

## Chapter 4

### RESULTS AND DISCUSSION

This chapter represents the analyses, presentation, and interpretation of data. The evaluation of the personnel's of CSWD and the IT experts on the Web-based Community Profiling System for Taguig City is presented in Tables 4.1 through 4.9.

The mode used by the researcher for the evaluation of the proposed system that requires a highly interactive or complex user interface was the prototype software development model, because it allows the proponent to set priorities and redirect plans inexpensively, with a minimum of disruption which is advantageous to this study.

#### **Presentation of the Project Development and Evaluation of the System**

##### **Presentation of the objective number 1.**

Mobile application that is capable in the collection and transmission of data on a real-time basis to the database server and on an off-line mode to a smartphone for later transmission.

**Figure 4.1.** Provides the actual screenshots of the mobile-based application. It provides the capability of collection and transmission of data on a real-time basis to the database server and on an off-line mode to save the data on a smartphone for later transmission.

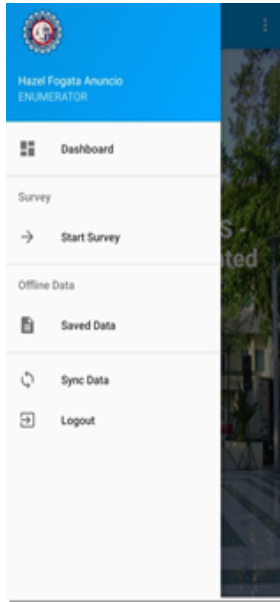


Figure 4.1.1

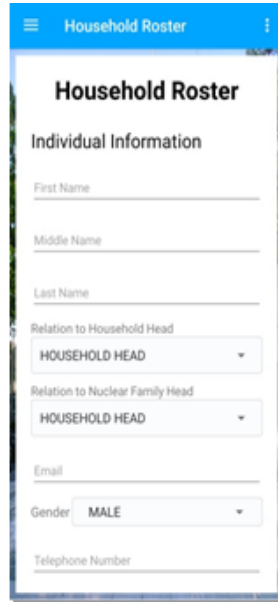


Figure 4.1.2

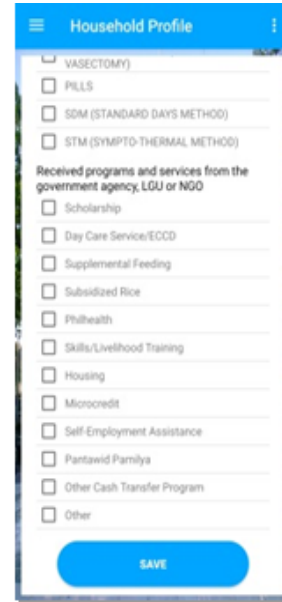


Figure 4.1.3

Figure 4.1. Mobile Application

**Figure 4.1.1** Shows the menu options of the mobile-application wherein the assigned enumerator in the barangay must log-in the system.

Log-in. The administrator of the system is the only person with full access to the system that includes the management of users.

Internet connection is a must to be log-in the system using the mobile application for the following reasons:

1. to validate the user if active or inactive;
2. to give restrictions to the enumerator's schedule of conducting the interview / surveying; and
3. to automatically update the mobile application for the updated survey questionnaires that are needed in the conduct of surveying.

*Off-line Data mode.* This is used to collect data without an internet connection. The collected data will be saved in the smartphone for a while for later data transmission. This mode will give an advantage to the survey taker to be efficient even when the internet connection is unavailable or slow.

*Sync Data.* This will upload the conducted activity from the smartphone to the web-server and at the same time, it records the performance of the survey taker by recording it in an audit trail.

**Figure 4.1.2.** Shows the sample fields of information that the survey taker needs to collect from the target individual. Any changes made from the questionnaires will automatically update the mobile application when the Sync Data option is used.

**Figure 4.1.3** Shows that the mobile application is capable of saving the collected data on the smartphone and/or to be transmitted in real-time basis.

The mobile-based application is the tool that is designed to manage the collection of data from the community. This is for the usage of the enumerator that is assigned in a specific barangay to conduct the face-to-face interview using a smartphone.

## **Presentation of the objective number 2**

Provide web-based application with the following features:

2.1 Web-based application with the search profile features that will satisfy the needs of information for health and education program in terms of individual, family and barangay profile.

