



### PERCEPTION OF STUDENTS ON SERVICES AT THE COMPUTER LABORATORY: A case study at PSA

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This Report Submitted In Partial Fulfillment of Requirement For

The Diploma in Wood Based Technology in The Department Of Civil Engineering

Polytechnic Sultan Salahuddin Abdul Aziz Shah

**JUNE 2019** 

### **DECLERATION FORM**

This is to certify that we have no objection to public the report entitled 'PERCEPTION OF STUDENTS ON SERVICES AT THE COMPUTER LABORATORY: A case study at PSA'

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A LEVEL OF STUDENT'S SATISFACTION ON COMPUTER LABORATORY:

A case study at PSA

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Abstract: In higher education, students are considered customers and they need a

conducive environment to have a good teaching and learning environment. The quality

of educational services provided by institutions of higher learning can be measured

through the perspectives of students involved in various campus services and activities.

This study is to see how many are satisfied with the system in each lab used. This study

will help some institutions to improve their security systems. The purpose of this case

study is to prove that the existing system is good enough for students in computer-based

learning sessions.

**Keyword: Student Satisfaction Level and Security System** 

vii

### TABLE OF CONTENT

ITEM	PAGE
PROJECT TITLE	i
DECLERATION FORM	ii
APPROVAL SHEET	iv
ACKNOWLEDGEMENT	v
ABSTRACT	vi
TABLE OF CONTENT	vii
CHAPTER 1 INTRODUCTION	
1.1 Background Of Study	1
1.2 Problem Statement	2
1.3 Significant Of Study	3
1.4 Objective Of Study	3
1.5 Scope Of Study	4
CHAPTER 2 LITERATURE REVIEW	
2.1 Safety Security	5
2.2 Health Hazard	6
2.3 Safety Hazard	6
2.4 Environmental Hazard	7
2.5 Regulations and Prohibitions	7
2.6 Procedures and Regulation of Use of Use	8

ITEM	PAGE	
2.7 Probably Happened	9	
2.8 Hazard Scratches	10	
2.9 Risk Assessment	11	
CHAPTER 3 METHODOLOGY		
3.1 Observation	15	
3.2 Definition of ANOVA	16	
3.3 Definition of SPSS	17	
3.4 Questionnaire	18	
3.5 Gantt Chart of Final Year Project	20	
3.6 Flow Chart	21	
3.7 Work Planning	22	
3.8 Questionnaire Preparation	22	
3.9 Distribution of Questionnaire Forms	22	
3.10 Collect Data from the Questionnaire Form	23	
CHAPTER 4 RESULT AND DISCUSSION	24	
CHAPTER 5 CONCLUSION	35	
REFERENCES	36	

### **CHAPTER 1**

### **INTRODUCTION**

### 1.0 INTRODUCTION

A computer lab is a space that provides computer services to a designated community. Computer labs are usually provided by libraries to the public, by academic institutions to students attending other institutions or institutions to the public or to those affiliated with the institution.

As such, our case study will indirectly help to obtain information on the level of student satisfaction of computer labs provided by the Polytechnic institution Sultan Salahuddin Abdul Aziz Shah.

Indirectly, it is possible to prove that student satisfaction is subject to the terms and conditions of the proof of this study and can be presented if the institution wants to know the level of student satisfaction with the computer lab.

#### 1.1 BACKGROUND OF STUDY

Economic stimulus and government support are major factors in the direction of Higher Education Institutions (HEI) to become leading institutions of higher learning. High qualities of Higher Education Institutions (HEI) will produce excellent quality graduates that are competitive in at higher level of the job market as well as globally. In higher education, students are treated as costumers and they need a conducive environment in order to have a good teaching and learning environment. The quality of education services provided by institution of higher learning can be gauged through the perspective of students who are engaged the various services and activities in the campus.

Security features in computer labs are located in the computer lab environment that are the key features to be addressed and given special attention because the laboratory environment of wire-filled and labor-intensive computer laboratories makes the laboratory less secure. Electrical equipment in computer labs should be well maintained to prevent any accident. All electrical equipment must be connected to earth as best as possible. The computer labs must be compiled and regularly inspected by computer lab technicians and technicians. Wiring is very important in ensuring that computer labs are safe to use because of inadequate wiring can be a problem and can cause short circuit.

