

4.0 PRESENTATION AND ANALYSIS OF DATA.

Data collected from field survey were presented and analysed in this chapter based on the research questions and hypothesis that guided the study. Only the questions relevant to the research questions were presented and analysed.

4.1 PRESENTATION OF BASE DATA.

In this sub-section, data on questionnaire distribution and personal data of respondents were presented.

Table 4.1 Analysis of Distributed and Returned Questionnaires

The following data reveals details of questionnaires administered and returned which was analysed in table 4.1 below.

A total of 234 questionnaires were administered out of which 205 questionnaires representing 87.60% were returned, the returned questionnaires formed the basis for this analysis.

Respondents	No. of Questionnaire administered	No. of Questionnaire returned	No. of Questionnaire not returned	% of Questionnaire returned
Staff of ESHDC	36	30	6	12.82
Residents	92	90	2	38.46
Estate Surveyors and Valuers	106	85	21	36.32
Total	234	205	29	87.60%

Source: Field Survey (2021)

Table 4.1 shows how the questionnaire were distributed and analysed. Furthermore, a total of 234 questionnaires were distributed to staff of Enugu State Housing Development Corporation (ESHDC), residents of WTC estate, Valley estate, Zoo estate, Liberty estate and Citadel estate and Estate Surveyors and Valuers in Enugu metropolis; out of which 205 questionnaires were returned. The returned questionnaires representing 30 staff of ESHDC, 90 residents and 85 estate surveyors and valuers which is 87.60% appears adequate to do justice to the study.

Table 4.2 Age Distribution of Respondents

Age	Staff of ESHDC	Residents	Estate surveyors and valuers	Frequency	% frequency
20-29years	0	5	0	5	2.44
30-39years	8	25	39	72	35.12
40-49years	11	42	10	63	30.73
50-59years	10	12	20	42	20.49
60years and above	1	6	16	23	11.23
Total	30	90	85	205	100%

Source: Field Survey (2021)

Table 4.2 reveals the age distribution of respondents. Indicating that 8, 11, 10, and respondents who are staff of ESHDC fall within the age groups; 30-39years, 40-49years, 50-59years and 60years and above. 5, 25, 42, 12 and 6 respondents who are residents fall within age bracket 20-29years, 30-39years, 40-49years, 50-59years, 60years and above. 39, 10, 20 and 16 estate surveyors fall within age groups 30-39years, 40-49years, 50-59years and 60years and above. In general, 5 respondents representing 2.44% are between 20-29years, 72 respondents representing 35.12% are between 30-39years, 63 respondents representing

30.73% are between 40-49years, 42 respondents representing 20.49years are between 50-59years while 23 respondents representing 11.23% are between 60 years and above. This means that 35.12% of the respondents which has the highest frequency fall between 30-39years old.