The screenshot displays the TCISS Report module. The top navigation bar is blue with the TCISS logo and a 'Report' title. A 'Logout' link is in the top right. The left sidebar shows a user profile for 'Administrator TCISS' and a menu with options: Dashboard, Start Survey, Forms, Management, Report (highlighted), Data Analytics, and Sync Activity. The main content area has a 'Menu' section with 'Household', 'Individual Profile' (selected), and 'Barangay Report'. A filter section at the top right includes 'Filter By' (set to 'Household'), a 'Filter' input field, and 'Filter Brgy' (set to 'All Barangay'). A dropdown menu for 'Filter By' is open, showing options: Basic Filter, Household Number, Member ID, Family Name, Information, Firstname (highlighted), and Lastname. Below the filters is a table with columns: Firstname, Middlename, Lastname, Age, and Birthday. The table contains 10 rows of data.

Firstname	Middlename	Lastname	Age	Birthday
J	G.	ORONCILLO	23	1996-04-25
MARY ANGEL	GALIMA	ORONCILLO	20	1998-12-29
JESUSIMO	S.	ORONCILLO JR.	62	1957-10-12
ELIZABETH	G.	ORONCILLO	52	1967-05-17
APRIL MAE	G.	ORONCILLO	17	2002-01-01
ANN CLARISSE	G.	ORONCILLO	15	2004-01-01
MEMBER		1	59	1960-01-01
MEMBER		2	58	1961-01-01
MEMBER	G.	3	23	1996-05-25
MEMBER		1-2	59	1960-01-01

*Figure 4.2 Profile Search Module*

**Figure 4.2** Shows the profile search module. It can search the individual, family, and barangay using the selected filters, household number, member's ID, and family name are used for basic filtering, while the system also provides an advance filters to give a flexibility feature to the user in searching.

2.2 Web-based application with the flexibility features on reports generation by allowing the user to define the column or parameters that will satisfy the need of information for health and education program in terms of Individual, family and barangay;

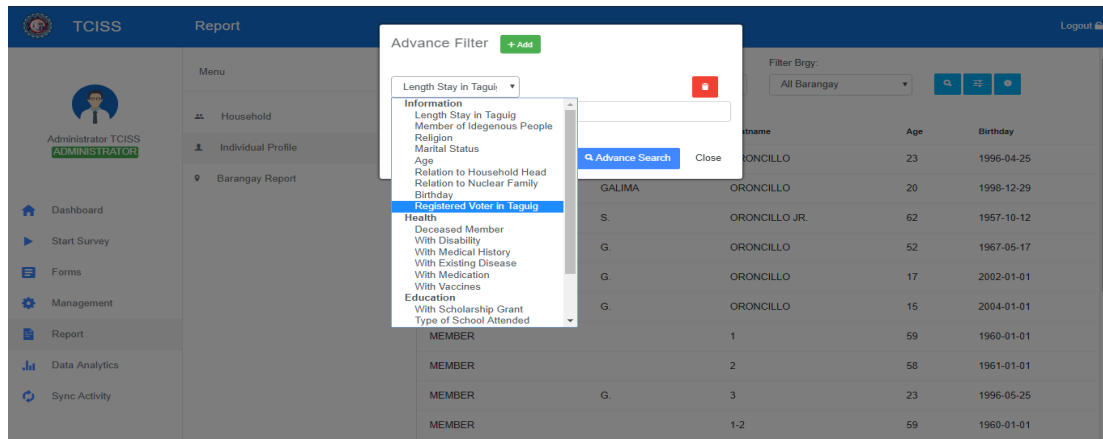


Figure 4.3. Report Generation Module

**Figure 4.3** Shows the Report Generation module providing the flexibility features on reports generation by allowing the user to define the column or parameters that will satisfy the need of information for health and education program in terms of Individual, family, and barangay using the advance filtering feature.

