.420	.6674
I intend to watch 360 video to increase knowledge	250	3.0	5.0	b4.200	.7498
The use of 360 video will help media expansion in the future	250	3.0	5.0	b4.320	.7615
The use of 360 video would be one of the ways to promote about tourism.	250	3.0	5.0	4.460	.6403
The use of 360 videos are better than regular videos on Youtube.	250	3.0	5.0	b4.340	.7116
The use of 360 video can replace websites.	250	2.0	5.0	4.360	.7434
I will recommend others to watch 360 video.	250	3.0	5.0	4.440	.6388
360 video would be one of my favorite technologies.	250	2.0	5.0	4.280	.7237
Valid N(listwise)	250				

The table above shows the mean and Standard Deviation. The mean for variables are major 4.0 and above which states that the opinions of respondents statement are positive. The question of 'I feel interest watching 360 video' has the highest mean with 4.560 and with a standard deviation of 0.6695. Its shows that 360 video can indeed attract a lot of interest.

Furthermore, is the question of 'The use of 360 video would be one of the ways to promote about tourism'. With the mean of 4.460 and with a standard deviation of 0.6403. The respondents believe that the use of 360 video can promote about tourism and this is the second factor that affects the adoption of 360 video in our project. Next, is followed by the question of 'I will recommend others to watch 360 video'， which mean is 4.440 along with its standard deviation of 0.6388. Respondents did show their passion to share the 360 video to others to enjoy it.

Besides that, the question of 'I intend to watch 360 video to pass my free time' with the mean of 4.420 with the standard deviation of 0.6674. Respondents did show how they would spend time watching 360-degree video. In addition, the question of 'The use of 360 video can replace websites' with the mean of 4.360 along with standard deviation 0.7434. Respondents believe that the using of 360 video also have the same functions as the website could.

Furthermore, it following up with the questions of 'the use of 360 video are better than regular videos on YouTube', which mean is 4.340 and standard deviation of 0.7116. Respondents believe 360-degree video is more impact than regular video. Next, the question of 'The use of 360 video will help media expansion in the future technologies', which mean is 4.320and standard deviation of 0.7615. It shows that respondents believe that 360-degree video can expand the medium in future technology. Besides that, the question of '360 video would be one of my favorite technologies', which mean is 4.280 along with standard deviation 0.7237. This shows that respondents will choose 360 videos as their favorite technology. Lastly, the question of 'I intend to watch 360 video to increase knowledge', which mean is 4.200 along with standard deviation 0. 7498.This shows that respondents believe that 360 video can be used to increase their knowledge.

5.0 CONCLUSION

After this research, Fearless 360 video can be used to promote dark tourism in Malaysia. Fearless 360 videos can tell the tourists more about dark tourism and help to understand what it really means. This video can tell the tourists more about dark tourism and guide you to discover it. As our research shows, there are still many people who do not understand dark tourism and are afraid to visit it. So, this 360-degree Fearless video solves that problem. This video is useful when watching a video that has many options to keep the viewer watching until the end of the video. Also, this fearless 360-degree video can attract more people who are interested in dark tourism instead of those who are looking for information outside, and they can also experience this 360-degree video as if they were in that place. Through this work, dark tourism can gain traction in the form of 360-degree videos.

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2 IN 1 BLANKET

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ABSTRACT

2 in 1 Blanket is a product designed to make it easier for users and tourists to travel around the world. This product is an item that has two functions that can be as a blanket and a wind mattress. It is shaped into a look that can be seen like a pillow when it is not opened. It comes with a zipper sewn around it. When looking to use it, it is only left to unzip and be ready to fill the wind of the mattress. This setup only takes 4 minutes to get ready for use. The user only needs to carry one item but has two functions. This can reduce the risk of losing items while traveling. This product is specially designed to have a significant impact on savings. For example, it saves space when going on a rip. Vehicle space, storage space for goods and more importantly it saves money. The material we use is used fabric. This is to meet the theme of this year-end project, Sustainable. We are introducing used fabrics in this product to create awareness to the community in caring about the current deteriorating environment. By reinforcing this theme, more people can open their eyes about an importance of practicing sustainable in everyday life. The impact is on the long lifespan of the faucet it involves the next generation. The cause, the use of natural materials and pollution that occur uncontrollably will have adverse effects on the future. Thus, this product can have a beneficial and beneficial effect on the whole life.

