

Study on Students' Satisfaction of Covid-19 Sop Implementation in Uthm Pagoh Campus During Post Pandemic Era

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DOI: <https://doi.org/10.30880/peat.2023.04.01.091>

Received 15 January 2023; Accepted 12 February 2023; Available online 12 February 2023

Abstract: The emergence of COVID-19 pandemic has sparked massive impact towards the whole world, with every industry could not prevent themselves from being affected. The implementation of new normal with strict guidelines has caused people to shift towards an unprecedented situation, where human interaction becomes limited because social distancing needs to be applied everywhere. Facilities that are available also needs to be subjected towards change, where the usage of them needs to adapt with the new and stricter guidelines to prevent the spread of this infectious virus. After higher educational institute such as universities started to reopen and welcome students back to respective campuses, the guidelines that newly implemented meaning students must follow them strictly and comply to the guidelines that the university has decided on. Their perception on the operational facilities usage is in question for this research, and a quantitative method with the use of a questionnaire has been conducted to achieve the results of this study. After a series of data collecting and analyzing, it can be said that this research has concluded positive perceptions from students involved in this study about their experience in the campus after the pandemic. However, improvements also cannot be ruled out for a better user experience in the future, in case our country has to face the same situation again.

Keywords: Students' Satisfaction, Post COVID-19 SOP, University Campus, Case Study

1. Introduction

This research will be about perception of students towards facilities usage and operation of university campus after the strike of global pandemic, which put almost every activity in the world to a halt. After a series of lockdowns with millions of lives becoming the victim of the nasty virus, the world finally has shifted towards back to normal activities in daily lives, with the invention of vaccine being

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one of the most vital reasons for that. Going back to normal way of living also means reopening of university campus for students to go back towards attending class physically, as going through virtual class has been a trend across the globe during the period of lockdown. This research will also include students' satisfaction about operational maintenance and facilities management within the campus, with comparison between their experience as building occupant during pre-pandemic to post pandemic era being in question.

1.1 Problem statement

COVID-19 has produced severe economic devastation in many areas of society, with long-term consequences. It is spreading swiftly over the world, putting a burden on healthcare systems, and causing a humanitarian disaster. The coronavirus outbreak is also wreaking havoc on the facility management and services industry. Many organizations, including the public sector in these nations, will be examining the necessity for a full or partial shutdown of facilities and a decrease in services in response to the COVID-19 pandemic, based on the orders of respective government lock down laws. Educational sector was also not excluded from being affected from what has happened, as the emergence of COVID-19 has caused the government instructed public and private institutions to shut down all activities, causing a pause within the industry. As activities that requires human physical interaction as simple as going for a class is considered risky, even those kind of activity needs to be stopped in an instant as lockdown and social distancing rules must be enforced. Higher education institution has no choice but to start conducting class virtually, with the effectiveness of the unprecedented method being at risk. It is not a hyperbolic statement to say that the world was practically at war during those times. However, after about 2 years of ups and downs of cases, with the existence of vaccine contributing towards lowering cases, it can be said that finally the situation is finally under control. With that, the world starts to go back towards going back to normal, but still with some implementations of things to be considered to lower any risk of emergence or infection outbreak within any facility. Universities also start welcoming students back into the campus for attending class physically once again after the situation has been under control, but not without new rules to be complied for the safety of the students, lecturers and other building occupants within the campus itself. It is important for those mentioned people to feel safe while being inside the campus, going through their respective daily lives whether as a student, lecturers or other else. Hence, this research will focus specifically on students as to how they feel about their own safety while being in campus in terms of how the facilities were being used and the operation of activities in UTHM Pagoh.

1.2 Research Objectives

This research is being conducted with the purpose of completing its objectives, which includes: -

- i) To study the perception of students as building occupants towards the operational facility usage in UTHM Pagoh Campus since the emergence of COVID-19 pandemic.
- ii) To collect and analyse the data about users' satisfaction towards facilities operation in UTHM Pagoh Campus after reopening of campus.