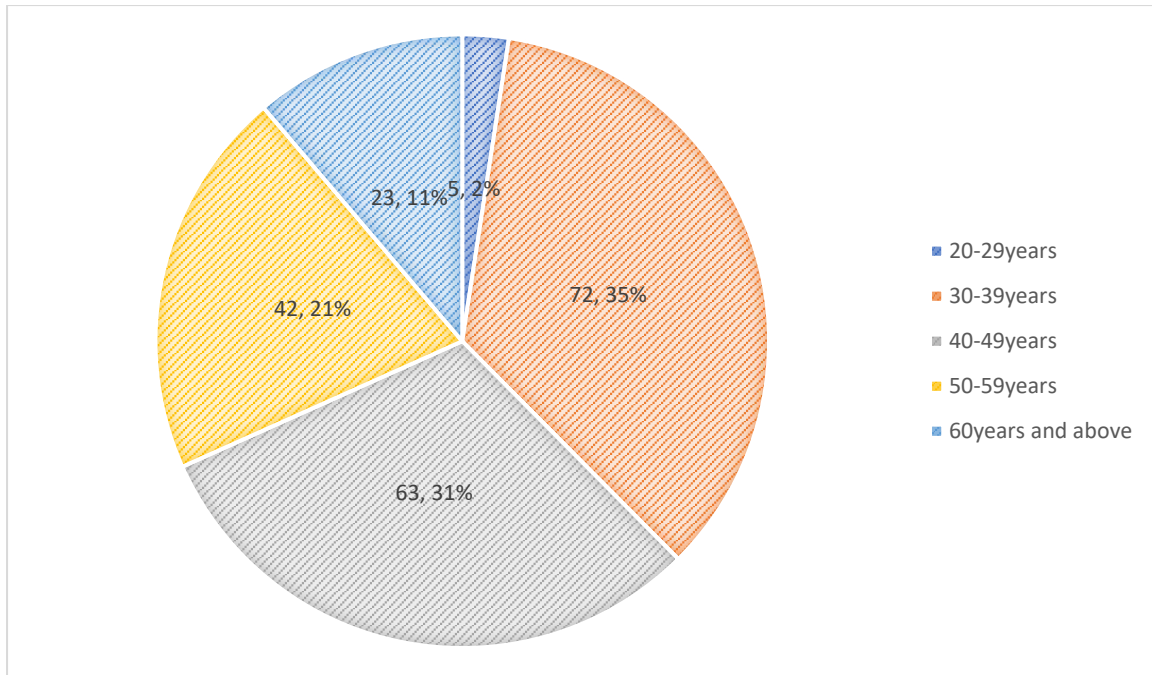


Fig 1. Chart showing Age Distribution of Respondents

Table 4.3 Sex Distribution of Respondents

Gender	Staff of ESHDC	Residents	Estate surveyors and valuers	Frequency	% frequency
Male	20	44	65	129	62.93
Female	10	46	20	76	37.07
Total	30	90	85	205	100%

Source: Field Survey (2021)

Table 4.3 highlights the sex distribution of the respondents where out of 205 respondents, 129(62.93%) representing 20 staff of ESHDC, 44 residents and 65 estate surveyors and valuers are male respondents. 76(37.07%) representing 10

staff of ESHDC, 46 residents and 20 estate surveyors and valuers are female respondents. The implication of this is that the male respondents are lot higher than their female counterparts.

Table 4.4 Marital Status of Respondents

Marital status	Staff of ESHDC	Residents	Estate surveyors and valuers	Frequency	% frequency
Single	9	25	24	58	28.29
Married	20	60	60	140	68.29
Widowed	1	5	1	7	3.41
Total	30	90	85	205	100%

Source: Field Survey (2021)

Table 4.4 displays the marital status of respondents. Out of 205 respondents, 58 of them representing 28.29% are single, 140 of them representing 68.29% are married while 7 respondents representing 3.41% are widowed.

Table 4.5 Education Qualification of Respondents

Education Qualification	Staff of ESHDC	Residents	Estate surveyors and valuers	Frequency	% frequency
FSLC	0	5	0	5	2.44
OND	0	25	0	25	12.20
HND	15	15	30	60	29.27
BSc	10	35	45	90	43.90
MSc	5	5	5	15	7.32
PhD	0	5	5	10	4.88
Total	30	90	85	205	100%

Source: Field Survey (2021)

Table 4.5 reveals the education qualification of 205 respondents. This shows that a total of 5 respondents representing 2.44% have their First School Leaving Certificates, 25 respondents representing 12.20% have OND as their highest academic qualification, 60 respondents representing 29.27% are HND qualified, 90 respondents representing 43.90% said they are BSc holders, 15 respondents representing 7.32% said they have their MSc and PhD holders are 10. In all, With 85.37% of the total respondents attaining either of HND, BSc, MSc and PhD it shows that the respondents are intellectually sound and vibrant to attend to the questionnaires which instantaneously affects the accuracy of data supplied for the study.