1.0 INTRODUCTION

Students are required to complete the FYP for semester 5 to give them the opportunity to find experiences that can only be found while still on campus. The final project of this semester should help the students to innovate various products, thus things that will help in terms of all aspects that make a difference for a better environment. The potential of each student can be assessed and highlighted during the completion of the final year project in terms of assuming their respective roles in the assigned task. Students can apply the skills and knowledge learned from the previous semester in implementing the final year project with the prescribed one group member.

2.0 LITERATURE REVIEW

Sustainable Fashion

There are various perspectives on used clothes that can be discussed regarding our project this time. It has been discussed by Via Rini Anggaraeni (2021) the founder of Teman thrifty says that old clothes that are processed are second-hand clothes fashion with a thrifty concept. It is increasingly accepted by the public which is offered at a reasonable price and is suitable in the era of financial problems hit by the pandemic season.

Furthermore, this used clothing trend has been called a popular fashion among Indonesian fans. It is the aim to promote the appreciation of used clothing in order to reach more people and encourage 'high resale value'. The idea is to redesign and re-stitch used items into new clothes, and the fashion trend of used clothes has managed to attract more people. The business is gaining attention, especially from the niche market of green fashion enthusiasts, and recently set up an offline store at The Hallway Space in Kosambi, Bandung, to handle demand. The opinion given by Zulfah Nazala, the founder of Bazooku, said that he believes the younger generation has a responsibility in dealing with fashion waste through the production and recycling of used clothes or turning them into bags. Hana Surya, (2020) thinks that exploring a different kind of sustainable fashion, the opportunity led her to start Therapeutic, which calls itself a 'sustainably minded artisan textile studio with a passion for fabric reconstruction and the goal of minimizing waste'.

"From that point of view, I realized there is a market (for recycled fashion)," Once, a hotel even donated their old sheets. Based on all above, this sustainable fashion can be curbed in the community if it can be marketed. Indirectly it has spread awareness about sustainable issues.

Sustain For the Environment

Sustainable fashion trends are gaining attention as a description of making the fashion industry more environmentally friendly. The fashion industry contributes to around 10 percent of carbon gas production and almost 20 percent of waste water. Average 4-6% of textile waste is recycled in Singapore. The trend of cheap disposable clothing and the development of 'fast fashion' is believed to be one of the contributors to this large amount of textile waste. In a survey conducted by CNA in 2016, every 1,000 residents in Singapore were found to buy an average of 34 new clothes and throw away 27 old clothes every year. It was discussed by Hafizah Ghazali, (2021) saying that Fast fashion is the manufacture or marketing of clothing designs in mass production and it is also famous for the characteristics of trend replication - that is, the production of low-quality clothes from very cheap materials.

Based on these article, they said the percentage of clothing waste disposal is very high to cause pollution which gives a bad image to the country especially developed countries. This is included in visual pollution.

Preserve the Environment

Based on the concern of 195,300 tons of textile waste being dumped in landfills per year, fashion designer Hatta Dolmat came up with a collection made of patchwork for environmental sustainability. It was discussed by Hatta Dolmat (2020) a Malaysian fashion designer who said that the fashion industry is no longer as it used to be based on popularity and the world of celebrities, instead it is now a mega industry that is also the main source of the country's economy and has become one of the world's largest producers of solid waste. He had felt a waste with scraps of cloth from a collection whose material was drawn by himself. So he started thinking that it would be better to turn the patchwork into another product instead of throwing it in the landfill.

From all above, our own local people have opened their eyes in preserving nature by starting from reducing waste in using clothes or cloth. This can prove that local products have now been exposed to the issue of environmental sustainability in addition to bringing their own brand name on the world stage.

3.0 METHODOLOGY

Data Collection Method

Study was conducted using quantitative methods. Questionnaires is choices to collect the data. Questionnaires were distributed to respondents online. The data collection period was for 14 weeks of lectures.

Research Instrument

A research instrument is a tool used when conducting a study to obtain data for the purpose of achieving the objectives of the study. Instruments that can be used such as questionnaires that use google form.

Sampling Design

The sampling technique used in the study should be clearly stated. Sampling shows to make inferences made on the population unnecessarily sampling can provide analysis from a study made about the intended population. Some of the commonly used sampling techniques include simple random sampling. The polytechnic student population of dup students is 200 people. The sampling target for this project is semester 1 to semester 5.