1.3 Literature Review

Local universities have been submissive and have carried out government policy ever since the Movement Control Order (MCO) was imposed by the Malaysian government on March 18, 2020 as a result of the COVID-19 pandemic. The institution barely functioned at its bare minimum during the MCO because the education sector at the time was seen as non-essential operations. The majority of local universities' policies specified that staff members were only permitted on campus if they provided essential services [1].

The switch to online learning has forced many educators and students across the globe. For their students' online learning, faculty have already started creating lesson plans. Any university has been offering courses online for some time. Many academic staff members receive training to use online learning environments as either the only medium of delivery or as an adjunct to in-person instruction. The faculty's capacity to work with the current technology has come under scrutiny as a result of the switch to online mode. Additionally, parents, kids, and other family members who must work from home are now in high demand for laptops and IT equipment in the home. One crucial issue that requires due consideration is the calibre of online education [2].

Universities must postpone or cancel all events, sports, workshops, conferences, and other activities due to the alarming rise in COVID-19 cases around the world. Unless it is critical, they should avoid or reschedule meetings with a lot of staff or pupils. They should attempt holding Zoom meetings rather than in-person gatherings. Universities must create a plan to handle admissions for upcoming academic sessions in addition to the current difficulties in managing teaching and evaluation during the COVID-19 pandemic. Online applications from incoming freshmen should be accepted, and admissions procedures should be more accommodating. The university website needs to be updated with the revised information [3].

1.3.1 Facilities offered in UTHM Pagoh Campus

Only 20 minutes from the royal town of Muar, Johor, the Universiti Tun Hussein Onn Malaysia Pagoh Campus is conveniently situated in the Educational Hub Malaysia Pagoh, at the Pagoh Interchange on the North-South Expressway. The International Islamic University of Malaysia (IIUM) Southern Campus, the Universiti Teknologi Malaysia (UTM) Research Centre, and Politeknik Tun Syed Nasir Syed Ismail are the other three higher education institutions housed in this educational cluster (PTSN). The Faculty of Applied Science and Technology, Faculty of Engineering Technology, and the Centre for Diploma Studies are the currently operational faculties at the UTHM Pagoh Campus. The facilities offered in UTHM Pagoh Campus includes accommodation, cafeteria, transportation, development and counseling services, religious facilities, health center, sports and recreation facilities and shared facilities.

2. Materials and Methods

The project began with a literature review of the title. Survey questions and interviews are the primary sources for this research. To perform the survey, all of the suggestions were compiled into a questionnaire. All of the information was gathered and examined in order to discover any concerns that arose. This section delves deeply into the study methodology. The current study's research strategy is divided into three portions based on the research aims, because the research methods used to reach each purpose differ. Figure 1 shows the framework for this research in essence, namely:

- i. The first part - the stage of title selection.
- ii. The second part - the stage of methods and implementation of the study.
- iii. The third part - the stage of analyzing the study data.
- iv. The fourth part - the stage of drawing conclusions and recommendations of the study.

