

## **CHAPTER FOUR**

### **RESEARCH RESULTS**

This chapter presents the findings of the survey. It begins with the process of the complaint handling system and the findings of the complaint database for the period of 1997 to 2000 and the five years annual operating budget and expenses from 1996 to 2000. This is followed by analysis on the respondents towards existing complaint handling system.

#### **4.1 Process of Complaint Handling System**

It is interesting to note that the complaint handling system of the Department is not being written and documented. The process of complaint handling system also does not have any references to any internal written manual or standard operating procedure.

The One-Stop Complaint Center of the Department requires many activities to be fulfilled started from the complaint received from the Faculties until the resolution of complaints by the Department or contractors and payment. And, the main objective of this system is to identify the complaint and resolve it quickly and as required by the complainants.

The received complaint channels are from various means such as by filling standard complaint forms and telephone. Both channels were found to be the mostly being used on addressing complaints. Most of telephone calls are emergency and urgent complaints such as electrical or lift breakdown, power failure and etc. Others such as formal letter e-mail and counter is less

frequently being used. Most of the formal complaint letters or e-mail addressed to the respective Section Heads or Engineers and not been logged in the database of the system.

**Figure 3** explains the flowchart activities of the system. The stages of the activities are to be discussed as follows.

### **Stage 1**

Complaints received by the Department are entertained by the One-Stop Complaint Center operated by a Clerk or Operator.

### **Stage 2**

Then, the complaints are recorded in the database for record keeping purposes. The complaint forms are distributed to the Technical Assistants or Senior Technicians for action.

### **Stage 3**

The Technical Assistant or Senior Technician will issue a work order to the relevant technicians to investigate the complaints.

### **Stage 4**

For minor repairs, the technicians are being instructed to repair and rectify by themselves such as replacement of burnt bulbs, resetting of air conditioning control system, etc. Once the jobs are completed, the complainants are required to rectify by signing the complaint form. The rectified completed complaint form is to be resubmitted to the One-Stop Complaint Center for updating purposes.

### **Stage 5**

For major repairs, the technicians will inspect and notify the Technical Assistants or Senior Technician about the problem before taking any actions.

Discussion with the Engineers or Section Heads will be held before decisions are to be made. Normally, the discussion will be complimented with quotations from nominated outside contractors for approval. Once approved, the contractors will be instructed to proceed with the work under supervision of the technician as the front-line staff. However, due to empowerment, most of time, the technicians are allowed to make decision in pursuing rectification works but later on shall informed their supervisors.

#### ***Stage 6***

Once the works are completed, the complaint form will be signed for certification by the complainants. The certified complaint form will be forwarded to the One-Stop Complaint Center to record the resolved complaints. In the same time, purchase orders to contractors for the works to be prepared.

#### ***Stage 7***

The certified complaint form shall be logged in as job completed.

#### ***Stage 8***

Further, the contractors will issue invoice of the completed works for payment processing. The Technicians and Technical Assistant or Senior Technician will certify the invoices or bills before Completion Certificate to be issued by the Engineers.

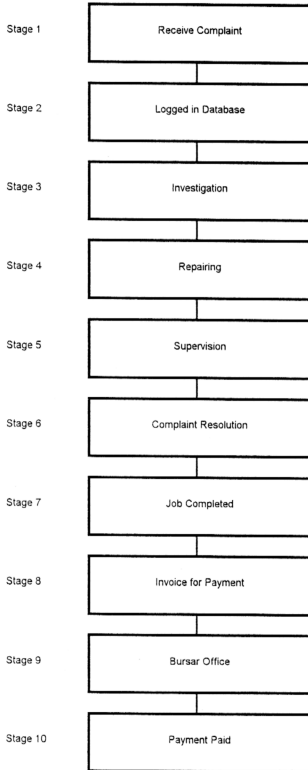
#### ***Stage 9***

The Administration Section will issue Payment Certificate of the completed work, to be signed by the Section Heads before they are forwarded to the Bursar's Office for payment.

#### ***Stage 10***

The contractors received the payment.

**FIGURE 3**  
*Flowchart of the Complaint Handling System*





From the interview, some weaknesses can be observed in the One-Stop Complaint Center, the complaint handling system at the Department. The system only provide hard copy printout of logged data in every two to three weeks, to be updated by the respective technician and senior technician and technical assistants. Further, this information will be logged into the database for status updating purposes. The three weeks period for feedback can be considered late for monitoring purposes.

The software or program of the database stored in the Department's server cannot be accessed by more than one user simultaneously. The main reason is to provide security from unnecessary interference. This causes difficulties to the Section Heads and the Engineers in monitoring the status of each complaint. The weakness of this database is the difficulties in extracting and categorizing the complaint type. Types of complaints have been lengthy logged in as stated by the complainants and more simplified information shall be designed.

In term of costing, it does not provide any cost incurred in rectifying and solving the received complaints. Higher cost to rectify usually indicates the seriousness of the complaint especially in time taken for resolution.

But, the strength of the database program is its capability to record as detail as possible of received complaint, categorize according to Sections, the respective technical staffs and the account number/vote. But, some of these features are underutilized due to non-continuous training especially in preparing report and statistics.

## 4.2 Complaint Database (1997 until 2000)

The computerized record keeping system started since August 1997 with Microsoft Access Database application. The main reason of this database development is due to previous manual recording of complaint data were very difficult and tedious in monitoring the status of each complaint.