Table 4.6 Occupation of Residents

Occupation	Frequency	% frequency
Artisan	0	0
Technician	5	5.56
Civil servant	35	38.89
Business	30	33.33
Professional	20	22.22
Total	90	100%

Source: Field Survey (2021)

Table 4.6 shows the occupation of respondents who are residents of WTC estate, Valley estate, Zoo estate, Liberty estate and Citadel estate managed by ESHDC. Furthermore, out of the 90 residents; 5 of them are technicians, 35 of them are civil servants, 30 of them are business owners and 20 of them are professionals in different capacities. The implication of this is that the residents are income earners of various capacities.

Table 4.7 Level of Computer Literacy of Respondents

Response	Staff of ESHDC	Residents	Estate surveyors and valuers	Frequency	% frequency
Excellent	5	10	20	35	17.07
Good	10	25	30	65	31.71
Fair	10	40	32	82	40.00
Poor	5	15	3	23	11.22
Total	30	90	85	205	100%

Source: Field Survey (2021)

Table 4.7 gives details on the level of computer literacy amongst the 205 respondents who make up staff of ESHDC, residents and estate surveyors and valuers. This further revealed that 5,10,10 and 5 respondents who are staff of ESHDC are excellent, good, fair and poor in their level of computer literacy. 10, 25, 40 and 15 residents said excellent, good, fair and poor in their levels of computer literacy while 35, 65, 82 and 23 estate surveyors and valuers opined to be excellent, good, fair and poor in their levels of computer literacy. In general, 182 respondents who have; excellent, good and fair knowledge of computer and representing 88.78% of the total respondents appears sufficient to believe that majority of the respondents are computer literate.

Table 4.8 Respondents Opinion on the Rate of ESHDC Operational Performance in the Maintenance and Management of Real Estate in Enugu

Performance	Staff of ESHDC	Residents	Estate surveyors and valuers	Frequency	% frequency
Excellent	5	6	5	16	7.80
Very good	15	25	25	65	31.71
Good	10	35	30	75	36.59
Fair	0	20	20	40	19.51
Poor	0	4	5	9	4.39
Total	30	90	85	205	100%

Source: Field Survey (2021)

Table 4.8 reveals the rate of Enugu State Housing Development Corporation's performance in maintenance and management of real estate in Enugu. Out of the 205 respondents, 16 believe that ESHDC operational performance is excellent, 65 respondents said that ESHDC performance is very good, 75 respondents feels that ESHDC is good, meanwhile 40 respondents said that ESHDC performance in the maintenance and management of real estate in Enugu is fair and 9 respondents opined that ESHDC performance is poor. In all the result shows that ESHDC are performing okay in the maintenance and management of real estate in Enugu.

Table 4.9 Respondents Level of Familiarity with Information Technology System

Response	Staff of ESHDC	Residents	Estate surveyors and valuers	Frequency	% frequency
Excellent	5	3	25	33	16.10
Very good	7	17	30	54	26.34
Good	13	33	10	56	27.32
Fair	5	25	20	50	24.39
Poor	0	12	0	12	5.85
Total	30	90	85	205	100%

Source: Field Survey (2021)

Table 4.9 helps to show the respondents levels of familiarity with information technology system. The result shows that a total of 33(16.10) respondents are of the opinion that they have an excellent level of familiarity with information technology. 54(26.34%) respondents opined that they have very good familiarity with information technology system. 56(27.32%) respondents affirmed to have good familiarity with information technology system. 50(24.39%) respondents said they are fairly familiar with information technology system and 12(5.85%) respondents are of the view that they are poor when it comes to being familiar with information technology system. This implies that a good number of the respondents are familiar with information technology system.

4.2 Data on The Different Information Technology System Applicable by Various Organization

In order to determine the information technology system relevant in the management and maintenance of real estate, questionnaires on the subject were administered to staff of ESHDC and Estate Surveyors and Valuers, the table below shows their response.