4.0 FINDING

Introduction

Data analysis in research is a way of thinking that is closely related to the systematic) testing of something to determine the parts, the relationship between parts, and the relationship with the whole (James Spradley 2017. This chapter shows the analysis data that we have obtained through a survey that we made using a simple platform that is "google form". We have followed current developments to implement this chapter without having a face-to-face question-and-answer session with respondents. Besides, this method is highly encouraged to be used to adapt the new norms that hit our country recently. Besides that, it also makes it easier for the two parties, namely us and the respondent, to cooperate even if they are not face to face. The term technique in analyzing research data is a procedure for analyzing data. This procedure includes the technique of interpreting the data that has been analyzed and how to plan the research data collection technique so that the analysis becomes faster (John Tukey) 1962.

FINDING – SECTION A – DEMOGRAPHIC

The number of respondents is as many as 50 people, that is, there are two age groups that is as many as 87.8% are aged 20-25 and 13.3% are aged 26-30. The largest race is the Malay race which is 76% followed by the Indian race with 8% and the Chinese race with 12%. The respondents according to semester one to five students of METrO Kuantan Polytechnic. Among them, semester 5 is the highest at 40% followed by semester 3 at 24% while semesters 1 and 2 have the same percentage at 12% and semester 4 at 16%.

FINDING – SECTION B

Many students who like to travel, which is 94% and those who don't like it are only 6%. There are all students who answered that they already know about this sustainable which is 92% and 8% answered for don’t know.

Based on question “Do you think sustainable is important in tourism”?
The respondents said important with 98% and it shows the importance of sustainable tourism products

Based on question “Do you think important to bring space - saving items when travelling”?
The respondents were very supportive with this question with all giving 100% feedback and it shows the importance of saving space during travel to make it easier and lighter to carry anywhere, for example the products produced by us have a size that is very suitable for traveling and does not take up a lot of space.

Based on question “In your opinion, is it true that second hand items can be reduced”?
The respondents gave a response of 97.7% and it shows that used goods or second-hand goods can also be reused by renovation so as not to waste and cause dumping to occur like discarded clothing. With that, we chose to recycle the clothes and make them into more innovative products.

Based on question “Do you know that recycle the used clothes can keep the sustainable”?
There are 92% of respondents who support and 8% who disagree and it shows that used goods are highly encouraged in preserving the concept of sustainable.

Based on question “What types of thing do you often know of wet clothes”?
There are 58.1% suitable to be used as a blanket and 38.7% who choose to be used as a pillow.

Based on question “What types of thing do you often know of wet clothes”?
There are 74% suitable to be used as a blanket and 24% who choose to be used as a pillow.

Based on question “The innovation of blanket using used clothes will help traveler”?
There are 90% who support and 10% who do not support and its show this product able to help travelers while they are travel.

5.0 DISCUSSION

The discussion in this chapter includes the findings of a study that will answer the three main objectives to be achieved. This study was conducted to obtain information on the level of knowledge on sustainability issues and consumer awareness of the environment and the importance of using minimalist items such as "2 in1" innovations when traveling. Studies used online questionnaires as a medium to collect data. This instrument consists of four parts of it which is the background of the respondent, the student's knowledge of the sustainable, and the importance of the product to the consumer and the good enhancer of the product. The study obtained 31 respondents from Polytechnic Metro Kuantan students. Data obtained through online questionnaires is analyzed using google form. The method of analysis used in this study is the percentage of respondents.

6.0 CONCLUSION

The conclusion is that this analysis data can research the percentage that supports our product. This research should be done through communicating with people whether online or face to face. These surveys can also develop ideas and improvements to our products. It can also deepen the wants and needs of future users of the product. The collected analysis data can help us see whether the desired objectives have been achieved or not. The objective of the study must be achieved to shape our products in a better direction and benefit everyone

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TRAVELER'S LEVEL OF ACCEPTANCE TOWARDS BAG'CO SHOE BAG

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ABSTRACT

Most of the traveler will carry different types of shoes to travel. This situation may cause them to bring extra bag to carry these shoes. Extra bags means extra load to carry during the travelling period. Currently, most of the shoe bag in market can only fill in one pair of shoe. The idea to design and create Bag'Co a special shoe bag in order to overcome the mentioned problem earlier. Bag'Co (full name Bag'Eco tourism) is a shoe bag can fill in two pair of shoes in one bag. This bag specially designated using recycled denim fabric as part of supporting action for green environment. The main purpose of the innovation of Bag'Co is to help Tourism management's students in Politeknik Metro Kuantan to carry more shoes during recreational activities and travelling. This study is conducted mainly to evaluate the the level of acceptance towards this brand new shoe bag among travelers. Travelers identified in this study is all Diploma of Tourism Management students in Politeknik Metro Kuantan. Three objectives were identified in this study which is to identify the level of acceptance among students in term of Bag'Co durability, to identify level of acceptance among students in term of Bag'Co product design and the third to measure the value-added of Bag'Co among students. Questionnaires has been distributed among respondent to gauge the level of their acceptance. The results are shows a high mean score for all three research questions. Bag'Co is found to be durable, has good looking design and has value added especially it is eco-friendly to environment.