TCISS - Taguig City Integrated Survey System Report  
Individual Profile Report  
For All Barangay

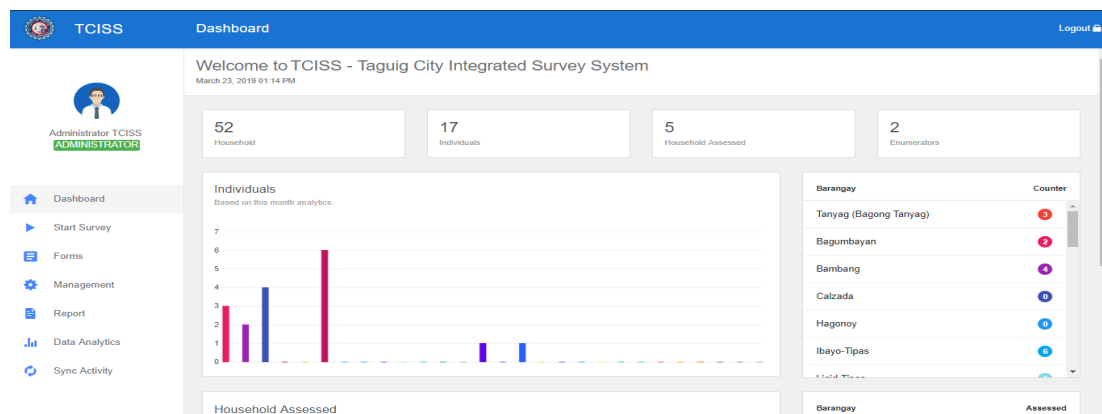
Firstname	Middlename	Lastname	Age	Birthday	Has Disability
Barangay: Bayo-Tipas					
JOHN LIVEE	G.	ORONCILLO	23	1996-04-25	N
MARY ANGEL	GALIMA	ORONCILLO	20	1998-12-29	N
JESUSIMO	S.	ORONCILLO JR.	62	1957-10-12	N
ELIZABETH	G.	ORONCILLO	52	1967-05-17	N
APRIL MAE	G.	ORONCILLO	17	2002-01-01	N
ANN CLARISSE	G.	ORONCILLO	15	2004-01-01	N
Barangay: Tanyag (Bagong Tanyag)					
MEMBER		1	59	1960-01-01	N
MEMBER		2	58	1961-01-01	Y
MEMBER	G.	3	23	1996-05-25	N
Barangay: Bagumbayan					
MEMBER		1-2	59	1960-01-01	Y

Figure 4.4. Generated Report

**Figure 4.4** Shows the fields that were selected will appear in the form of reports. The system creates the format automatically.



2.3 Web-based application with the real-time dashboard that will aid in the analyses of the local government in identifying and addressing the needs of the city's constituents in health and education;



*Figure 4.7. Real-time Dashboard Module*

**Figure 4.7** The real-time dashboard presents the data in the form of graphics serves as the analyzing tool of the system. These graphs will aid the local government in the defining the programs that will be fitted to the community. Barangay names were listed, wherein the number of households, number of individuals interviewed, number of household assessed, and the number of enumerators conducted the actual survey.

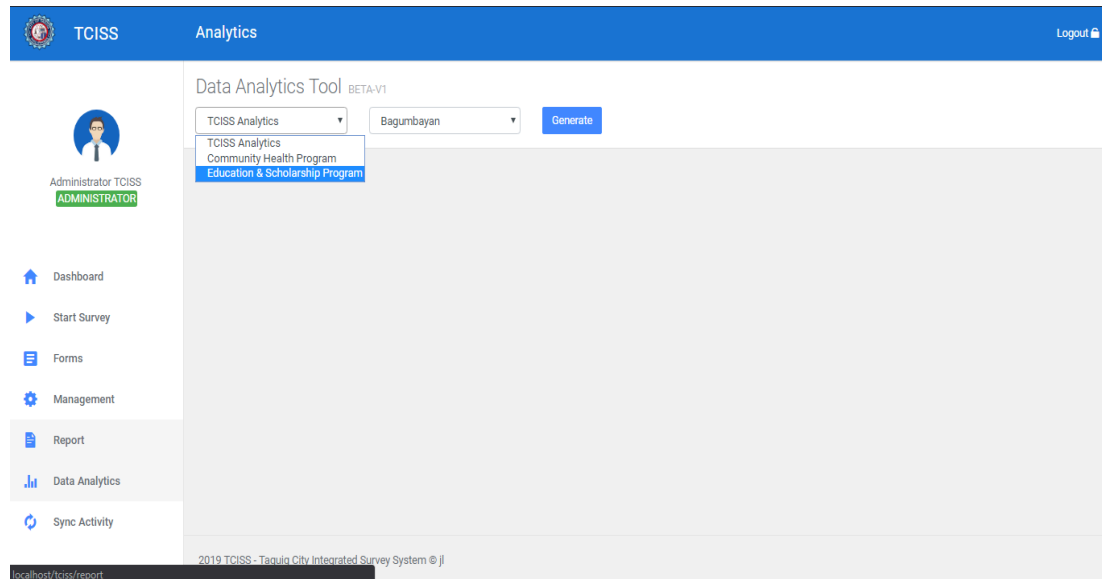


Figure 4.8 . Data Analytics Tool

**Figure 4.8** Data Analytics Tool is divided into three areas: TCISS used, Community Health Program used, and Education and Scholarship Program used.