A security item must be placed in a computer lab. Among the tools needed in computer labs are emergency boxes, fire extinguishers and so on. Emergency routes must be provided at each computer lab. This emergency route must be placed in a convenient place to be seen by the laboratory user.

### 1.2 PROBLEM STATEMENT

The quality of education services provided by institution of higher learning can be gauged through the perspective of students who are engaged in the various services and activities in the campus. One of those services is the services provided by the institute's computer labs. Effective management of

computer labs is a common goal to ensure the customers (students) are always provided with good infrastructure to support their learning activities. Therefore, various approaches have been employed to ensure that these goals are achieved.

### 1.3 SIGNIFICANT OF STUDY

In our observation, the **AIM** of the study is to assess the level of satisfaction on the services provided at the computer labs in the PSA according to the perspective of the students. The study also identifies the reasons why the students use the computer labs and the frequency of usage per student per semester. Information obtain from the present study will provide a baseline. **UNDERSTANDING** Then our group's understanding is that every institution needs a conducive environment to have a good teaching and learning environment. The **FINDING** For our group search the results and responses are important to the safety management of the lab as well as making immediate improvements to the facilities provided to facilitate teaching and learning in the computer lab.

### 1.4 OBJECTIVE OF THE STUDY

This study is to measure the levels of student's satisfaction on the safety perspective in the computer laboratory.

### 1.5 SCOPE OF THE STUDY

The scope for our group study area is divided into three namely AlphaCAM lab at JKA, CBT Laboratory in Facilities Management Building and CAD1 Labs, CAD2 Laboratories and Link Centers in JMSK. These three places are very often used amongst students and lecturers for teaching and learning sessions. In addition, safety issues are given priority in the execution of a task or job in the event of negligence.

### **CHAPTER 2**

### LECTURE REVIEW

An environment that is conducive to teaching and learning coupled with good infrastructure were found to be helpful to the process of teaching and learning. Selamat et al. (2004) shows that, on average, respondents agreed that a conducive learning environment would increase their motivation. Newby and Fisher (1998) states that the environment of the computer lab has a significant influence on student attitudes towards computers and courses of study. In addition, in order to meet customer needs (students), concept and philosophy of Total Quality Management in the management of computer labs has been investigated by Swanson and Phillips (1998).

#### 2.1 SAFETY SECURITY

Safety can be defined as a safe or hazardous situation as opposed to hazards and disasters. Safety rules should be informed to users to avoid any accident. As stated in the Employment Safety and Health Act 1994 (OSHA-Occupational Safety and Health Act 1994) the employer is responsible for providing information, instructions, training and supervision as well as facilities to ensure the safety and health of workers.

### 2.2 HEALTH HAZARD

Occupational health hazards are any agents that can cause illness individual. Health hazards can cause serious and immediate (acute) side effects, or can cause long-term (chronic) problems. All or part of it the body can be affected. Someone with occupational disease may not be aware of it will be immediately diagnosed. For example, hearing loss due to noise it is often difficult to detect the affected individual until the disease has subsided. Health hazards include chemicals (such as battery acids and solvents), biological hazards (such as bacteria, viruses, dust and dirt), physical agents (a powerful source of energy for harmful to the body, such as electricity, heat, light, vibration, noise and radiation) and work design hazard (ergonomics).

### 2.3 SAFETY HAZARD

A security hazard is anything that is strong enough to cause injury or damage to property. Injuries caused by safety hazards are common significant. For example, workers may be severely injured. Safety hazards cause damage when there is insufficient workplace control. Some examples of security hazards include, but are not limited to:

- i.. Slipping / tripping (such as wires spread on the floor)
- ii. Fire (from combustible materials)
- iii. Parts of moving machinery, tools and equipment (such as clamps and points)
- iv. Manually lift and handle operations manually and work

#### 2.4 ENVIRONMENTAL HAZARD

Environmental hazards are environmental releases that can cause harm or impact that is damaging. Discharge to the environment may not be significant. For example, employees that drain the glycol system and release the fluid into the storm sewer may be unaware of its effects on the environment. Environmental hazards are coming harm when work controls and procedures are not followed.

### 2.5 REGULATIONS AND PROHIBITIONS

- Students are allowed to enter the lab only with the permission or knowledge of the lecturer or faculty or in the presence of the lecturer himself.
- Each student or user is required to record their presence in the User Note book.
- Do not carry CDs, disks or any external software into a computer lab. If necessary (on the instruction or request of the lecturer), be first-handed by PIC (Personal in Charge) or Technician before use.
- If you have any problems with your computer, report it immediately to the PIC.
- The computer user's time limit must obtain prior authorization from the lecturer.
- Changing any settings on a computer is not allowed.
- All computer users are prohibited from tampering with or altering any wire connection on the computer without their consent.