Keyword: Bag'Co ; durability;product design; value added

1.0 INTRODUCTION

It might be very difficult to select an ideal travel bag for one-bag excursions.There are so many different brands and models available, each with a different level of durability, cost, and try-on accessibility. It is every traveler's desire to only carrying one bag for their trip, one that can hold all of their essentials and yet easy to access.It is considerably simpler to move from one place to another with just one bag. The identical problem was encountered by travelers who wanted to store their shoes for travel. Current shoe bag has been identified as non waterproofed, limited space and the price is high.

In order to solve these problem, Bag'Co is innovated by our group to provide a convenient shoe bag for traveler. This bag is an innovation of current shoe bag for travelling. The unique element of this shoe bag as it is specially designed using recycled materials which is jean pants which is no longer been used. Our group decided to use a used jean pants and transform them to become a nice convenient and light shoe bag. We also added plastic materials to add a waterproof element to our shoe bag so that easier for traveller to bring wet shoes or to carry it during heavy rain. This bag also has two compartment so that traveller has the chances to bring not only one shoe for travel at aparticular time. Bag'Co is designed specifically for student recreation and for all backpacker's travelers.

Bag'Co is a solution for travelers who need to bring different types of shoes for different reason for their travelling journey.Therefore, this study is conducted aiming to identify and analyze user perceptions toward the feasibility of this bag in term of its durability, product design and also its value added criteria. The following are the research questions:
i.What the level of acceptance towards the durability of Bag'Co among travellers?
ii.What is the level of acceptance towards the design of Bag'Co among travellers?
iii.What is the level of acceptance towards the value added of Bag'Co among travellers?

The remainder of this paper is structured as follows: the next section is the literature review, and research methodology applied in this study. The following sections will present the discussion and findings from the analysis. The final section will be the conclusion and recommendation for future researches.

2.0 LITERATURE REVIEW

Today, Malaysia is prepared to welcome back foreign visitors after the government announced the full reopening of its borders for the first time following nearly two years of COVID-19 pandemic-related closures as the country is moving into an endemic phase, starting 1 April 2022. (Malaysia Tourism, 2022). Some of the tourist love to visit Malaysia because the cultural and natural of the recreational center. Recreation center become one of the centers for a family to bring their children for recreation and leisure activity. Moreover, the recreation center is the place for education research and awareness to the public (Yusnita, 2020).

Traveling activities can be exciting. The mark of a good traveller is their ability to pack lightly and select the appropriate luggage to fit all of their essentials. (Steves, 2017). Nowadays, everyone likes to travel light. Carrying heavy loads of luggage is stressful for a tourist. Thus, choosing the right bags has become an integral part of travelling. The role of the right travelling bags cannot be underestimated as it is very essential.

Hence, the present study is conducted to design and implement a luggage that could provide the needs of travelers today. To date, these shoe bag issues remain unsolved. Thus, our project plan to create a new shoe bag named as Bag'Co . Bag'Co will make things easier for recreational students and backpackers as it provides a special place to store shoes that are easy to carry. This bag is a solution for travelers who need to bring different types of shoes for different reason for their travelling journey.

3.0 METHODOLOGY

The questionnaire of this study consists of three sections. Section A requires respondents to fill out their demographic details.Section B is measuring the respondent's level of acceptance towards the durability, design and value added of Bag'Co . These items were in the form of Likert Scale that range from 1 (strongly disagree) to 5 (strongly agree).

Reliability test for this study is using value Cronbach's Alpha. Cronbach Alpha is a reliability test conducted using SPSS in order to measure the internal consistency i.e. reliability of the measuring instrument (Questionnaire). It is most commonly used when the questionnaire is developed using multiple Likert scale statements and therefore to determine if the scale is reliable or not. Before the questionnaires being distributed to the respondent, we run the reliability test for these three questions. All three questions shows very good reliability and the score is 0.810, 0.832 and 0.864 respectively.