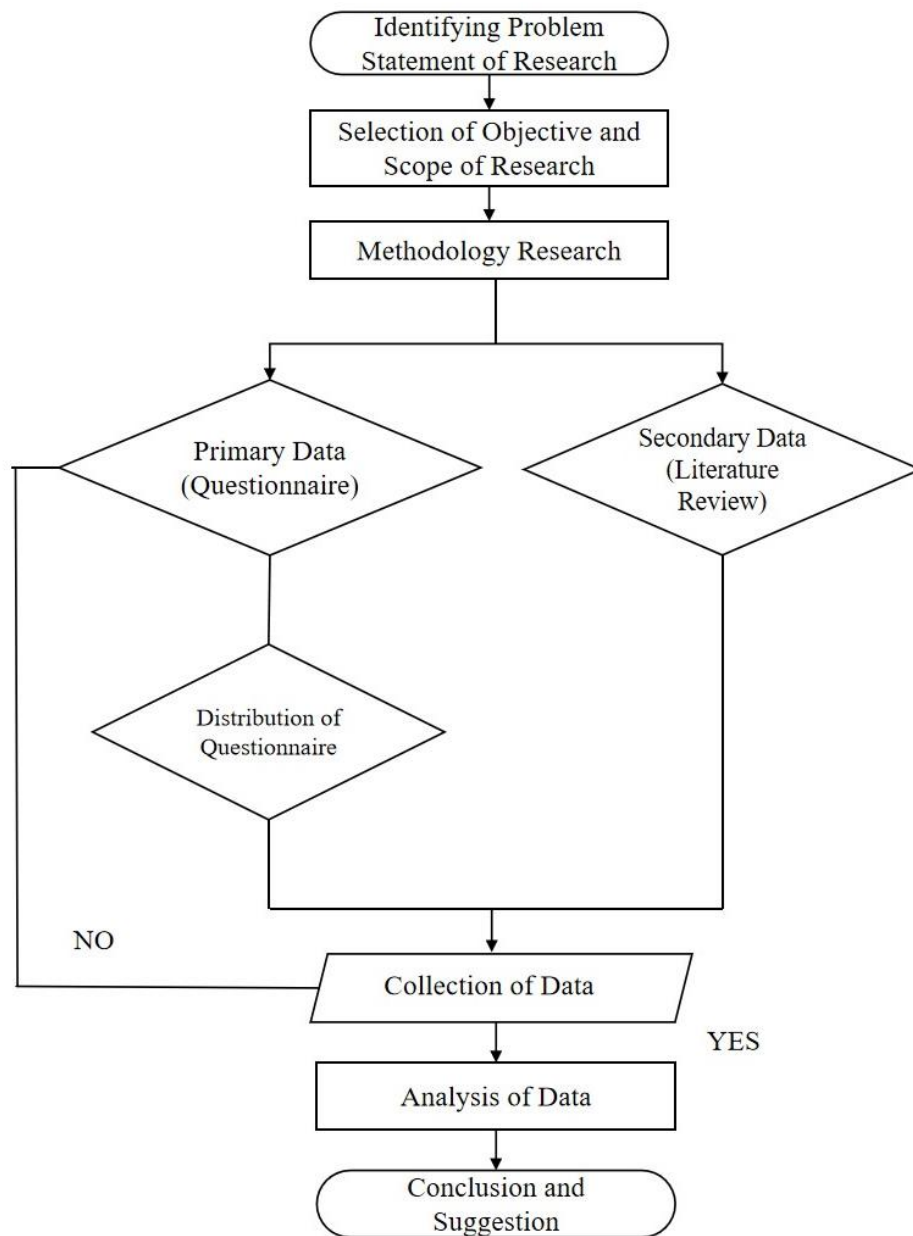


Figure 1: Flow Chart of the Process

Four measurement scale concepts: nominal, order, interval, and ratio are used to answer scaling questions. A visual question is one that poses a query to the respondent and offers a visual menu of potential responses. Respondents are able to select an answer fast and without hesitation as a result, giving more precise information.

The information required will be gathered through a computer questionnaire due to the present COVID-19 outbreak scenario. Respondents will be required to complete an online survey that will be sent to them through email or Google Forms. On behalf of the chosen demographic, this survey is then forwarded to students from the target population. The benefits of computer surveys include inexpensive costs, quick turnaround times, and more accurate results because respondents do not feel pressed for time.

2.1 Sampling

Sampling is a technique for choosing certain individuals or a small portion of the population in order to draw conclusions about the population as a whole and estimate its characteristics. Researchers frequently utilize various sampling techniques in market research so they do not have to study the full community in order to gather useful information. It is also a time- and money-efficient method, serving as the cornerstone of every research design. Software for research surveys can employ sampling strategies for the best derivation.

2.1.1 Target Population

Population target is the group of individuals that will be seek by the researcher in order to complete their research. For this research, the target population will be final year or Year 4 students from Faculty of Engineering Technology (FTK) in UTHM. The targeted population will be focusing that specific batch because their opinion could reflect comparison between their experience in being in UTHM before and after the pandemic has strike the world.