- Maintain cleanliness of the laboratory and use designated terminals.
- Do not open websites that are non-profitable to R&D.
- Make sure any programs and computers are closed in the correct manner.
- Make sure all suites are turned off before leaving the computer lab.

#### 2.6 PROCEDURES AND REGULATION OF USE OF USE

- All laboratory users must receive laboratory safety briefings from the TMK laboratory coordinator before using the laboratory.
- Comply with all the rules and regulations and instructions given from time to time.
- Obtain the permission of the TMK lab coordinator before using the laboratory facilities.
- Make advance booking, written permission or fill out an application form using the TMK lab facilities.
- Leave the shoes and bags on the shelves provided outside the TMK lab.
- Use the facilities in the laboratory according to the steps provided.
- Follow proper guidelines when switching on and off all computer equipment.
- Students are not allowed to enter the TMK lab without the presence of their teacher.
- It is not allowed to use the internet without the knowledge of the teacher.
- The permission of the teacher must be obtained before carrying out the print job.
- Students are prohibited from entering the Server Room.
- Post laboratory usage information on the lab manual (student teacher) and computer student logbook.

- Report any damage and loss to all equipment, hardware and software in the TMK laboratory to the laboratory coordinator or his representative immediately.
- It is not permitted to transfer or transfer all equipment and appliances in the TMK laboratory without the permission of the coordinating teacher.
- Use a fire escape plan in the event of a fire.

### 2.7 PROBABLY HAPPENED

### 2.7.1 TABLE A SHOWS THE POSSIBILITIES BY USING THE FOLLOWING VALUES:

POWER (L)	EXAMPLE	RATE
Most likely	Hazard / event most likely to occur	5
Probably	It is possible rather than extraordinary	
Expected	It may happen in the future 3	
Rarely	It has not been known for several years 2	
Unbelievable	It is said to be impossible and never happened	1

**TABLE A** 

### 2.8 HAZARD SCRATCHES

RISK (S)	EXAMPLE	RATE	
Damage	Many deaths, property	5	
	damage and expenditure		
	cannot be recovered		
Severe	About one death, great	4	
	damage to property		
	thing if hazard occurs		
Serious	Bad injuries, permanent	3	
	disability		
Moderate	Causing disability but	2	
	not permanent injury		
Little	Minor abrasions, bruises,	1	
	cuts, injuries and other		
	types of emergency		
	treatment		

TABLE B

### 2.9 RISK ASSESSMENT

Risk can be expressed in various ways to convey the results of analysis to make decisions about risk control. For analysis of risks using (probability and severity) in qualitative methods, state the results in the matrix

Risk is a very effective way of distributing risk

Risks can be calculated using the following formulas:

 $L \times S = Relative risk$ 

Where,

L = Probability

S = Severity

### 2.9.1 AN EXAMPLE OF A RISK MATRIX (TABLE C) IS SHOWN BELOW:

	SEVERITY (S)				
PROBABILITY	1	2	3	4	5
(L)					
5		10	15	20	25
4		8	12	16	20
3		6	9	12	15
2					10
1					



**2.9.2** Relative risk values can be used to prioritize the actions that need to be taken to effectively manage hazards in the workplace. Table D defines preferences based on the following ranges:

RISK	DESCRIPTION	ACTION		
15-25	Height	HIGH risk requires immediate action to		
		control the hazard as detailed in control		
		hierarchy. Action must be taken		
		documented in the risk assessment form		
		including the completion date.		
5-12	Medium	MEDIUM risk requires a planned approach		
		to hazard control and adopting interim		
		measures where necessary. The action taken		
		must be documented in the risk assessment		
		form including completion.		
1-4	low	Risks identified as LOW can be considered		
		acceptable and further reductions are not		
		required. However, if the risk can be		
		effectively resolved immediately, control		
		measures should be taken and recorded		

### 2.5 STATISTICAL PACKAGE FOR THE SOSIAL SCIENCES (SPSS)

SPSS is a widely used program for statistical analysis in social science. It is also used by market researchers, health researchers, survey companies, government, education researchers, marketing organizations, data miners, and others. The original SPSS manual (Nie, Bent & Hull, 1970) has been described as one of "sociology's most influential books" for allowing ordinary researchers to do their own statistical analysis. In addition to statistical analysis, data management (case selection, file

reshaping, creating derived data) and data documentation (a metadata dictionary is stored in the datafile) are features of the base software.