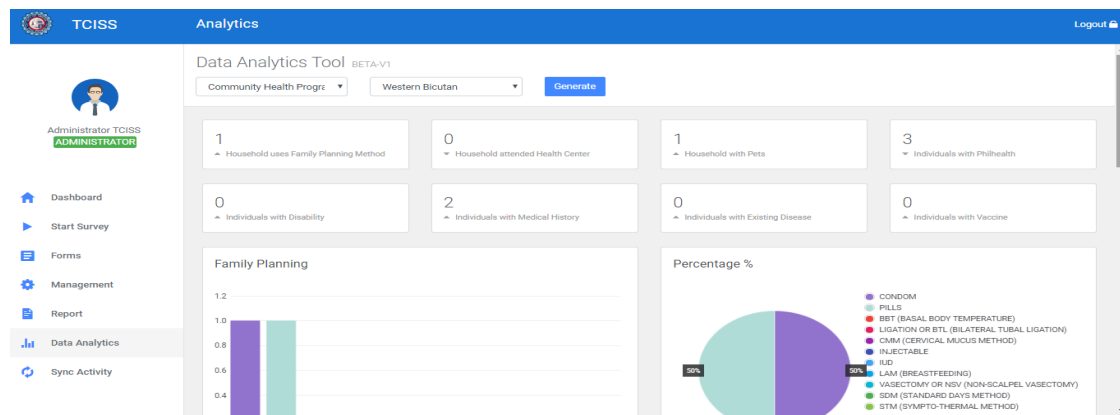


Figure 4.9. Pie Graph and Bar Graph Data Representation

**Figure 4.9** All related data for health and education is presented in bar and pie graph. The bar graph presented the counters of the number of individual, households,



and barangay in the system's database while the pie graph represents in percentage.

### Presentation of objective number 3

Evaluation of the proposed system based on the International Standardization Organization (ISO) 25010:2011 software quality characteristics in terms of functional suitability, performance efficiency, compatibility, usability, reliability, security, maintainability, and portability.

Rate	Range	Verbal Interpretation
5	4.20 – 4.99	Strongly Agree (SA)
4	3.4 – 4.19	Agree (A)
3	2.6 – 3.39	Minimally Agree (MA)
2	1.80 – 2.59	Disagree (D)
1	1.00 – 1.79	Strongly Disagree (SD)

**Table 4.1. Evaluation of the Proposed System in terms of Functional Suitability**

Indicators	CSWD Personnel		IT Experts		Total WM	VI
	WM	VI	WM	VI		
4.1.1. The system covers all the specified tasks and user objectives which were designed <b>(Completeness)</b>	4.92	Strongly Agree	4.87	Strongly Agree	4.90	Strongly Agree
4.1.2 The system provides correct results with the needed degree of	4.71	Strongly Agree	4.68	Strongly Agree	4.70	Strongly Agree

precision. <b>(Correctness)</b>						
4.1.3 The system is designed to facilitate accomplishment of specified tasks. <b>(Appropriateness)</b>	4.85	Strongly Agree	4.93	Strongly Agree	4.89	Strongly Agree
<b>Total Weighted Mean</b>	<b>4.83</b>	<b>Strongly Agree</b>	<b>4.83</b>	<b>Strongly Agree</b>	<b>4.83</b>	<b>Strongly Agree</b>

Table 4.1 shows the evaluation of the respondents on the proposed web-based community profiling system. It shows that the CSWD personnel strongly agree on the Completeness (WM=4.92), Appropriateness with weighted mean of 4.85 and Correctness got weighted mean of 4.71. Moreover, it also shows that IT experts, in terms of Completeness (WM = 4.90), Appropriateness (WM = 4.89) and Correctness (4.70) each got a verbal description of strongly agree.

Hence, the evaluation of the respondents on the proposed web-based community profiling system in general got a weighted mean of 4.83 or Strongly Agree. Therefore, the system conforms a high acceptance of its Functionality from the respondents.