2.1.2 Sample Size

Determination of sampling size for this specific is conducted by using a sample size calculator. Based on the statement released by FTK for the first semester of campus reopening, 314 students are detected from the batch of the target population. The number of students being called to go through their semester in campus is not the whole batch because FTK focuses on only allowing students that will need to use laboratory and workshops for the subjects that were taken, hence explaining why the population is not that huge. Based on the sample size calculator used, 314 populations will result it 174 sample size needed, for 95% confidence level and 5% margin of error. For 90% confidence level and 5% margin of error, the sample size calculator shows that 314 number of populations will need 147 sample size needed.

2.2 Methods

The questionnaire layout is primarily based totally at the study`s objectives. In order to fulfil the studies objectives, the questionnaire have to be competent. Therefore, queries wished with inside the literature evaluate must be related to the topic. The questionnaire is needed to be finished in English and have to comprise all of the advocated hints that had been reaped from the literature evaluate. This statistic is needed so as for the respondent to higher recognize and privy to the consequences in close to future. The questionnaire will encompass 3 principal components which can be Part A, Part B and Part C.

2.2.1 Part A

In Part A, the questionnaire carries the respondents` demographic history information, which incorporates the following:

- a) Gender
- b) Age
- c) Program Course Code

Respondents will need to enter all of the above information for a better understanding of the background.

2.2.2 Part B

Data analysis will process the data obtained from the survey through the answers from the respondents. Questionnaire answers are made according to the Likert scale method on part C of the questionnaire. Respondents will give a measure (rating) of agreement or importance in each question asked. Five Likert scale as an initial response for this part of the question.

2.2.3 Part C

Dichotomy type questions are used in Part C. This type of question is a closed-end question with a "yes" or "no" answer to choose from. Respondents are less likely to think when responding to the survey, so they can get more accurate results. Questions in this part will be aiming towards achieving the second objective of the research, which is users' satisfaction towards facilities operation in UTHM Pagoh Campus after reopening of campus.

2.3 Mean Score

A fundamental statistic in research, the mean measures the centre of the distribution of a random variable. In some circumstances, the trimmed mean, the inter-quartile means, and the geometric mean are better alternatives to the arithmetic mean. Which one to use is determined by the data. Regardless of the mean selected, the sample mean is random. Depending on the demographic samples, it varies [4].

$$\text{mean} = \frac{\text{sum of all entries}}{\text{total entries}}$$

Mean Score	Level
1.00 – 1.80	Very Low
1.81 – 2.60	Low
2.61 – 3.40	Medium
3.41 – 4.20	High
4.21 – 5.00	Very High

Table 1: Mean Score Level

3. Results and Discussion

This chapter will describe the results of research from the conducted study. The analysis will be conducted by referring to the questions from the questionnaire form that has been distributed to FTK students to be answered. The details of the analysis based on data collection will be outlined and presented in this chapter. To draw conclusions from this study, the data from the respondents will be acquired and examined, while the success or failure of this study will be determined by its goals and objectives. Microsoft Excel and Google Forms will all be used in the analysis of the data gathered from respondents. The information will be displayed as a table, pie chart, and bar chart to make sure it was presented clearly. The degree of agreement expressed by respondents who complete the surveys is also taken into account when rating the item on a variable. The study's questionnaire responses can be interpreted in a variety of ways. Calculating the frequency, percentage, mean, and average mean of the answers to the questions can be done. In order to make the study's findings more understandable, bar charts, pie charts, and tables with graphic data representations were also used. The mean and frequency are therefore used to analyse the data in measuring techniques. The detail of this data and analysis will be discussed in further detail in this chapter.

3.1 Data Analysis and Results

From the questionnaire that has been distributed, a total of 148 responses has been obtained. The responses from the questionnaire will be analyzed by using Microsoft Excel, with representation by using table, pie chart, and bar chart will be included for better understanding towards the data that is being discussed.

3.2 Data Analysis for Part A

Table 2 shows the total number of respondents of the conducted survey, in terms of gender. It shows that total number of respondents among male students are 97 students, which takes 65.5 percent among all the respondents. On the other hand, the total number of respondents that are female consist of 51 students in total, which covers 34.5 percent among all the respondents involved in this survey.