However, the database was only being used until October 2000 with the development of on-line complaint system through website. Due to that, complaint data from January 1997 to August 1997 and from November to December 2000 will be obtained from the manual record keeping system.

### 4.2.1 Analysis of Complaint Data by Faculty

**Table 1** shows the summary of the complaint database for the four years period from 1997 until 2000. It is found that the data was never being analyzed for any complaint trend.

It reveals that complaints received by the Department are increasing every year. For 1996, there were 2285 complaints received, 2770 for 1998, 3982 for 1999 and 4473 in 2000. It shows an increasing trend of 21.23% in 1997 and 41.95% in 1999 before decreasing to 13.76% in 2000.

It is interesting to explain the complaint trends from the table. It shows that four faculties/departments lodged the highest complaints i.e. Central Administration followed by Faculty of Science, Faculty of Medicine, Faculty of Engineering. It is understandable the Central Administration which also locates the Kompleks Perdanasiswa, Exam Hall and Rumah University held continuous functions. In 1996 alone, the University managed approximately 40 to 50 functions per month (JPPHB, 1997).

However, the trend for Central Administration seems to be rapidly decreasing from 33.27% in 1997 to 20.66% in 2000. It means that the Department has taken proactive action on the area. The huge percentage of lodge complaint is from the new extension of Rumah University. The approximately RM 4.0 million building with 20 accommodation rooms first started its operation in 1999.

For Faculty of Science, the four years increasing trend is 17.37%, 16.90%, 17.50% and 18.98%. As for Faculty of Medicine is 7.63%, 7.33%, 10.40% and 11.47%. Meanwhile for Faculty of Engineering is 8.27%, 8.38%, 8.01% and 9.05% respectively. The main cause of the high percentage of these faculties is due to the rapid physical developments i.e. occupancy of new buildings.

In the 49<sup>th</sup> Annual Report of University of Malaya for the Year 1998, it stated that, the Faculty of Science alone records two stages of development projects with approximation cost of RM 37.0 million. The first stage completed in 1998 and comprises of new Dean Office, Department of Geology, Department of Genetics and Department of Physics including tutorial rooms. And, eight units of glass house laboratories for Herbarium Rimba Ilmu.

The second stage is completed in early 2000 and comprises of Department of Biology and Department of Zoology inclusive of administration office, research laboratories, seminar rooms and a museum.

Currently, there are two projects of approximately RM 20 million, which are still under construction i.e. Department of Bio-Chemistry and Department of Chemistry, and construction of new lecture halls and tutorial rooms.

Since 1998 and 1999, Faculty of Medicine has occupying three new development projects building with approximate total cost of RM 50 million. Firstly, Department of Parasitology, Microbiology and Pathology and

Societal, Prevention Medical, Department of Pharmacology and BioChemistry and renovation of Department of Physiology including car park. And, secondly, the Department of Pharmacy and Sains Bersekutu complete with various research and pharmaceutical laboratories, auditorium, theaterette and administration office. Finally, anatomy laboratories research center, computer laboratories and clinics to accommodate Makmal Pelbagai Ilmu.

There are various phases of development project in Faculty of Engineering with approximation cost of RM 72 million. The projects are to be completed and handed over in phases. The first phase, completed in 1998, is a 'design and build' building which locates the Dean Office, lecture halls and a laboratory block.

The second phase is a six blocks building comprises of Department of Mechanical Engineering, Department of Electrical Engineering, Department of Civil Engineering and Department of Survey including lecture halls and parking. The whole package has been completed in 2000.

TABLE 1

*Frequency of Complaint Received From Faculties / Departments (1997 until 2000)*

Item	Faculty/Department	1997 N, %	1998 N, %	1999 N, %	2000 N, %
1	Academy of Islamic	19 1.75%	91 3.29%	92 2.40%	91 2.60%
2	Academy of Malay Studies	7 0.64%	51 1.84%	39 0.99%	33 0.94%
3	Faculty of Arts and Science Social	30 2.76%	89 3.21%	189 4.81%	191 5.45%
4	Faculty of Business and Accountancy	-	-	57 1.45%	60 1.71%
5	Faculty of Science Computer and Information Technology	26 2.39%	55 1.99%	100 2.54%	114 3.25%
6	Faculty of Dentistry	18 1.65%	26 0.94%	100 2.54%	70 2.0%
7	Faculty of Economics and Administration	42 3.86%	165 5.96%	148 3.76%	73 2.08%
8	Faculty of Education	12 1.10%	82 2.96%	63 1.60%	68 1.94%
9	Faculty of Engineering	90 8.27%	232 8.38%	315 8.01%	317 9.05%
10	Faculty of Language and Linguistics	10 0.92%	53 1.91%	192 4.88%	109 3.11%
11	Faculty of Law	7 0.64%	49 1.77%	82 2.09%	68 1.94%
12	Faculty of Medicine	83 7.63%	203 7.33%	409 10.40%	402 11.47%
13	Faculty of Science / BPK	189 17.37%	468 16.90%	688 17.50%	665 18.98%
14	IPSP / Faculty of Sport Science / PALAPES	73 6.71%	181 6.53%	313 7.96%	182 5.19%
15	Central Administration / KPS / Exam Hall / Rumah U	362 33.27%	898 32.42%	853 21.69%	724 20.66%
16	Pusat Asasi Sains	61 5.61%	89 3.21%	126 3.20%	154 4.39%
17	Colleges	32 2.94%	16 0.58%	33 0.84%	16 0.46%
18	Quarters	27 2.48%	22 0.79%	133 3.38%	167 4.77%
Sub-Total		1088	-	-	3504
Additional Data		1197 *	-	-	969*
TOTAL (Increase %)		2285	2770 21.33%	3932 41.95%	4473 13.76%