Table 4.9 Response on the Type of Information Technology System Applicable in Real Estate Management Practice in Enugu

Response	Staff of ESHDC	Estate surveyors and valuers	Frequency	% frequency
Computerized Maintenance Management System (CMMS)	5	15	20	17.39
Computer-Aided Facilities Management (CAFM)	5	20	25	21.74
Enterprise Asset Management (EAM)	0	5	5	4.35
Building Infrastructure Platform (BIP)	5	5	10	8.70
Integrated Workplace Management System (IWMS)	15	35	50	43.48
Undecided	0	5	5	4.35
Total	30	85	115	100%

Source: Field Survey (2021)

Table 4.9 highlights respondent's opinion on the types of technology information system applicable in real estate management practice in Enugu. out of 115 respondents representing staff of ESHDC and estate surveyors and valuers; 20 of them representing 17.39% went for computerized maintenance management system (CMMS), 25 of them representing 21.74% selected computer-aided facilities management (CAFM), 5 of them representing 4.35% favoured enterprise asset management (EAM), 10 respondents representing 8.70% said it is building infrastructure platform (BIP) that is applicable in real estate management practice in Enugu, 50 respondents said that integrated workspace management system (IWMS) is applicable in real estate management practice and 5 respondents said that they are undecided on the information technology system most applicable. However, the results show that integrated workspace management system (IWMS) with 43.48% response appear the most applicable information technology system in real estate management practice in Enugu.

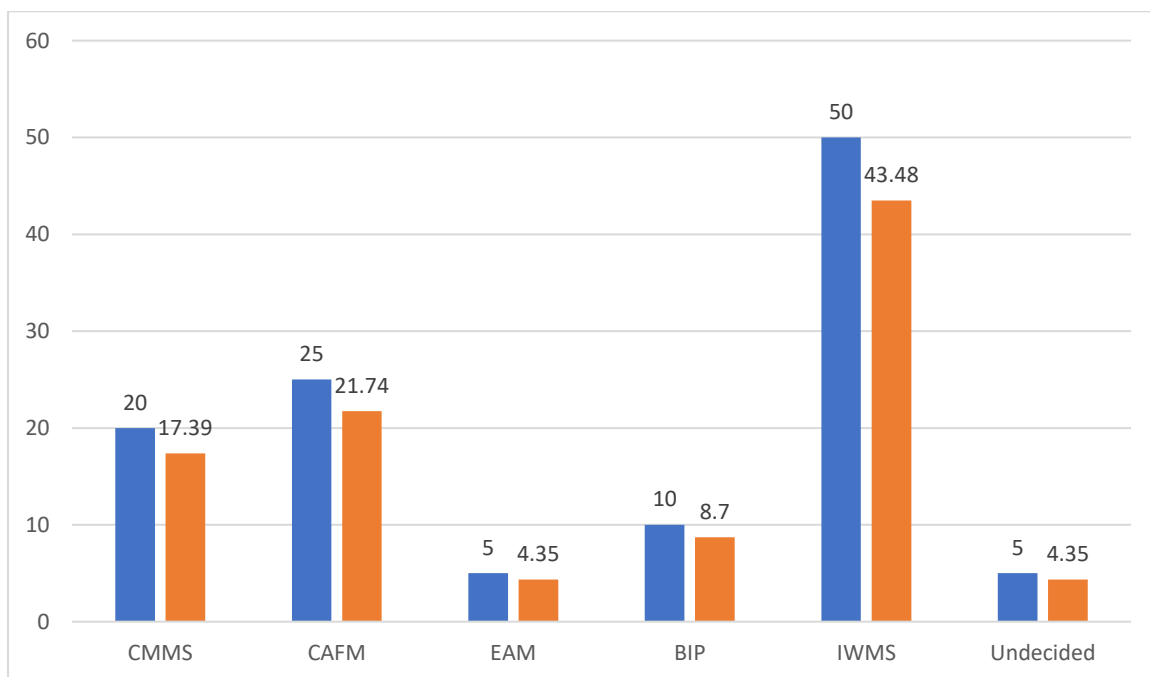


Fig 2. Chart showing the Type of Information Technology System Applicable in Real Estate Management Practice in Enugu

4.3 Data on The Extent ESHDC Apply Information Technology System in Their Operations

The result on the extent ESHDC apply information technology system in their operations are presented in the table below.

