# **CHAPTER IV**

**PRESENTATION AND DISCUSSION OF RESULTS**

This chapter shows the results of the evaluation of the developed system conducted by the proponents.

Table 1: Summary of the Respondents

|  |  |  |
| --- | --- | --- |
| Area | Number of Respondents | Percentage |
| Administrative Offices | 18 | 56.25% |
| Student Organizations | 9 | 28.125% |
| IT Experts | 5 | 15.625% |
| **Total** | **32** | **100%** |

The Table 1: Summary of Respondents shows the total number of respondents and their weighing percentage for the evaluation of the developed system. It shows that 18 from the administrative offices will consume 56.25% of total percentage, 9 from the student organization for 28.125% and for five IT experts for 15.625% and to sum up for a total of 100%. Two instrumentation was used for evaluation, (1) the McCall’s Software Evaluation for administrative and student organization; and therefore, they will compromise 84.375% of total percentage; (2) for IT expert’s the ISO Systems and Software Quality Requirements and Evaluation (SQuaRE) instrument or ISO/IEC 25022 software characteristics.

Both instrument was interpreted per statistical mean as the following:

|  |  |
| --- | --- |
| **Statistical Mean** | **Descriptive Interpretation** |
| 4.21 - 5.00 | Very Good |
| 3.41 - 4.20 | Good |
| 2.61 – 3.40 | Average |
| 1.81 – 2.60 | Fair |
| 1.00 – 1.80 | Poor |

Table 3: Statistical Mean and Descriptive Interpretation

## SOFTWARE EVALUATION RESULTS

### **User’s Evaluation Result**

The proponents conducted a random evaluation in both administrative offices and student organizations using the McCall’s Software Evaluation with 27 total of respondents, and the results are followed:

Table 7: Users Evaluation Results, N=27

|  |  |  |
| --- | --- | --- |
| **Criteria** | **Average** | **Verbal Interpretation** |
| Auditability | 4.555556 | Very Good |
| Accuracy | 4.62963 | Very Good |
| Completeness | 4.62963 | Very Good |
| Communication Commonality | 4.444444 | Very Good |
| Conciseness | 4.296296 | Very Good |
| Consistency | 4.407407 | Very Good |
| Observability | 4.62963 | Very Good |
| Security | 4.555556 | Very Good |
| Self-Documentation | 4.666667 | Very Good |
| Simplicity | 4.555556 | Very Good |
| Software System Independence | 4.407407 | Very Good |
| Traceability | 4.296296 | Very Good |
| Training | 4.333333 | Very Good |
| Controllability | 4.296296 | Very Good |
| Data Commonality | 4.518519 | Very Good |
| Decomposability | 4.518519 | Very Good |
| Error Tolerance | 4.444444 | Very Good |
| Execution Efficiency | 4.259259 | Very Good |
| Expandability | 4.333333 | Very Good |
| Generality | 4.481481 | Very Good |
| Hardware Independence | 4.481481 | Very Good |
| Instrumentation | 4.37037 | Very Good |
| Modularity | 4.740741 | Very Good |
| Overall Mean Result: 4.47182 | | Very Good |

The overall meanof the user’s evaluation using McCall’s Software Evaluation Criteria was 4.47182 and this was interpreted as Very Good**.** Therefore, 84.375% of the respondents rated the developed system as Very Good.

### **Experts Evaluation Result**

The proponents asked five IT experts to evaluate the system using the ISO Systems and Software Quality Requirements and Evaluation (SQuaRE) instrument or ISO/IEC 25022 software characteristics.

And the result of the evaluation are followed:

### **Functionality Characteristics**

Table 1: The experts’ attitude towards the functionality characteristics of the system, N=5

|  |  |  |
| --- | --- | --- |
| **Criteria** | **Average** | **Verbal Interpretation** |
| Suitability | 4.8 | Very Good |
| Accurateness | 4.8 | Very Good |
| Interoperability | 5 | Very Good |
| Compliance | 4.4 | Very Good |
| Security | 4.4 | Very Good |
| Sub Mean result: 4.68 | | Very Good |

The Table : The experts’ attitude towards the functionality characteristics of the system, N=5 shows the sub-mean result of evaluation on functionality characteristics of the developed system, it was been calculated and resulted 4.68 which was interpreted as very good. Therefore, the system’s functionality developed by the proponents met the quality standards.