*Notes: \* Obtained from manual record keeping system*

(Source: JPPHB, University of Malaya, December 2000)

#### 4.2.2 Analysis of Received Complaint by Section

The frequency of received complaint by each section of the Department as shown in **Table 2**. The Electrical and Mechanical Section indicates an increasing trend whereas other section shows otherwise i.e. 44.51%, 53.07%, 62.94% and 63.63% from 1996 to 2000. The trends are due to the increasing users occupying the new development buildings. In most engineering practices, the electrical and mechanical covers two different responsibilities: - building electrical distribution system and mechanical equipment, respectively. However, in the Department, these two responsibilities have been combined as one responsibility.

Most of the mechanical and electricity building systems are found to be faulty or need to maintained/serviced or not properly designed especially air conditioning units and wiring works. The warranty period scope of work, which is still under responsibility of the project consultants and contractors, are not being properly monitored. Most of the time, on good faith, the Electrical and Mechanical Section staffs rectified and resolve the complaints. Based on the Department experience, these defectives may affect the operation and function of the faculties or departments.

The new building supposed to be under responsibility of the Development Section. The users and the complaint handling staff seem to be confused since they do not know the status of liability period of each building.

The decreasing percentage of Civil Maintenance Section is mainly due to the increasing renovation works. The renovation and upgrading works are considered essential due to aging buildings and infrastructures. It is interesting to note that this section have been allocated a substantial amount of budget for this purpose.

In 1999 alone, approximately 2805 applications received for renovation and upgrading of buildings and infrastructures. And, for Seventh Malaysian Plan, about RM27.0 millions are allocated for maintenance of building, roads and drainage. (JPPHB, 1997)

The main responsibilities of Administration Section are in cleaning services and landscaping. This section reduces complaint received by employing out-sources parties i.e. the contractors. Full time contractor's workers have been attached to the respective department and most of the time the building users were able to complaint directly to the workers.

**TABLE 2**  
*Frequency of Complaint Received by Each Section (1997 until 2000)*

Item	Section of JPPHB	1997 N, %	1998 N, %	1999 N, %	2000 N, %
1	Electrical and Mechanical Section	1017 44.51%	1470 53.07%	2475 62.94%	2846 63.63%
2	Civil Maintenance Section	979 42.84%	1149 41.48%	1277 32.48%	1429 31.95%
3	Development Section	-	13 0.47%	39 0.99%	53 1.18%
4	Administration & Finance Section	289 12.65%	138 4.98%	141 3.59%	145 3.24%
<b>TOTAL</b>		<b>2285</b>	<b>2770</b>	<b>3932</b>	<b>4473</b>

(Source: JPPHB, University of Malaya, December 2000)

### 4.3 Annual Operating Budget and Expenditure (1996 to 2000)

One of the important aspects in the Department management team, especially the engineers, is to manage the annual financial resources based on cost saving approach with the aim is to provide comfort environment to the building users. With limited financial resources, the Department have to plan, control and monitoring the operating budget based on following requirement (JPPHB, 1996): -

- i. Emergency or urgent requirement; as most important
- ii. Priority based requirement
- ii. To beautify and provide aesthetic environment
- iv. Routine works
- v. Maintain good maintenance practice for long-term usage and reliability

**Table 3** presented the five years period of annual operation budget and expenditures. It explained that the operating budget increases every year. For the period of 1996 to 2000, the increasing trends from previous years are +6.22%, +19.05%, +3.50% and +9.76%, with 1998 shows a tremendously increase of 19.05%.

Also, it is interesting to note that the utility bills such as electricity, telephone, water and gas covers more than 52% of the annual budget and approximately 44% are the electricity bills. However, the responsible section of the Department, the Electrical and Mechanical Section have been progressively implementing planning in reducing and stabilizing the electricity bill. On of them is construction of 33KV/11KV main intake electricity supply with lower tariff.