Table 4.10 Response on the Extent of Application of Information Technology System by ESHDC

Extent	Staff of ESHDC	Residents	Estate surveyors and valuers	Frequency	% frequency
Very high extent	9	0	4	13	6.34
High extent	5	5	5	15	7.32
Reasonable extent	10	20	31	61	29.76
Low extent	5	35	25	65	31.71
No extent	1	10	5	16	7.80
Undecided	0	20	15	35	17.07
Total	30	90	85	205	100%

Source: Field Survey (2021)

Table 4.10 reveals the response on the extent of application of information technology system by ESHDC. Out of 205 respondents (staff of ESHDC, residents and estate surveyors and valuers) 13 respondents representing 6.34% said it is to a very high extent, 15 respondents representing 7.32% said it is to a high extent, 61 respondents representing 29.76% opined that it is to a reasonable extent, 65 respondents representing 31.71% are of the view that it is to a low extent. 16 respondents representing 7.80% said that there is no extent of

application of information technology system by Enugu State Housing Development Corporation. The option with the highest response is the “low extent”, hence, it deduced that ESHDC’s application of information technology system is to a low extent.

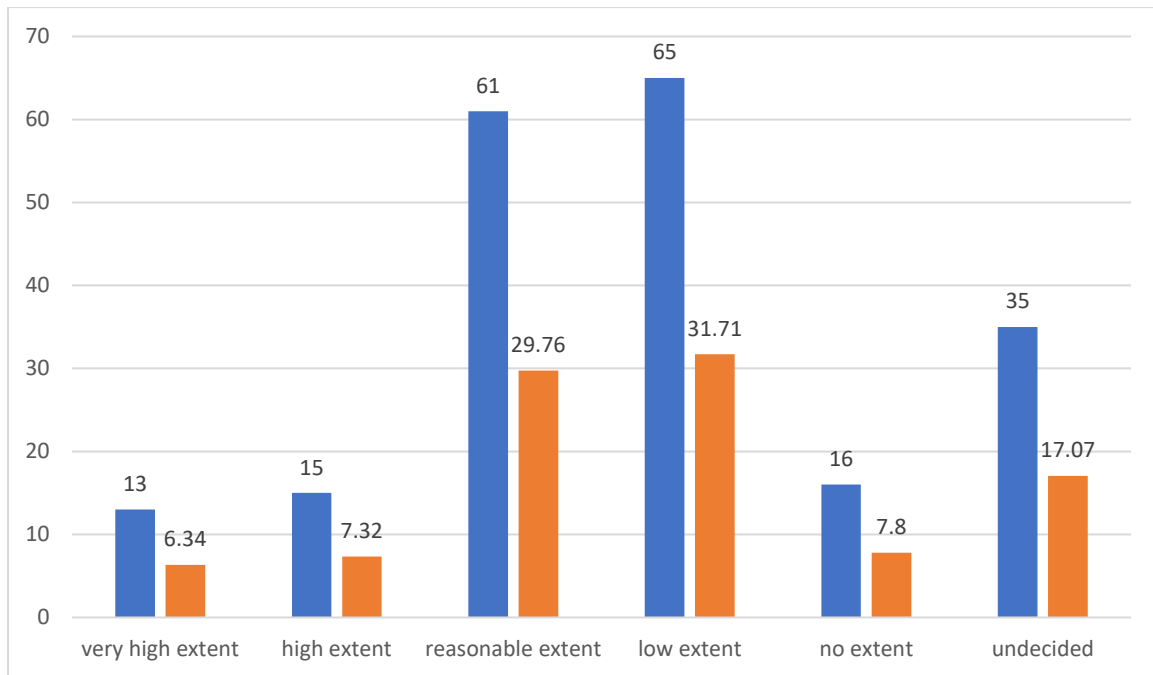


Fig 3. Chart showing the Extent of Application of Information Technology System by ESHDC

4.4 Data on The Factors Limiting the Application of Information Technology System in ESHDC

In order to investigate the factors limiting the application of information technology system in real estate management practice in Enugu it was necessary to prepare and distribute questionnaires on the subject to the respondents. The results from questionnaires collected is showed in the table below.