### **Reliability Characteristics**

Table 2: The experts’ attitude towards the reliability characteristics of the system, N=5

|  |  |  |
| --- | --- | --- |
| **Criteria** | **Average** | **Verbal Interpretation** |
| Maturity | 4.6 | Very Good |
| Fault Tolerance | 4.6 | Very Good |
| Recoverability | 4.8 | Very Good |
| Sub Mean Result: 4.6666667 | | Very Good |

The Table : The experts’ attitude towards the reliability characteristics of the system, N=5 shows the sub-mean result of evaluation on reliability characteristics of the developed system, it was been calculated and resulted 4.6666667 which was interpreted as very good. Therefore, the system developed was reliable.

### **Usability Characteristics**

Table 3: The experts’ attitude towards the usability characteristics of the system, N=5

|  |  |  |
| --- | --- | --- |
| **Criteria** | **Average** | **Verbal Interpretation** |
| Understandability | 4.8 | Very Good |
| Learnability | 4.4 | Very Good |
| Operability | 4.4 | Very Good |
| Sub Mean Results: 4.53333 | | Very Good |

The Table : The experts’ attitude towards the usability characteristics of the system, N=5 shows the sub-mean result of evaluation on usability characteristics of the developed system, it was been calculated and resulted 4.53333 which was interpreted as very good. Therefore, the system developed was usable.

### **Efficiency Characteristics**

Table 4: The experts’ attitude towards the efficiency characteristics of the system, N=5

|  |  |  |
| --- | --- | --- |
| **Criteria** | **Average** | **Verbal Interpretation** |
| Time Behavior | 4.8 | Very Good |
| Resource Behavoir | 5 | Very Good |
| Sub Mean Result: 4.9 | | Very Good |

The Table : The experts’ attitude towards the efficiency characteristics of the system, N=5 shows the sub-mean result of evaluation on efficiency characteristics of the developed system, it was been calculated and resulted 4.9 which was interpreted as very good. Therefore, the system developed was efficient.

### **Maintainability Characteristics**

Table 5: The experts’ attitude towards the maintainability characteristics of the system, N=5

|  |  |  |
| --- | --- | --- |
| **Criteria** | **Average** | **Verbal Interpretation** |
| Analyzability | 4.4 | Very Good |
| Changeability | 4.6 | Very Good |
| Stability | 4.4 | Very Good |
| Testability | 4.6 | Very Good |
| Sub Mean Result: 4.5 | | Very Good |

The Table : The experts’ attitude towards the maintainability characteristics of the system, N=5 shows the sub-mean result of evaluation on maintainability characteristics of the developed system, it was been calculated and resulted 4.5 which was interpreted as very good. Therefore, the system developed was maintainable.

### **Portability Characteristics**

Table 6: The experts’ attitude towards the portability characteristics of the system, N=5

|  |  |  |
| --- | --- | --- |
| **Criteria** | **Average** | **Verbal Interpretation** |
| Adaptability | 4.8 | Very Good |
| Instability | 4.6 | Very Good |
| Conformance | 4.4 | Very Good |
| Replaceability | 4.8 | Very Good |
| Sub Mean Results: 4.65 | | Very Good |

The Table : The experts’ attitude towards the portability characteristics of the system, N=5 shows the sub-mean result of evaluation on portability characteristics of the developed system, it was been calculated and resulted 4.65 which was interpreted as very good. Therefore, the system developed was portable.

## Overall ISO Systems and Software Quality Requirements and Evaluation (SQuaRE) Result

Table 6: Overall ISO System and Software Quality Requirement and Evaluation (SQuaRE) result, N=5

|  |  |  |
| --- | --- | --- |
| **Criteria** | **Average** | **Verbal Interpretation** |
| Functionality | 4.68 | Very Good |
| Reliability | 4.6666667 | Very Good |
| Usability | 4.53333 | Very Good |
| Efficiency | 4.9 | Very Good |
| Maintainability | 4.5 | Very Good |
| Portability | 4.65 | Very Good |
| Sub Mean Results: 4.655 | | Very Good |

The overall meanof the experts’ evaluation using ISO Systems and Software Quality Requirements and Evaluation (SQuaRE) instrument or ISO/IEC 25022 software characteristics was 4.655 and this was interpreted as Very Good**.** Therefore, IT experts rated the developed system as Very Good.