Statistics included in the base software:

- Description statistics: Cross tabulation, Frequencies, Descriptive, Explore,
   Descriptive Ratio Statistics
- Bivariate statistics: Means, t-test, ANOVA, Correlation (bivariate, partial, distances), Nonparametric tests, Bayesian
- Prediction for numerical outcomes: Linear regression
- Prediction for identifying groups: Factor analysis, cluster analysis, (twostep, K-means, hierarchical), Discriminant.

SPSS Statistics places constraints on internal file structure, data types, data processing, and matching files, which together considerably simplify programming. SPSS datasets have a two-dimensional table structure, where the rows typically represent cases (such as individuals or households) and the columns represent measurements (such as age or household income). Only two data types are defined numeric and text or "string". All data processing occurs sequentially case-by-case through the file (dataset). Files can be matched one-to-one and one-to-many, but not many-to-many. In addition to that cases by variables structure and processing, there is a separate Matrix session where one can process data as matrices using matrix and linear algebra operations.

The graphical user interface has two views which can be toggled by clicking on one of the two tabs in the bottom left of the SPSS Statistics window. The 'Data View' shows a spreadsheet view of the cases (rows)

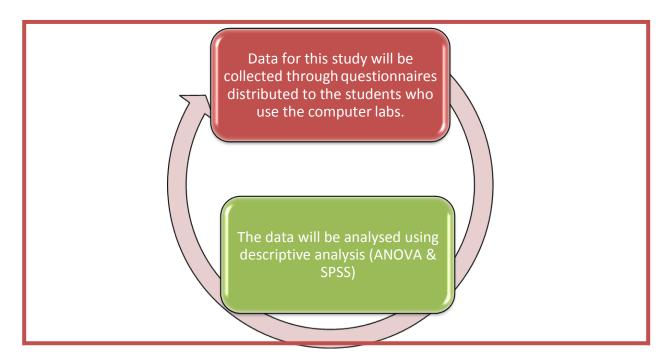
and variables (columns). Unlike spreadsheets, the data cells can only contain numbers or text, and formulas cannot be stored in these cells. The 'Variable View' displays the metadata dictionary where each row represents a variable and shows the variable name, variable label, value label(s), print width, measurement type, and a variety of other characteristics. Cells in both views can be manually edited, defining the file structure and allowing data entry without using command syntax. This may be sufficient for small datasets. Larger datasets such as statistical surveys are more often created in data entry software, or entered during computer-assisted personal interviewing, by scanning and using optical character recognition and optical mark recognition software, or by direct capture from questionnaires. These datasets are then read into SPSS.

### **CHAPTER 3**

### **METHODOLOGY**

### 3.1 OBSERVATION

Based on our observation, there are many students in PSA used computer lab and we decide to make a case study the level of satisfaction on the services provided at the computer labs in the PSA according to the perspective of the students. Data for this study will be collected through a questionnaire distributed to students using each computer lab and data will be analyzed using descriptive analysis (ANOVA & SPSS)



### 3.2 DEFINITION OF ANOVA

Anova is a statistical analysis that tests the differences between groups. Groups here can mean groups or types of treatment. Anova was discovered and introduced by a statistician named Ronald Fisher. Anova stands for Analysis of variance. This is a statistical test procedure similar to a t test. However the advantage of Anova is that it can test the differences between the two groups. Unlike the independent sample t test which can only test the mean differences of the two groups.

In this discussion opportunity, the statistics will briefly explain but hopefully enable readers to easily understand and apply them in future field research. Anova's Use. Anova is used as an analytical tool to test research hypotheses that assess whether there are differences between groups. The final result of the ANOVA analysis was the F test value or F count. The value of F Calculate this which will later be compared to the value in table f. If the value of computes more than f the table, then it can be concluded that accepting H1 and rejecting H0 or that there is a mean difference is significant across groups.

ANOVA analysis is often used in experimental studies where there are several treatments. Researchers want to test whether there is a significant difference between these treatments.