A quantitative method was chosen for data collection which was carried out using a questionnaire. This descriptive study was carried out among Semester 1 to Semester 5 students of Diploma of Tourism Management of Polytechnic Metro Kuantan. These students were chosen as they match the characteristic of traveller. There are 123 students in total. According to Krejcie & Morgan (1970), total samples needed for this study is 100 respondents The data were analysed by using Statistical Package for Social Sciences (SPSS) Version 22 (IBM Corporation, New York, NY, USA).

4.0 FINDING (Data analysis)

The results and findings of the study are based on the stipulated methodology involved in the conduct of the study. Table 1 shows the demographic profile of the respondent.

Table 3: Level of acceptance towards the product design of Bag'Co among traveller

Items		Mean	Std. Deviation
1	Bag'Co has rich and vibrant colour	3.9600	0.6655
2	Bag'Co is fashionable and trendy	3.8400	0.8958
3	Bag'Co is made from fabric that is difficult to fade	3.7800	0.7730
4	Bag'Co is attractive and has unique design	3.8000	0.8646
5	The colour of this bag is suitable for both male and female	3.8900	0.8633
Total		3.8540	0.6304

Table 4: Level of acceptance towards the value added of Bag'Co among traveller

Items		Mean	Std. Deviation
1	Bag'Co is easy and convenience to use	4.1300	0.7609
2	Bag'Co enable me to carry more travelling shoes	3.9800	0.8987
3	Bag'Co is made of materials that support sustainable	4.0200	0.8526
4	Bag'Co is an environment friendly product	4.0100	0.8468
5	Bag'Co is suitable for all age	4.0200	0.7782
Total		4.0320	0.6677

Table 1 present the demographic profiles of the respondents involved in this study. Based on the table, majority were female respondents (68.0%). About 27.0% of the respondent is from Semester 1, 25.0% is from Semester 2 and 22.0% Semester 3, 16.0% Semester 5 and the lowest from Semester 4 10.0% only.

RQ1:What the level of acceptance towards the durability of Bag'Co among traveller?

Table 2 shows the findings for the level of acceptance towards durability of Bag'Co. The total mean score is 3.7940 (SD:0.6754), This high mean score means that traveller accept that Bag'Co is durable to be used for travel. Bag'Co is suitable to be used for a long time (Mean:3.9300;SD:1.0076), enabled them to carry more shoes and it is easy waterproof and easy to be cleaned.

RQ2:What the level of acceptance towards the product design of Bag'Co among traveller?

Bag'Co is regarded by respondent as having an appealing and distinctive design. This statement is supported by the findings of this study tabulated in Table 3. Table 3 present that the overall mean score for level of acceptance towards Bag'Co design is 3.8540 (SD:0.6304). This result shows that majority of the traveler agreed that Bag'Co has rich and vibrant colour (Mean:3.9600; SD:0.665) , fashionable and trendy (Mean:3.8400; SD:0.8958) , and the colour of this bag is suitable for both male and female (Mean:3.8900; SD:0.8633).

RQ3:What the level of acceptance towards the value added of Bag'Co among traveller?

The overall mean score for level of acceptance of Bag'Co value added is 4.0320 (SD:0.6677) as accordance to to Table 4. These figure shows that Bag'Co offer value added criteria for its users. Respondents agreed that Bag'Co is easy and convenience to use (Mean:4.1300; SD:0.7609) and will enable them to carry more travelling shoes (Mean:3.9800; SD:0.8987). Besides Bag'Co is made of materials that support sustainable (Mean:4.0200; SD:0.8526) and is an environment friendly product (Mean:4.0100; SD:0.8468) . This study also found that respondent agree that Bag'Co is suitable for all age (Mean:4.0200; SD:0.7782)

5.0 CONCLUSION

This study explored the travelers' level of acceptance on newly invented shoe bag namedBag'Co. Specifically this study aim to identify and analyze user perceptions toward the feasibility of this bag in term of its durability, product design and also its value added criteria. For the first objective, findings of this study showed that traveler acknowledged that this bag is durable as it is suitable to be used for a long time,water proof and easy to clean. The same result is found for the second objective as traveler agree that Bag'Co is attractive and has unique design. Lastly, this bag is also found to give value added to all traveler in term of easy and convenience to use and enable them to carry more travelling shoes. Another value added criteria is that this bag is made of materials that support sustainable and can be classified as one of environment friendly product.

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