Gender	Frequency (f)	Percentage (%)
Male	97	65.5
Female	51	34.5

Table 2 : Demographic Respondent in terms of Gender

Table 3 shows the number of respondents of the conducted survey, in terms of age, where the options for this question are offered in range. It shows that among all the respondents, 14 of them are between 18 to 21 years old which makes up 9.5 percent of respondents, while 91 students that answered this survey are between 22 to 25 years old making up 61.5 percent, which is the largest frequency among all the options. 36 respondents are between 26 to 29 years old, making up 24.3 percent of the respondents while only 7 respondents are 30 years old or above, and that makes up 4.7 percent of the total number of respondents for this survey.

Age	Frequency (f)	Percentage (%)
18-21 years old	14	9.5
22-25 years old	91	61.5
26-29 years old	36	24.3
30 years old & above	7	4.7

Table 3: Demographic Respondent in terms of Age

Table 4 shows the number of respondents in term of their respective program course code, as all the respondents are all from FTK. It shows that 18 students from BNA are involved in the survey, which is 12.2 percent among all the respondents while 16 students from BNB are involved in this survey, making up 10.8 percent. 10 students from program BNC are among the respondents, which makes up 6.8 percent while 17 BND students have answered this survey, where they make up 11.5 percent among all the respondents involved. 13 students from BNE program have answered this survey, and they make up 8.8 percent while 16 BNF students are involved in the survey, making up 10.8% of the respondents. For students from BNG program, 23 students have taken part in this survey and they make up 15.5 percent among the respondents while 29 students from BNM program have answered this survey, where they cover 19.6 percent as the option with the highest frequency among all. Lastly, 6 students from BNN program took part in answering this questionnaire, where they make up 4.1 percent of all the respondents involved.

Program Course Code	Frequency (f)	Percentage (%)
BNA	18	12.2
BNB	16	10.8
BNC	10	6.8
BND	17	11.5
BNE	13	8.8
BNF	16	10.8
BNG	23	15.5
BNM	29	19.6
BNN	6	4.1

Table 4 : Demographic Respondent in terms of Program Course Code

3.3 Data Analysis of Part B (Perception towards Operations of Facilities in Campus)

Rank	Question	Mean	Standard Deviation	Classification
1	Q4. Scheduled available time for selected group of students to use sports and recreation facilities is a good step in reinforcing social distancing among students.	4.01	30.55	High
2	Q2. The reinforcement of rule for students to wear a mask while being in campus or residential college is essential as a step of reducing the spread of COVID-19 within campus.	4.00	29.91	High
3	Q1. Reducing the number of students from 12 to 8 per college unit is a good step in preventing the spread of COVID-19 within campus.	3.99	29.79	High
4	Q3. Reducing the maximum capacity of feeder bus from college to campus and vice versa makes it safer for students going back and forth as social distancing is enforced.	3.97	29.14	High

5	Q6. The obligation for any students to present a negative COVID-19 screening result before coming back from hometown would prevent COVID-19 outbreak within campus.	3.95	28.95	High
6	Q5. Hybrid method of learning allows students to go to campus only on selected, preventing cross contact with other students thus could help in preventing the spread of COVID-19 within campus.	3.82	26.70	High
7	Q7. Facilities in UTHM Pagoh were well-maintained despite absence of students in college for almost 2 years.	3.35	21.33	Medium