### 3.3 DEFINITION OF SPSS

SPSS is one of the first statistical software developed in 1968 by three Stanford University students, Norman H. Nie, C. Hadlai Hull, and Dale H. Bent. When the software was first developed it was operating on the mainframe computer, until eventually McGraw-Hill's publisher published the SPSS user manual. In 1984, SPSS appeared in the PC version (available for desktop computers) under the name SPSS / PC +, and in line with the popularity of the Windows operating system SPSS in 1992 released the Windows version. In addition, SPSS also has strategic alliances with other software houses, such as Oracle corp, Business Object, and Ceres Integrated Solution to strengthen the market in business intelligence. As time progressed, the original purpose of creating the SPSS shifted slightly. Initially, SPSS was created for the process of processing data in the field of social sciences, and at that time SPSS stands for Statistical Package for the Social Science. However, now SPSS functionality has been expanded to serve a wide variety of users such as factory production processes, science research, and more. As a result, the SPSS extended to the Statistical Product and Service Solution, where users of this software are as diverse as HSBC Bank, ABN Amro Bank, AC Nielsen (the world's largest marketing research agency), American Airlines, British Telecommunication, Canon UK, Unilever, the University of Chicago, and other large companies. Currently, SPSS software not only solves statistical problems, but extends to data mining (exploratory data collected), and predictive analytic. The latest version of SPSS is SPSS 17, launched in late 2007, where previous versions of SPSS have been released from SPSS 7.5, SPSS 10, to SPSS 15.

### 3.4 Questionnaire

# POLYTECHNIC SULTAN SALAHUDDIN ABDUL AZIZ SHAH PERCEPTION a LEVEL OF STUDENT'S SATISFACTORY ON COMPUTER LABORATORY:

A case study at PSA.

DEPARTMENT:	
CLASS:	
COURSE CODE:	FREQUENCY OF USAGE PERSENT:

No.	QUESTIONNAIRE	NO	YES
1	Are you satisfied with the facilities provided in this lab?		
2	Can the facilities provided here be used properly?		
3	Is the learning process in this lab very comfortable and safe to use?		
4	Is every activity done by lecturers and students well executed?		
5	Does the layout in this lab provide a safe system for students		
	and faculty to perform?		
6	What is the layout of each facility in this laboratory in		
	accordance with the established safety standards?		
7	What is the safety level in this laboratory that is very good in		
	the event of anxiety?		
8	Do you as a student agree to each of the rules set out in this		
	lab?		
9	Do you have experience using this facility well?		
10	Is the facility available in this lab doing everything you can to		
	make every process as easy as possible?		

Please provide some suggestions if you would like to upgrade your existing laboratory
safety standard?
,

### 3.5 GANTT CHART OF FINAL PROJECT

TASK	W 1	W 2	W 3	W 4	W 5	W 6	W 7	W 8	W 9	W 10	W 11	W 12	W 13	W 14	W 15
DISCUSSION WITH															
PROJECT															
SUPERVISOR															
CREATE A															
QUESTIONNAIRE															
FOR THE															
QUESTIONNAIRE															
FORM															
PROVIDE															
RESEARCH QUESTIONS FOR															
STUDENTS															
COLLECTION OF															
DATA FROM THE															
RESEARCH															
QUESTION FORM															
INSERT DATA															
SUBMITTED IN															
SPSS SYSTEM															
FINAL PROJECT															
PRESENTATION															
												F	lann	ing	
												Pro	gres	sion	

### 3.6 FLOW CHART

Flow chart of project



Planning



Questionnaire preparation



Distribution of questionnaire forms



Collect data from the questionnaire form

### 3.7 WORK PLANNING

For the first step in making a case study on the level of student satisfaction with the computer lab at PSA, we spoke with our supervisor, Mrs. Aqila about what level of satisfaction she wanted to study and noted in this study. We then went to each lab to identify the problem in the lab and we wanted to conduct a case study on the level of student satisfaction in the security system. We also collect some information such as how many classes the lab uses to help us take the next step. Next, the next step is to ask a few questions to include in the questionnaire form that we will distribute to students using the computer lab. The third step is that we distribute the questionnaire to each student who uses the computer lab to collect data on how satisfied they are with the level of security provided by the PSA in this computer lab. Finally we collect all the forms that are distributed and retrieve data from the form for inclusion in SPSS or ANOVA.