**TABLE 3**  
**Operating Budget and Expenditure (1996 until 2000)**

Item	Category of Account	1996	1997	1998	1999	2000
1	Utilities – Telephone	1,175,380.09 5.96%	866,071.89 4.13%	802,869.43 3.22%	698,513.61 2.71%	500,961.96 1.77%
2	Utilities – Electricity	7,148,812.71 36.25%	9,468,209.12 45.19%	11,140,180.47 44.67%	11,703,530.03 45.34%	12,575,704.71 44.39%
3	Utilities – Gas	9,300.72 0.05%	8,803.34 0.04%	5,914.50 0.02%	4,807.30 0.02%	4,484.00 0.02%
4	Utilities – Water	975,002.65 4.94%	717,185.98 3.42%	1,249,634.64 5.01%	1,356,858.12 5.26%	867,636.10 3.09%
5	Office Equipment/Appliances	18,900.00 0.10%	8,460.00 0.04%	19,994.00 0.08%	19,936.50 0.08%	19,964.00 0.07%
6	Cleaning of Building	1,375,172.17 6.97%	1,181,250.11 5.64%	2,158,508.34 8.65%	2,149,762.98 8.33%	1,567,725.95 5.52%
7	Maintenance of Landscaping	1,451,376.37 7.36%	824,895.87 3.94%	1,276,244.86 5.12%	878,371.74 3.40%	686,081.10 2.41%
8	Maintenance of Building	3,316,571.42 16.82%	2,242,093.52 10.70%	2,900,487.30 11.63%	2,921,169.72 11.32%	4,260,637.64 15.03%
9	Maintenance of Road, Drainage etc	709,662.45 3.60%	978,581.22 4.67%	1,086,203.31 4.36%	936,602.87 3.63%	1,726,644.46 6.09%
10	Maintenance of Car, Motor, Tractor etc.	419,318.15 2.13%	399,701.82 1.91%	474,179.63 1.90%	439,741.29 1.70%	601,890.10 2.12%
11	Maintenance of Electrical Appliances	2,296,372.08 11.64%	3,092,563.40 14.76%	3,381,423.09 13.56%	3,958,315.05 15.33%	4,659,722.71 16.45%
12	Construction of Minor Works	41,982.00 0.21%	73,900.00 0.35%	79,966.80 0.32%	99,925.00 0.39%	73,238.00 0.26%
13	Office Furniture / Equipment	784,704.68 3.97%	1,088,393.75 5.21%	364,876.23 1.46%	645,142.80 2.49%	786,669.26 2.78%
<b>TOTAL</b>		19,722,555.49	20,950,110.02	24,940,482.60	25,812,677.01	28,330,955.00
Increased/Decreased From Previous Years, RM, %			+ 1,227,554.53 + 6.22%	+ 3,990,372.58 + 19.05%	+ 872,194.41 + 3.50%	+ 2,518,277.99 + 9.76%
Utilities (1+2+3+4), %		47.20%	52.78%	52.92%	53.33%	49.27%

(Source: JPPHB, University of Malaya, December 2000)

#### 4.4 Demographic Profile of Respondent

Based on the data collected, demographic profile of respondents was constructed. A complete profile of respondents is shown in **Table 4**. A total of 74 respondents participate in the survey i.e. 86% of the targeted respondents. The majority of the respondents are male with 47 respondents (63.5%) and 27 female respondents (36.5%). The gender percentage different of 27% is reasonable and accepted due to the fact that it is common for a technical maintenance department to have a higher percentage of male staff compared with female staff.

In term of position held, the largest proportion of respondents fell into administration staff such as clerks, storekeepers, typists and office assistants. They were counted for 38 (51.4%) and the remaining 36 (48.6%) are technical staffs such as technician, technical assistant and engineers.

For years of service with the Department, respondents with more than 15 years service were accounted for 24 (32.4%) of total respondents. Followed by between 1 to 4 years of 20 (27%) and between 5 to 9 years of 14 (18.9%). Respondents with service between 10 to 14 years and less than 1 year formed a small fraction of the sample i.e. 8 (10.8%).

When asked about the online complaint system through website (<http://asasi.um.edu.my:88/jpphb/f/default.htm>), it is not surprising to note that 41 (55.4%) of the respondents are aware but never access it and 21 (28.4%), does not know about it and 12 (16.2%) of respondents have experiencing in accessing. These figures seemed to resemble closely to the Internet access facilities to all level of staff.

The experienced respondents may be the officers or staffs who have been involving with the development of the online system. This may be due to the

online system was developed by a lecturer from Pusat Asasi Sains. In addition, it is interesting to note that the online system was not publicly announced or communicated throughout the Department and most of them were only informed through the word-of-mouth.

**TABLE 4**  
*Demographic Profile of Respondent*

Item	Description	Frequency (%)	Total
1    Sex	Male	47 (63.5%)	74 (100%)
	Female	27 (36.5%)	
2    Position Held	Technical Staff in Civil and Development Section	12 (16.2%)	74 (100%)
	Technical Staff in Electrical, Mechanical and Administration Section	24 (32.4%)	
	Administration Staff	38 (51.4%)	
3    Years of Services With the Department	More than 15 years	24 (32.4%)	74 (100%)
	Between 10 to 14 years	8 (10.8%)	
	Between 5 to 9 years	14 (18.9%)	
	Between 1 to 4 years	21 (27.0%)	
	Less than 1 year	8 (10.8%)	
4    Online complaint system through website	Do not know	21 (28.4%)	74 (100%)
	Aware but never or knew to access it	41 (55.4%)	
	Experience in accessing	12 (16.2%)	

**4.5 Analysis of Variables by Position Held by Respondent**

The analysis is done by equality of mean method i.e. the t-test for univariate hypotheses. The hypothesis was tested for statistical differences the six variables of the complaint handling system by position held by respondent. Statements in each variable are measured as dependent variable and position held by respondent as independent variable.

To enhance the analysis, both technical position i.e. the Civil/Development Section and Mechanical/Electrical Section were combined as Technical and administration as Non-Technical position.