Table 4.11 Response on the Factors Limiting the Application of Information Technology System in Real Estate Management Practices in Enugu

Response	Strongly agree	Agree	Strongly disagree	Disagree	Undecided	Mean	Decision
Technology know-how	205	0	0	0	0	5.00	Accept
Awareness	50	55	50	50	0	3.50	Accept
Power supply	105	30	70	0	0	4.17	Accept
Maintenance and upgrade	205	0	0	0	0	5.0	Accept
High cost of implementation	200	0	5	0	0	4.95	Accept
Inadequate funding	100	30	65	10	0	3.59	Accept
Negative attitude of staff towards learning	30	70	10	95	0	3.17	Accept
Degree of complexity involved	200	0	5	0	0	4.95	Accept
Structural resistance	42	46	56	61	0	3.34	Accept
Total	30	90	85	205	100%		

Source: Field Survey (2021)

Table 4.11 reveals the factors limiting the application of information technology system in real estate management practice in Enugu. the mean results showed that technology know-how, awareness, power supply, maintenance and upgrade, high cost of implementation, inadequate funding, negative attitude of staff towards learning, degree of complexity involved and structural resistance have all been accepted by the respondents as factors limiting application of information technology system in real estate management practice in Enugu. The acceptance of these factors is on the basis of exceeding the calculated cut-off point of 3.00. see appendix 2.

4.5 Data on Reasons the Implementation of Information Technology System are Highly Recommended for ESHDC

The table below shows results on reasons the implementation of information technology system is highly recommended for ESHDC

Table 4.12 Response on Reasons Implementation of The Information Technology System are Highly Recommended for ESHDC

Extent	Staff of ESHDC	Residents	Estate surveyors and valuers	Frequency	% Frequency
Ease of operation	6	25	2	33	16.10
Improves productivity	8	20	28	56	27.32
Reduces operational cost	0	5	25	30	14.63
User friendly	5	0	10	15	7.32
It is more efficient	5	30	15	50	24.39
Reduces energy consumption	0	0	5	5	2.44
Provides effective work environment	6	10	0	16	7.80
Total	30	90	85	205	100%

Source: Field Survey (2021)

Table 4.12 reveals the response on reasons implementation of the information technology system are highly recommended for ESHDC. Out of 205 respondents, 33 representing 16.10% are of the opinion that

information technology system provides ease of operation, 56 respondents representing 27.32% said that it improves productivity, 30 respondents representing 14.63% opined that it reduces operational cost, 15 respondents representing 7.32% said it is because it is user friendly, 50 respondents affirmed that it is as a result of its efficiency, 5 respondents representing 2.44% and 16 respondents representing 7.80% said it is because it reduces energy consumption and provides effective work environment respectively. The implication of this result is that implementation of information technology system improves real estate management efficiency and reduces operational cost of real estate management in Enugu.