### 3.8 QUESTIONNAIRE PREPARATION

The most important part of this case study is the questionnaire form that will be given to the student using the computer lab. In order to create a questionnaire we have highlighted the students' level of satisfaction with the security system in the computer lab.

### 3.9 DISTRIBUTION OF QUESTIONNAIRE FORMS

For the questionnaire distribution session, we went to each computer lab where the students used to provide the questionnaire we created to get data from the students.

### 3.10 COLLECT DATA FROM THE QUESTIONNAIRE FORM

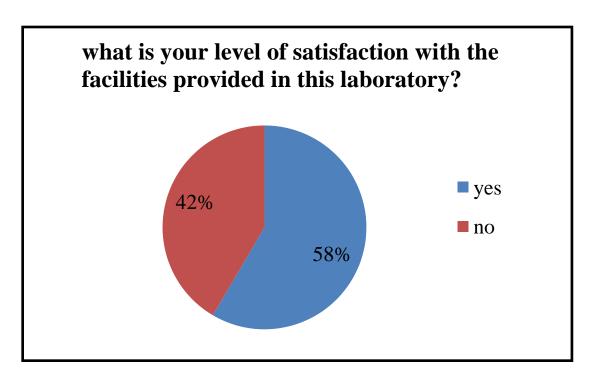
Once the questionnaire has been given to the student and collected it all. We have collected all the data obtained from the questionnaire form for us to put that data into the SPSS system.

### **CHAPTER 4**

### RESULT AND DISCUSSION

### Class \* what is your level of satisfaction with the facilities provided in this laboratory? Cross tabulation

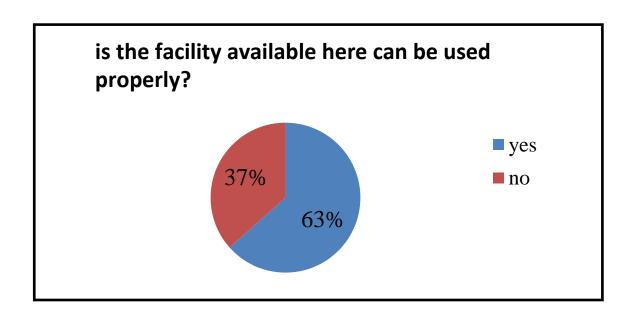
	Count				
		What is your lev with the facilitie labor			
		yes	no	Total	
Class	dbk2a	13	17	30	
	dbk2b	27	7	34	
	dbk3a	8	8	16	
	dbk3b	17	15	32	
	dka2a	14	18	32	
	dka2b	15	16	31	
	dbp2	21	11	32	
	dbk4a	7	5	12	
	dbk5a	20	13	33	
	dbk5b	24	8	32	
Tot	al	166	118	284	



Class \* is the facility available here can be used properly?

Cross tabulation

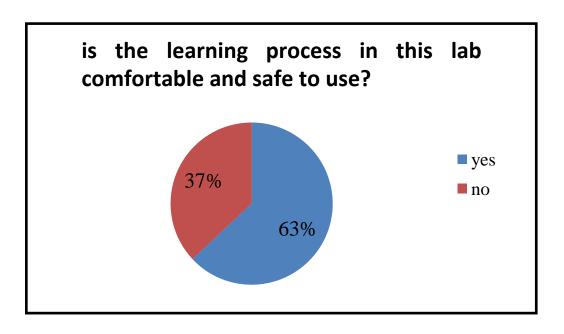
		Is the facility can be use		
		yes	no	Total
Class	dbk2a	25	5	30
	dbk2b	27	7	34
	dbk3a	12	4	16
	dbk3b	17	15	32
	dka2a	8	24	32
	dka2b	20	11	31
	dbp2	18	14	32
	dbk4a	10	2	12
	dbk5a	26	7	33
	dbk5b	17	15	32
То	otal	180	104	284



Class \* is the learning process in this lab comfortable and safe to use? Cross tabulation