Table 5: Perception towards Operations of Facilities in Campus

This part of this questionnaire is mainly about perception of students towards the operations of facilities and its usage in UTHM Pagoh Campus after the campus being back in operation post pandemic era. Based on Table 4.4, the mean for perception of students towards operational facilities in campus is calculated and ranked in descending order of significance. In addition, the range of mean score lies between 3.35 to 4.01 in a five-point scale. Q4 is ranked first with the highest mean score which is 4.01, with it being classified as high. This means most respondents agree with the statement about operation of sports and recreational facilities, hence it scores the highest mean. Statement in Q2 scores a mean of 4.00, making it the second highest among the other questions, and that score is also categorized as high, meaning most respondents agree the rule for students to wear a mask while being in campus or residential college that was reinforced is considered essential in reducing the spread of COVID-19 within the institute. Ranked third with a mean score of 3.99 is Q1, which is a statement about the action of reducing the occupant of a college unit from 12 students to 8. The classification of mean that is high meaning that majority of students that took part in this survey does agree with the statement in Q1. After that, ranked fourth with a mean score of 3.97 is Q3, which is a statement about the transportation service that has changed after the pandemic. The classification of mean, still under the high category means that a lot respondents agree that reducing the maximum capacity of feeder bus that transports students back and forth from college to campus and vice versa would mean safer travel journey for students that are using that facility as social distancing can be enforced with the implementation of that new rule. Q6 is ranked fifth among all the questions in the survey, with a mean score of 3.95, where Q6 is a statement about obligation for students residing in residential college to present a negative COVID-19 health screening result before arriving in college when any of them go back to their respective hometown during the semester is ongoing. The high classification of mean means that students that answered this survey mostly agree that by doing that, it could prevent a COVID-19 outbreak from happening inside the campus. Next, ranked sixth with a mean score of 3.82 is Q5, which is a statement about the implementation of hybrid learning in UTHM despite students already going back to college. The mean score for this statement sees quite a gap with the fifth ranked question compared to the statements ranked higher, however it is still under the classification of high which means the respondents agree that hybrid method of learning could prevent cross contact among students thus could help in preventing the spread of the virus within the campus. Lastly, Q7 results in the lowest mean score

with 3.35, where Q7 is a statement whether the facilities in UTHM Pagoh were kept in well-maintained condition after about 2 years of students not residing in it. The mean score for Q7 is under the classification of medium, which could also be interpreted as neutral. This means the students that answered this survey have neutral point of view about the statement in Q7, that is about the condition of facilities in UTHM Pagoh. In other words, some of them might agree with the statement while some of them disagree with it, as all students could have different experience in dealing with the facilities available in campus and residential college. To put it simply, it can be said that majority of respondents in the survey have positive review about the actions that have been done since the reopening of UTHM Pagoh Campus in terms of facilities usage and operation.

3.4 Data Analysis of Part C (User Satisfaction Survey)

Based on Table 6, referring from Q1 from the user satisfaction survey, it can be seen that majority of the respondents are satisfied with how UTHM handles the operational facilities in campus after reopening on post pandemic era, where 71 respondents answered “Yes” to this question, making up 48 percent of respondents that agrees with the statement in the question. Q1 also sees 21 respondents answered “No”, which makes up 14.2 percent among the respondents that disagree with the statement in Q1. 56 students among the respondents which covers 37.8 percent among the respondents answered “Maybe” to this question, meaning they neither agree nor disagree with the statement or they do not know where to stand.

Referring Q2 from the same table, 60 respondents answered with a “Yes”, which means 40.5 percent of all the respondents feel that they feel safe while going for physical class in campus and staying in the residential college. 17 respondents selected “No” as their answer for Q2, where that makes up 11.5 percent of respondents that do not feel safe going for face to face class in campus and staying in residential college. Q2 sees majority of respondents answered this question with a “Maybe”, which means 48 percent among the respondents are not sure about feeling safe for going to physical class and residing college during semester is ongoing.

Based on Q3 from the table, 33 respondents answered “Yes” to the question, which means they have been infected by COVID-19 while being in campus, where that makes up 22.3 percent among all the respondents involved in this survey. Majority of the respondents, which is 101 of them answered “No” to this question, meaning 68.2 percent of respondents that have never been infected by the virus while being in campus or college. 14 students answered “Maybe” to this question, making up 9.5 percent among the respondents that were not sure whether they have been infected by COVID-19 while being in UTHM, where this could be they have been infected but they could not remember whether that was during their time at home or while being in campus, or simply because they have a bad memory of the past.

Referring to Q4 from the table, where the question is about the respondent’s opinion whether implementing the exact same standard operating procedures from before would be good enough to keep people safe around the campus in case of another outbreak within the country, 55 respondents answered with a “Yes”, which means 37.2 percent of respondents feel like what have been done is good enough to be implemented again. 27 respondents answered this question with a “No”, which makes up 18.2 percent of respondents that think the previous implemented operating procedures were not good enough and could see a room for improvement. The option with the most frequency is “Maybe”, with 66 or 44.6 percent of respondents picked this answer, meaning they are not sure about the statement asked in the question. This is completely understandable as if the situation really happens, it is unknown whether how severe would the new outbreak be, or if a new variant of the virus would mean higher risk compared to before. That kind of thoughts would prove crucial in deciding which to vote for, and that is why they opt for the option that may be considered safe as an answer.