**Table 4.2. Evaluation of the Proposed System in terms of Performance Efficiency**

Indicators	CSWD Personnel		IT Experts		Total WM	VI
	WM	VI	WM	VI		
4.2.1 The system process a request and return a response <b>(Time Behavior)</b>	4.71	Strongly Agree	4.68	Strongly Agree	4.70	Strongly Agree
4.2.2 The system uses resources such as servers to access information of other applications	4.78	Strongly Agree	4.81	Strongly Agree	4.79	Strongly Agree

<b>(Resource Utilization).</b>						
4.2.3 The system has the ability to remain working even with large number of accesses at the same time <b>(Capacity)</b>	4.92	Strongly Agree	4.75	Strongly Agree	4.83	Strongly Agree
<b>Total Weighted Mean</b>	<b>4.80</b>	<b>Strongly Agree</b>	<b>4.75</b>	<b>Strongly Agree</b>	<b>4.77</b>	<b>Strongly Agree</b>

Table 4.2 evaluates the Web-Based Community Profiling System by respondents in terms of Performance Efficiency. It shows that the Capacity got highest weighted mean of 4.92 or Strongly Agree from the CSWD personnel, Resource Utilization (WM=4.78), and Time Behavior (WM=4.71) also got Strongly Agree. Similarly, the IT experts, Resource Utilization has the highest weighted mean with 4.81 or Strongly Agree, while Capacity (WM=4.75), and Time Behavior (WM=4.68) both got verbal interpretation of Strongly Agree.

Overall, the performance Efficiency of the Web-Based Community Profiling System got a weighted mean of 4.77 or Strongly Agree. Hence, it shows that the Resource Utilization, Time Behavior and Capacity performance of the Web-based Community Profiling System is Efficient.

**Table 4.3. Evaluation of the Proposed System in terms of Compatibility**

Indicators	CSWD Personnel		IT Experts		Total WM	VI
	WM	VI	WM	VI		
4.3.1 The system can share the same service operations <b>(Co-existence).</b>	4.42	Strongly Agree	4.18	Strongly Agree	4.30	Strongly Agree

4.3.2 The system allows the interaction between systems through the use of interfaces (Web Services Description Language) and communication protocols. <b>(Interoperability)</b>	4.64	Strongly Agree	4.37	Strongly Agree	4.50	Strongly Agree
<b>Total Weighted Mean</b>	<b>4.53</b>	<b>Strongly Agree</b>	<b>4.28</b>	<b>Strongly Agree</b>	<b>4.40</b>	<b>Strongly Agree</b>

Table 4.3 shows the evaluation of the respondents on the proposed Web-Based Community Profiling System. It shows that the system provides Interoperability (WM = 4.28), and the system has co-existence (WM = 4.25), each got a verbal description of Strongly Agree.

Hereafter, the evaluation of the respondents on the proposed Web-Based Community Profiling System in general got a weighted mean of 4.26 or Strongly Agree. Therefore, the system conforms a high acceptance of its Compatibility from the respondents.

**Table 4.4 Evaluation of the Proposed System in terms of Usability**

Indicators	CSWD Personnel		IT Experts		Total WM	VI
	WM	VI	WM	VI		
4.4.1 The users can recognize if the system is appropriate for their needs such as functionality and data types transmitted <b>(Recognizability).</b>	4.85	Strongly Agree	4.62	Strongly Agree	4.74	Strongly Agree
4.4.2 The system can easily facilitate its operation <b>(Learnability).</b>	4.78	Strongly Agree	4.87	Strongly Agree	4.83	Strongly Agree

4.4.3 The system has (WSDL) document that allows exchange messages between services ( <b>Operability</b> ).	4.21	Strongly Agree	4.62	Strongly Agree	4.41	Strongly Agree
4.4.4 The system disallow errors from the wrong inputs. ( <b>User Error Protection</b> )	4.21	Strongly Agree	4.43	Strongly Agree	4.32	Strongly Agree
4.4.5 The system has a user interface aesthetics( <b>Aesthetics</b> )	4.92	Strongly Agree	4.62	Strongly Agree	4.77	Strongly Agree
4.4.6 The system has its accessibility ( <b>Accessibility</b> ).	4.78	Strongly Agree	4.75	Strongly Agree	4.76	Strongly Agree
<b>Total Weighted Mean</b>	<b>4.63</b>	<b>Strongly Agree</b>	<b>4.65</b>	<b>Strongly Agree</b>	<b>4.64</b>	<b>Strongly Agree</b>