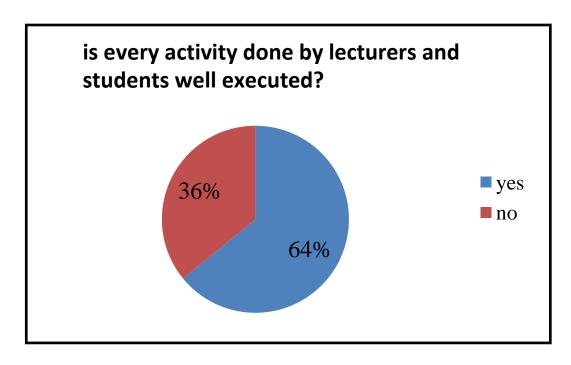
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		Is the learning process in this lab comfortable and safe to use?		
		yes	no	Total
Class	dbk2a	17	13	30
	dbk2b	21	13	34
	dbk3a	12	4	16
	dbk3b	20	12	32
	dka2a	15	17	32
	dka2b	19	12	31
	dbp2	23	9	32
	dbk4a	7	5	12
	dbk5a	20	13	33
	dbk5b	25	7	32
Total		179	105	284



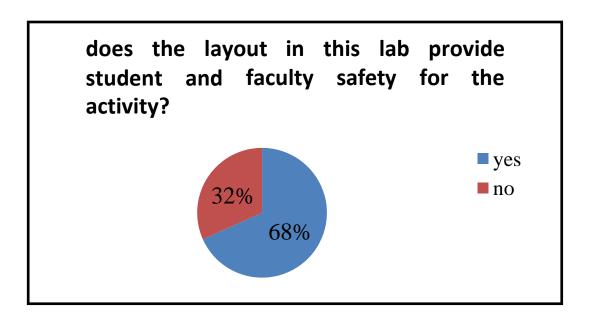
Class \* is every activity done by lecturers and students well executed? Cross tabulation

	Is every activity done by lecturers and students well executed?		
	yes	no	Total
Class dbk2a	20	10	30
dbk2b	23	11	34
dbk3a	13	3	16
dbk3b	24	8	32
dka2a	19	13	32
dka2b	16	15	31
dbp2	22	10	32
dbk4a	6	6	12
dbk5a	23	10	33
dbk5b	16	16	32
Total	182	102	284



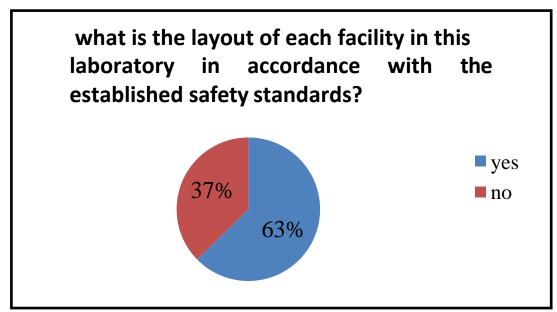
Class \* does the layout in this lab provide student and faculty safety for the activity? Cross tabulation

		Does the layer provide stude safety for t		
		yes	no	Total
Class	dbk2a	24	6	30
	dbk2b	24	10	34
	dbk3a	12	4	16
	dbk3b	22	10	32
	dka2a	24	8	32
	dka2b	16	15	31
	dbp2	21	11	32
	dbk4a	9	3	12
	dbk5a	20	13	33
	dbk5b	22	10	32
Total		194	90	284



Class \* what is the layout of each facility in this laboratory in accordance with the established safety standards? Cross tabulation

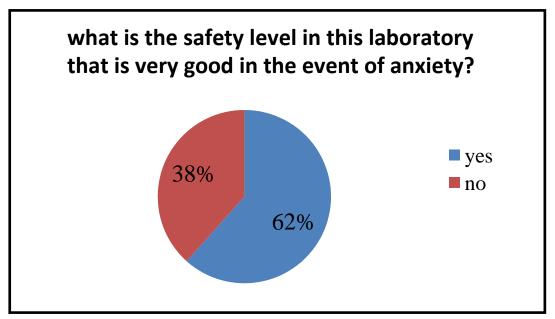
		What is the I facility in this accordance with safety st	T 1	
		yes	no	Total
Class	dbk2a	20	10	30
	dbk2b	28	6	34
	dbk3a	13	3	16
	dbk3b	22	10	32
	dka2a	16	16	32
	dka2b	14	17	31
	dbp2	18	14	32
	dbk4a	9	3	12
	dbk5a	22	11	33
	dbk5b	16	16	32
Total		178	106	284



Class \* what is the safety level in this laboratory that is very good in the event of anxiety? Cross tabulation