**4.5.1 Analysis of Policies and Procedures**

*Table 5* summarizes the mean scores for the analysis. A comparison between Technical and Non-Technical respondents revealed that out from seven statements, three statements were significantly difference at  $p<0.05$ . They are statement A1 (Include guideline in receiving complaint), A5 (Identify complaint handling staff) and A6 (Procedures are communicated throughout the Department).

Higher mean scores by Non-Technical respondents means that they tends to be more aware and agreed on the guidelines to be followed for receiving complaints, identify the staff responsible to handle the complaint handling system and the system procedures are written and documented and communicated to all the Department staff.

The most appropriate possibility is due to the non-technical respondents are the administration staff; most of them are clerk and doing office work most of the time. Thus, they are more exposed to the administration of the system.

The other four variables, statement A2, A3, A4 and A7 have no significance difference for both respondents. It means that both respondents have the same level of awareness towards these four variables in determining the policies and procedures of the complaint handling system.

TABLE 5  
*Analysis of Policies and Procedures by Position Held by Respondent*

Item	Statement	Position	Mean	Significance
JPPHB have developed procedure for the complaint handling system that:-				
A1	Include specific guidelines to be followed in receiving complaints	Technical Non-Technical	3.64 4.00	0.040*
A2	Include specific guidelines to be followed in resolving complaints	Technical Non-Technical	3.53 3.74	0.277
A3	Be able to specify the types of complaints to be referred to your Supervisor e.g. the Engineer / Section Heads	Technical Non-Technical	3.70 3.89	0.349
A4	Be able to set time limits for the resolution of complaints	Technical Non-Technical	3.51 3.37	0.460
A5	Identify the staff responsible to handle the complaint handling system	Technical Non-Technical	4.06 4.44	0.024*
A6	Complaint handling procedures are written and documented and communicated to all the Department staff	Technical Non-Technical	3.40 3.93	0.006*
A7	Shows that JPPHB have a high commitment to the building users	Technical Non-Technical	4.38 4.33	0.729
			Mean > 3.0	p < 0.05

4.5.2 Analysis of Response and Feedback

**Table 6** tabulates the mean rating of response and feedback of the complaint handling system by the position held by respondent.

The table presents that only statement B4 (Informing the complainant if the complaint has not been resolved within a reasonable period of time) out of six variables are found to be significant ( $p<0.05$ ). The higher mean ratio scored by Technical respondents explains that they are tends to be more aware and satisfied on that statement due to the fact that they are the responsible people in handling and resolving and monitoring the status of the complaint.

The other five statements B1, B2, B3, B5 and B6 have no significance difference. Both respondents seemed to have same level of awareness and satisfaction towards the statements in determining the response and feedback.

TABLE 6  
Analysis of Response and Feedback by Position Held by Respondent

Item	Statement	Position	Mean	Significance
If you are been assigned to handle the complaint handling system, how is your performance level in:-				
B1	Acknowledging and recording the received complaints?	Technical	3.49	0.969
		Non-Technical	3.48	
B2	Informing the complainant on the status of the complaints?	Technical	3.60	0.986
		Non-Technical	3.59	
B3	Determine whether the complainant is satisfied with the complaint resolution?	Technical	3.74	0.485
		Non-Technical	3.63	
B4	Informing the complainant if the complaint has not been resolved within a reasonable period of time ?	Technical	3.74	0.036*
		Non-Technical	3.30	
B5	Someone want to lodge complaints has contacted you. How is your level in providing information related with the procedures in lodging complaint?	Technical	3.87	0.200
		Non-Technical	3.67	
B6	Will you recommend the complainant to appeal to JPPHB if they are not satisfied with the level of resolution?	Technical	2.47	0.262
		Non-Technical	2.22	
			Mean > 3.0	p<0.05

4.5.3 Analysis of Staffing and Training

The analysis on the selection and training of the staff responsible in the complaint handling system by the position held by respondent is as tabulated in **Table 7**. When mean scores of Technical and Non-technical respondents were compared, only statement C2 (Complaint handling staff receive training in complaint handling procedure, communication skills and computer illiterate) to be significantly difference at  $p<0.05$ .

Non-Technical respondents reported that they are more aware and agreed on proper selection and the training of the staff responsible in handling complaint. This is quite appropriate because the complaint handling staff is non-technical position and they socialized formally and informally with other non-technical staff.

Due to that, they are more observant of their capabilities. On top of that, non-technical staffs are more frequently applied for this type of training courses. Technical staff tends to favors technical related courses.

The other statement i.e. C1, due to no significance difference, both respondents have the same level of awareness towards this statement pertaining the staffing and training of complaint handling staff.

TABLE 7  
Analysis of Staffing and Training by Position Held by Respondent

Item	Statement	Position	Mean	Significance
C1	Complaint handling staff are carefully selected based on their experience and high communication skills with people outside JPPHB	Technical	3.53	0.254
		Non-Technical	3.78	
C2	Complaint handling staff receive training in – i) Complaint handling procedure ii) Communication skills and iii) Computer illiterate	Technical	3.77	0.010*
		Non-Technical	4.22	
			Mean > 3.0	p < 0.05

4.5.4 Analysis of Organization of System

The mean scores as shown in **Table 8** summarizes the analysis on the organization of complaint handling system by position held by respondent. The table indicates that out of four statements, only two are found to be significant at  $p < 0.05$ , namely, statement D2 (Providing inputs) and D3 (Level of coordination).