Table 6: User Satisfaction Survey

Question	Frequency (f)		
	Yes	No	Maybe
Q1 As a student in campus, I am satisfied with how UTHM handles it's operational facilities after reopening the campus post pandemic.	71 (48%)	21 (14.2%)	56 (37.8%)
Q2 I feel safe while being in campus going for face to face class and staying in college.	60 (40.5%)	17 (11.5%)	71 (48%)
Q3 I have been infected by COVID-19 while being in campus.	33 (22.3%)	101 (68.2%)	14 (9.5%)
Q4 If Malaysia goes back from endemic phase to pandemic in case of another outbreak within the country, do you think implementing what have been done for would be good enough to keep people safe within the campus?	55 (37.2%)	27 (18.2%)	66 (44.6%)

Figure 5.1 shows Q5 from the User Satisfaction Survey, which is still a multiple choice question but for this question, the respondent can pick more than one option as their answer. This question instructed the respondent to suggest any element from the given choice of answers that they think can be improved in approach towards a better environment of a campus that is safe from the spread of COVID-19 virus. The option with the highest frequency is cafeteria and sports & recreational facilities, both with 39 votes which means they both cover 26.4 percent of respondents that chose that option. The element with the least votes is academic facilities, where 29 respondents or 19.6 percent voted for this option. Element of transportation has 37 votes which is 25 percent among the respondents, while students' accommodation or residential college has 36 votes, which equals to 24.3 percent.

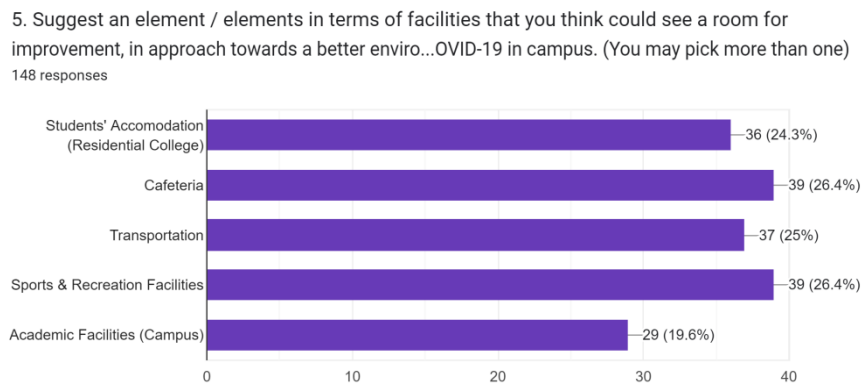


Figure 2: Q5 of User Satisfaction Survey

4. Conclusion

In conclusion, the study was conducted to tackle the issue of how university operates its facilities after the reopening of campus during the post pandemic era, with the building occupant's user experience being put as an indicator to complete this study. After the Ministry of Higher Education (KPT) has decided to welcome students back to their respective institutions, changes in facilities operation have to be made to comply with the guidelines of the new normal to keep the environment safe from the virus that has haunted our country for the past 2 years. To collect the data on the perception and user experience of the institution, students has been chosen to be the target population of this study, and quantitative method was used in order to complete this research. The collected data was then being presented and analyzed in order to achieve the objectives of this study, and in the end, conclusion can be drawn from the conducted research. It is believed that this research has been able to successfully achieved both of its objectives, where the perception of students about their experience in UTHM Pagoh Campus can be concluded as positive, while they are also satisfied with how UTHM handles it is facilities in terms of operation and usage of those facilities after the reopening of campus during the post pandemic era.

Acknowledgement

The authors of this study would like to express massive gratitude to Faculty of Engineering Technology, Universiti Tun Hussein Onn Malaysia for its support, as this research will not be possible without their contribution. Besides, the respondents that took part in this research are also being thanked for their cooperation in improving the quality of this study.

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