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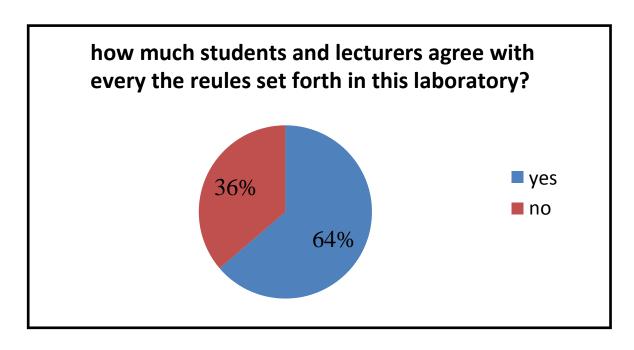
		What is the safety level in this laboratory that is very good in the event of anxiety?		
		yes	no	Total
Class	dbk2a	19	11	30
	dbk2b	21	13	34
	dbk3a	7	9	16
	dbk3b	22	10	32
	dka2a	19	13	32
	dka2b	17	14	31
	dbp2	23	9	32
	dbk4a	6	6	12
	dbk5a	22	11	33
	dbk5b	19	13	32
Total		175	109	284



Class \* how much students and lecturers agree with every the rules set forth in this laboratory? Cross tabulation

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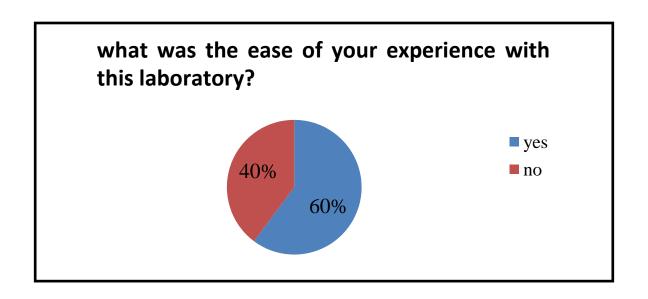
		How much students and lecturers agree with every the rules set forth in this laboratory?		
		yes	no	Total
Class	dbk2a	23	7	30
	dbk2b	23	11	34
	dbk3a	14	2	16
	dbk3b	19	13	32
	dka2a	17	15	32
	dka2b	16	15	31
	dbp2	18	14	32
	dbk4a	6	6	12
	dbk5a	28	5	33
	dbk5b	17	15	32
Total		181	103	284



Class \* what was the ease of your experience with this laboratory? Cross tabulation

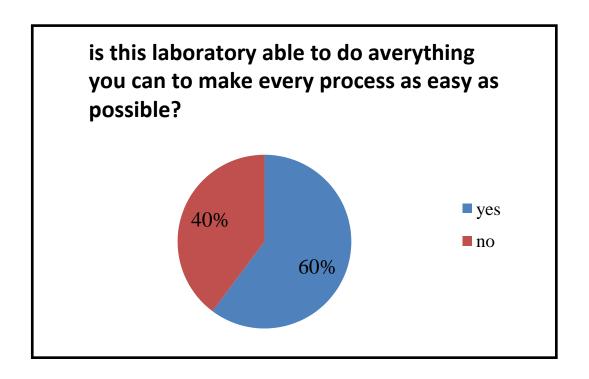
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		What was the ease of your experience with this laboratory?		
		yes	no	Total
Class	dbk2a	21	9	30
	dbk2b	20	14	34
	dbk3a	10	6	16
	dbk3b	24	8	32
	dka2a	15	17	32
	dka2b	16	15	31
	dbp2	18	14	32
	dbk4a	6	6	12
	dbk5a	20	13	33
	dbk5b	21	11	32
Total		171	113	284



Class \* is this laboratory able to do everything you can to make every process as easy as possible? Cross tabulation Count

		Is this laboratory able to do everything you can to make every process as easy as possible?		
		yes	no	Total
Class	dbk2a	23	7	30
	dbk2b	23	11	34
	dbk3a	13	3	16
	dbk3b	24	8	32
	dka2a	14	18	32
	dka2b	16	15	31
	dbp2	19	13	32
	dbk4a	9	3	12
	dbk5a	25	8	33
	dbk5b	15	17	32
Total		181	103	284



### **CHAPTER 5**

### **CONCLUSION**

The conclusion is that the safety system in each laboratory or place is very important for everyone to consider as it is an unexpected cause of accident and we also need to know how well the system located in that area reaches a predetermined level. We hope our research will help the institution. This case study was successfully completed within the time set by the panel. Throughout the process of creating this case study there are many new experiences and knowledge that we can learn.

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