The higher mean scored by Technical respondents in statement D2 applied that they are the responsible people in resolving the complaint. Thus, they have more information and ideas in improving the system.

However, as represented by higher mean score in statement D3, Non-Technical respondents tends to be more aware on the importance of coordination between sections. This is an interesting finding since coordination and resolution are normally related to Technical respondents. The other two statements; D1 and D4 have no significance difference for both respondents.

TABLE 8  
Analysis of Organization of System by Position Held by Respondent

Item	Statement	Position	Mean	Significance
D1	What is the level of JPPHB in oversees the complaint system before making any decision to resolve the complaint?	Technical	3.47	0.621
		Non-Technical	3.56	
D2	Overall, how is the feedback of the staffs in providing inputs / ideas to improves the existing system?	Technical	3.26	0.034*
		Non-Technical	3.04	
D3	How is the level of coordination of the system between sections in JPPHB?	Technical	3.01	0.006*
		Non-Technical	3.48	
D4	If complaints affected different section in JPPHB, what is the level that it will be coordinated and follow-up by the complaint handling staff.	Technical	3.04	0.462
		Non-Technical	3.19	
			Mean > 3.0	p< 0.05



4.5.5 Analysis of Data Collection

**Table 9** shows the analysis on received complaint data of the complaint handling system by the position held by respondent. The table explains that, only three out of six variables are found to be significantly difference ( $p<0.05$ ). They are statement E1 (Level of complaint form), E3 (Categorizing data) and E4 (Report statistics).

It is interesting to note that the Non-Technical respondents scored higher mean ratio in all the statements. It is expected that the Technical respondents should have a higher awareness for these statements. This finding means that the Technical respondents are less satisfied and less satisfy and less aware with the collection and analysis of data that involved trend of their complaint.

Due to no significance difference, the other three statements i.e. E2, E5 and E6 means that both respondents have the same level of satisfaction and awareness towards statements in data collection of the complaint handling system.

TABLE 9  
Analysis of Data Collection by Position Held by Respondent

Item	Statement	Position	Mean	Significance
E1	Level of standard complaint form have been used to collect information from complainant	Technical	3.70	0.023*
		Non-Technical	4.07	
E2	Level of record-keeping system of JPPHB in monitoring the status of each complaints	Technical	3.62	0.305
		Non-Technical	3.81	
E3	Level of received complaint to be logged-in according to category of section for analysis purposes	Technical	3.60	0.011*
		Non-Technical	4.11	
E4	Level of JPPHB in compiling and making report statistics for quick evaluation on complaint trend	Technical	3.13	0.014*
		Non-Technical	3.56	
E5	Level of JPPHB in analyzing complaint data for the purpose to prevent same complaint from occurring	Technical	3.15	0.321
		Non-Technical	3.33	
E6	Level of JPPHB to utilized the data for the purpose in planning the quality of services	Technical	3.19	0.255
		Non-Technical	3.41	
			Mean > 3.0	p < 0.05

#### 4.5.6 Analysis of Evaluation and Planning

**Table 10** summarizes the analysis on evaluation and planning of the complaint handling system by the position held by respondent. The table presents that only two out of six variables are found to be significantly difference at  $p < 0.05$  i.e. statement F3 (Relationship between complaint handling and technical staffs) and F6 (Formulating future planning).

When both position of respondents were compared, the Non-Technical respondents tends to be more aware and satisfy on the importance of in maintaining good relationship between complaint handling staff and technical staff in term of communication, accessibility and feedback from complainants. A possible reason of this statement is most of the time the technical respondents tends to be more on site and the non-technical respondents have to deal with the complainants.

In addition, the lower mean ratio of 3.00 by Technical respondents in formulating future planning in budgeting and training reveals that they are not aware and less satisfied with the essential requirement of the complaint handling system in analyzing their work load and planning where they should.

The other four statements: - F1, F2, F4 and F5 have no significance difference for both types of respondents. It means that both respondents have the same level of awareness towards these five variables in determining the evaluation and planning the complaint handling system.

**TABLE 10**  
**Analysis of Evaluation and Planning by Position Held by Respondent**

Item	Statement	Position	Mean	Significance
F1	Level of JPPHB to determine the percentage of satisfactorily resolved complaints	Technical Non-Technical	3.23 3.37	0.444
F2	Level of JPPHB to determine the timing and quality of time taken to resolve complaints	Technical Non-Technical	3.23 3.07	0.294
F3	Level of JPPHB in observing the complaint handling staff with respect to relationship with technical staff, telephone and feedback from complainants	Technical Non-Technical	3.36 3.78	0.037*
F4	Level of JPPHB surveying for feedback from complainant about the effectiveness of the complaint handling system	Technical Non-Technical	3.21 3.52	0.120
F5	Level of JPPHB evaluating the data statistics for the purpose of improving the existing complaint handling system	Technical Non-Technical	3.02 3.07	0.747
F6	Level of JPPHB in formulating plan for dealing future handling needs including budget and training based on projected workload and standard of given services	Technical Non-Technical	3.00 3.52	0.008*
			Mean > 3.0	p < 0.05

#### 4.6 Analysis of Difference by Years of Service

The result of ANOVA reveals any significant relationship between years of service of respondent and six established variables of complaint handling system. The years of service had been recoded from five groups into three groups' i.e. above 10 years, between 5 to 9 years and less than 4 years. **Table 11** summarizes the analysis.