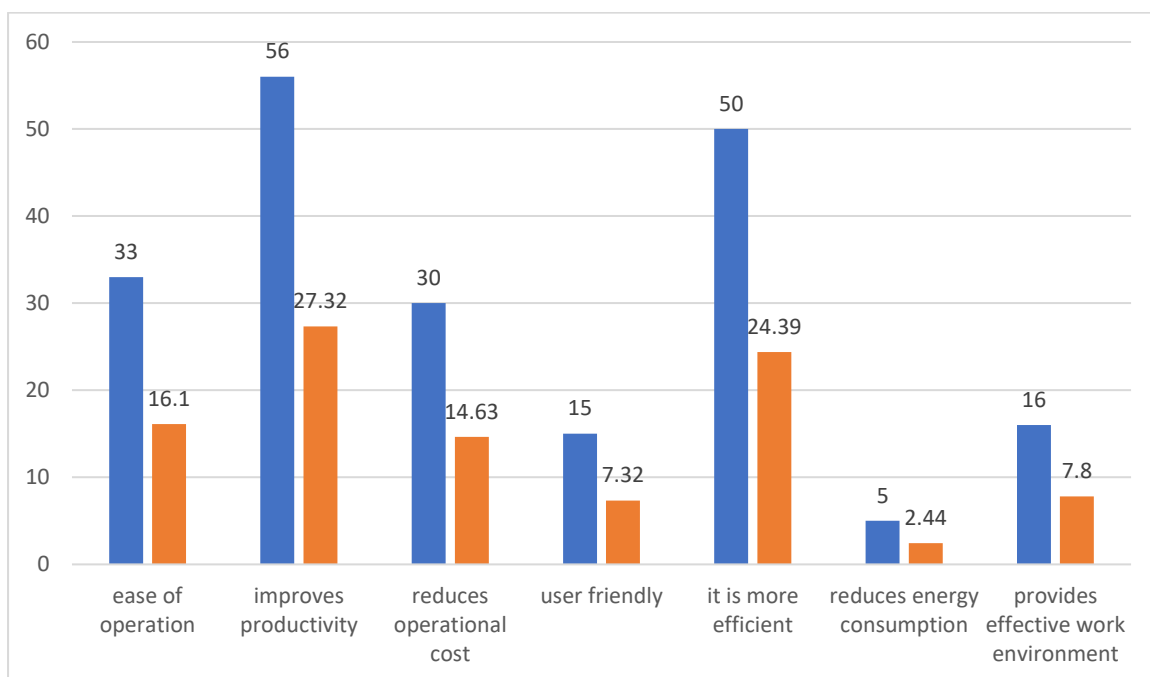


Fig 4. Chart showing Reasons Implementation of The Information Technology System are Highly Recommended for ESHDC

APPENDIX 2

Determination of Mean Results on table 4.11

Response		Strongly agree	Agree	Strongly disagree	Disagree	Undecided	Mean	Decision
Technology know-how	1	205	0	0	0	0	5.00	Accept
Awareness	2	50	55	50	50	0	3.50	Accept
Power supply	3	105	30	70	0	0	4.17	Accept
Maintenance and upgrade	4	205	0	0	0	0	5.0	Accept
High cost of implementation	5	200	0	5	0	0	4.95	Accept
Inadequate funding	6	100	30	65	10	0	3.59	Accept
Negative attitude of staff towards learning	7	30	70	10	95	0	3.17	Accept
Degree of complexity involved	8	200	0	5	0	0	4.95	Accept
Structural resistance	9	42	46	56	61	0	3.34	Accept
Total		30	90	85	205	100%		

Where:

SA – Strongly Agree

A – Agree

SD – Strongly Disagree

D – Disagree

U – Undecided

SA = 5

A = 4

SD = 3

D = 2

U = 1

Cut off point = $5+4+3+2+1/5 = 3.00$

N = 205

Derivation of **Mean Results** for options 1, 2, 3, 4, 5, 6, 7, 8 and 9

1. $205 \times 5 = 1025/205 = \mathbf{5.00}$

Criteria: mean result < 3.00 = reject otherwise accept

Hence, we accept 5.00

2. $50 \times 5 + 55 \times 4 + 50 \times 3 + 50 \times 2 + 0 \times 1 = 250 + 220 + 150 + 100/205 = \mathbf{3.5}$

Criteria: mean result < 3.00 = reject otherwise accept

Hence, we accept 3.5

3. $105 \times 5 + 30 \times 4 + 70 \times 3 + 0 \times 2 + 0 \times 1 = 525 + 120 + 210/205 = \mathbf{4.17}$

Criteria: mean result < 3.00 = reject otherwise accept

Hence, we accept 4.17

4. $205 \times 5 = 1025 = \mathbf{5.00}$

Criteria: mean result < 3.00 = reject otherwise accept

Hence, we accept 5.00

5. $200 \times 5 + 0 \times 4 + 5 \times 3 = 1,000 + 0 + 15/205 = \mathbf{4.95}$

Criteria: mean result < 3.00 = reject otherwise accept

Hence, we accept 4.95

6. Same principle
7. Same principle
8. Same principle
9. Same principle