The table indicates that only one variable has a significant relationship between years of service and the variables of the system. 'Response and Feedback' with significance value of  $p < 0.05$  and F ratio of 3.670 ( $F > 3.0$ ) summarizes that respondent with more than 10 years experience with the

Department scored the highest mean of 21.3750 followed by between 5 to 9 years of 20.8571 and less than 5 years of 19.4286.

This concludes that the more experience the staff, the more level of awareness towards the response and feedback of complaint. On the other hand, they realized the importance of the response and feedback.

TABLE 11  
*Analysis of Difference by Years of Service*

Section	Variables	Years of Service	F Ratio	Mean	Significance
A	Policies and Procedures	Above 10 years	0.863	26.4375	0.426
		5 to 9 years		26.2857	
		Less than 5 years		27.3929	
B	Response and Feedback	Above 10 years	3.670*	21.3750	0.030*
		5 to 9 years		20.8571	
		Less than 5 years		19.4286	
C	Staffing and Training	Above 10 years	2.074	7.2813	0.133
		5 to 9 years		7.2857	
		Less than 5 years		8.0000	
D	Organization of System	Above 10 years	0.334	12.7188	0.717
		5 to 9 years		13.2857	
		Less than 5 years		12.8649	
E	Collection and Analysis of Data	Above 10 years	0.368	20.7500	0.693
		5 to 9 years		21.6429	
		Less than 5 years		21.1786	
F	Evaluation and Planning	Above 10 years	0.350	19.8438	0.706
		5 to 9 years		19.6429	
		Less than 5 years		19.1071	
			F > 3.00	p < 0.05	

#### 4.7 Analysis on Reliability of Variables of Complaint Handling System

The Reliability Analysis - Scale (Cronbach's Coefficient Alpha) were performed in assessing the reliability of statements of each six variables i.e. Policies and Procedures, Response and Feedback, Staffing and Training, Organization of System, Analysis and Collection of Data and Evaluation and Planning.

##### 4.7.1 Policies and Procedures

**Table 12** summarizes the reliability of Policies and Procedures. The table reveals a reliable value of reliability coefficient of  $\alpha > 0.6$  at 0.7202.

Statement A1 (Specific guidelines to be followed for receiving complaints) and statement A2 (Specific guidelines to be followed for resolving complaints) seems to be the most important variables in determining the Policies and Procedures of complaint handling system.

This can be explained that if both statements are to be deleted, the alpha value will be decreased to 0.6278 and 0.6578 respectively. It means that both items can be considered as critical enough to further enhance the reliability of the scale.

**TABLE 12**  
**Reliability Analysis of Policies and Procedures**

Item	Statement	Mean	Scale Mean if Item Deleted	Alpha if Item Deleted
JPPHB have developed procedure for the complaint handling system that: -				
A1	Include specific guidelines to be followed in receiving complaints	3.7703	23.0000	0.6278*
A2	Include specific guidelines to be followed in resolving complaints	3.6081	23.1622	0.6578*
A3	Be able to specify the types of complaints to be referred to your Supervisor e.g. the Engineer / Section Heads	3.7703	23.0000	0.7048
A4	Be able to set time limits for the resolution of complaints	3.4595	23.3108	0.6912
A5	Identify the staff responsible to handle the complaint handling system	4.2027	22.5676	0.7051
A6	Complaint handling procedures are written and documented and communicated to all the Department staff	3.5946	23.1757	0.7003
A7	Shows that JPPHB have a high commitment to the building users	4.3649	22.4054	0.7169
Reliability Coefficient		N of Item = 7		
N of Cases = 74				
Alpha = 0.7202 ( Alpha > 0.6 )				

#### 4.7.2 Response and Feedback

**Table 13** tabulates the reliability analysis of Response and Feedback. The analysis shows a reliable value of reliability coefficient, alpha of 0.6772 (alpha>0.6)

Statement B3 (Determine whether the complainant is satisfied with the complaint resolution) and statement B4 (Informing the complainant if the

complaint has not been resolved within a reasonable period of time) are the most important variables in providing Response and Feedback of complaint handling system. If both item to be deleted, the alpha value will be decreased to 0.5460 and 0.5684 respectively.

However, if statement B6 (Will you recommend the complainant to appeal to JPPHB if they are not satisfied with the level of resolution) to be deleted, the alpha value will be increased to 0.7905. It explains that item B6 is less importance compares with other statements.

TABLE 13  
Reliability Analysis of Response and Feedback

Item	Statement	Mean	Scale Mean if Item Deleted	Alpha if Item Deleted
If you are been assigned to handle the complaint handling system, how is your performance level in:-				
B1	Acknowledging and recording the received complaints?	3.4865	17.0541	0.6430
B2	Informing the complainant on the status of the complaints?	3.5946	16.9459	0.6101
B3	Determine whether the complainant is satisfied with the complaint resolution?	3.7027	16.8378	0.5460*
B4	Informing the complainant if the complaint has not been resolved within a reasonable period of time?	3.5811	16.9595	0.5684*
B5	Someone want to lodge complaints has contacted you. How is your level in providing information related with the procedures in lodging complaint?	3.7973	16.7432	0.6113
B6	Will you recommend the complainant to appeal to JPPHB if they are not satisfied with the level of resolution?	2.3784	18.1622	0.7905
Reliability Coefficient		N of Item = 6		
N of Cases	= 74			
Alpha	= 0.6772 ( Alpha > 0.6 )			

4.7.3 Staffing and Training

**Table 14** shows that statistically, the obtained alpha value of 0.7914 is a reliable reliability value. The reliability analysis on staffing and training indicates that all statements are equally important since there were only two statements being analyzed.

TABLE 14  
Reliability of Staffing and Training

Item	Statement	Mean	Scale Mean if Item Deleted	Alpha if Item Deleted
C1	Complaint handling staff are carefully selected based on their experience and communication skills with people outside JPPHB	3.6216	3.9324	0.0000*
C2	Complaint handling staff receive training in i) Complaint handling procedure ii) Communication skills and iii) Computer illiterate	3.9324	3.6216	0.0000*
Reliability Coefficient		N of Item = 2		
N of Cases = 74				
Alpha = 0.7914 ( Alpha > 0.6 )				

4.7.4 Organization of System

**Table 15** tabulates the reliability analysis on the organization of complaint handling system. The analysis reveals a reliable value of reliability coefficient of alpha > 0.6.

As explanation, statement D3 (level of coordination of the system between each section) seems to be the most important statement in determining the Organization of complaint handling system.



This can be explained that if statement D3 to be deleted, the alpha value will be decreased to 0.5156. In addition, other statements can be explained as less importance due to the fact that of not much differentiation in alpha value if the statements to be deleted.

TABLE 15  
Reliability Analysis of Organization of System

Item	Statement	Mean	Scale Mean if Item Deleted	Alpha if Item Deleted
D1	What is the level of JPPHB in oversees the complaint system before making any decision to resolve the complaint?	3.5000	9.3649	0.6460
D2	Overall, how is the feedback of the staffs in providing inputs / ideas to improves the existing system?	3.1216	9.7432	0.6230
D3	How is the level of coordination of the system between sections in JPPHB?	3.1486	9.7162	0.5156*
D4	If complaints affected different section in JPPHB, what is the level that it will be coordinated and follow-up by the complaint handling staff.	3.0946	9.7703	0.6369
Reliability Coefficient N of Cases = 74 Alpha = 0.6752 ( Alpha > 0.6 )				
		N of Item = 4		

#### 4.7.5 Analysis and Collection of Data

Table 16 reveals the reliability of Analysis and Collection of Data with reliability coefficient, alpha of 0.8109 (alpha > 0.6) with statement E2 (Level of record keeping system in monitoring the status of each complaint) and statement E3 (Logged-in data) seems to be the most important variables.

Alpha value will be decreased to 0.7478 and 0.7725 if statement E2 and E3 are to be deleted, respectively. These statements are capable to de-enhancing the reliability of the scale.

**TABLE 16**  
**Reliability Analysis of Data Collection**

Item	Statement	Mean	Scale Mean if Item Deleted	Alpha if Item Deleted
E1	Level of standard complaint form have been used to collect information from complainant	3.8378	17.2432	0.8084
E2	Level of record-keeping system of JPPHB in monitoring the status of each complaints	3.68932	17.3919	0.7478*
E3	Level of received complaint to be logged-in according to category of section for analysis purposes	3.7838	17.2973	0.7725*
E4	Level of JPPHB in compiling and making report statistics for quick evaluation on complaint trend	3.2838	17.7973	0.7800
E5	Level of JPPHB in analyzing complaint data for the purpose to prevent same complaint from occurring	3.2162	17.8646	0.8018
E6	Level of JPPHB to utilized the data for the purpose in planning the quality of services	3.2703	17.8108	0.7700
Reliability Coefficient N of Cases = 74 Alpha = 0.8109 ( Alpha > 0.6 )				
		N of Item = 6		

#### 4.7.6 Evaluation and Planning

**Table 17** shows the reliability value of reliability coefficient (alpha > 0.6) at 0.8507.

All statements seem to be less important in determine evaluation and planning of complaint handling system. Table 17 reveals that if each item to be deleted; it will not critically influence the reliability of the scale.

TABLE 17

*Reliability Analysis of Evaluation and Planning*

Item	Statement	Mean	Scale Mean if Item Deleted	Alpha if Item Deleted
F1	Level of JPPHB to determine the percentage of satisfactorily resolved complaints	3.2838	16.2432	0.8201
F2	Level of JPPHB to determine the timing and quality of time taken to resolve complaints	3.1757	16.3514	0.8169
F3	Level of JPPHB in observing the complaint handling staff with respect to relationship with technical staff, telephone and feedback from complainants	3.5135	16.0135	0.8221
F4	Level of JPPHB surveying for feedback from complainant about the effectiveness of the complaint handling system	3.3243	16.2027	0.8252
F5	Level of JPPHB evaluating the data statistics for the purpose of improving the existing complaint handling system	3.0405	16.4865	0.8288
F6	Level of JPPHB in formulating plan for dealing future handling needs including budget and training based on projected workload and standard of given services	3.1892	16.3378	0.8432
Reliability Coefficient		N of Item = 6		
N of Cases = 74				
Alpha = 0.8507 ( Alpha > 0.6 )				