Table 4.4 shows the evaluation of the CSWD personnel and the IT experts on the proposed Web-Based Community Profiling System. It shows that the system's Aesthetics has the highest weighted mean with 4.92 or Strongly Agree for the CSWD personnel, followed by Recognizability (WM=4.85), then Learnability and Accessibility with WM=4.78. Lastly, both Operability and User-Error Protection got a weighted mean of 4.21 or Strongly Agree. Furthermore, it also shows that the system's Learnability in the part of IT experts got a weighted mean of 4.83, followed by Accessibility (WM=4.75), Recognizability, Operability, and Aesthetics, each got a weighted mean of 4.62, and lastly, User-Error Protection with weighted mean of 4.43 or verbal interpretation as Strongly Agree.

Henceforth, the evaluation of the respondents on the proposed Web-Based Community Profiling System in general got a weighted mean of 4.64 or Strongly Agree. Therefore, the system conforms a high acceptance of its Usability from the respondents.

**Table 4.5 Evaluation of the Proposed System in terms of Reliability**

Indicators	CSWD Personnel		IT Experts		Total WM	VI
	WM	VI	WM	VI		
4.5.1 The system provides response on the requests of information ( <b>Maturity</b> ).	4.92	Strongly Agree	4.87	Strongly Agree	4.90	Strongly Agree
4.5.2 The system is available whenever it is requested ( <b>Availability</b> ).	4.78	Strongly Agree	4.75	Strongly Agree	4.76	Strongly Agree
4.5.3 The system can recover data when some interruption or failure occurs ( <b>Recoverability</b> ).	4.92	Strongly Agree	4.87	Strongly Agree	4.90	Strongly Agree
<b>Total Weighted Mean</b>	<b>4.88</b>	<b>Strongly Agree</b>	<b>4.28</b>	<b>Strongly Agree</b>	<b>4.85</b>	<b>Strongly Agree</b>

Table 4.5 evaluates the Web-Based Community Profiling System by the CSWD personnel and IT experts as respondents in terms of Reliability. It shows that the system has Maturity and Recoverability each with weighted mean of 4.92, and Availability got a weighted mean of 4.78. All indicators got a verbal interpretation of Strongly Agree. The IT experts evaluates the system as with Maturity and

Recoverability (WM=4.90) with verbal interpretation of Strongly Agree. Finally, Availability got 4.76 weighted mean with verbal interpretation of Strongly Agree.

Overall, the Reliability of the Web-Based Community Profiling System got a weighted mean of 4.85 or Strongly Agree. Hence, it shows that the Maturity, Availability, and Recoverability of the Web-Based Profiling System is Reliable.

**Table 4.6 Evaluation of the Proposed System in terms of Security**

Indicators	CSWD Personnel		IT Experts		Total WM	VI
	WM	VI	WM	VI		
4.6.1 The system provides an access to the authorize person only <b>(Confidentiality)</b> .	5.00	Strongly Agree	4.87	Strongly Agree	4.90	Strongly Agree
4.6.2 The system prevents unauthorized access to modify private data <b>(Integrity)</b> .	4.28	Strongly Agree	4.12	Agree	4.20	Strongly Agree
4.6.3 The system constructs strategies to prove that the information is delivered <b>(Non-Repudation)</b> .	4.78	Strongly Agree	4.31	Strongly Agree	4.54	Strongly Agree
<b>Total Weighted Mean</b>	<b>4.69</b>	<b>Strongly Agree</b>	<b>4.43</b>	<b>Strongly Agree</b>	<b>4.56</b>	<b>Strongly Agree</b>

Table 4.6 evaluates the Web-Based Community Profiling System in terms of Security. The CSWD personnel evaluated the system with Confidentiality (WM=5.00), Non-Repudation (WM=4.78), and Integrity (WM=4.28), each got a verbal interpretation of Strongly Agree. Moreover, the IT experts evaluated the system with Confidentiality

(WM=4.90), and Non-Repudation (WM=4.54), both got a verbal interpretation of Strongly Agree. While Integrity got a weighted mean of 4.12 or agree.

Generally, the Security of the Web-Based Community Profiling System got a weighted mean of 4.56 or Strongly Agree. Hence, it shows that the Confidentiality, Integrity and Non-Refutation of the Web-Based Community Profiling System has Security.

**Table 4.7 Evaluation of the Proposed System in terms of Maintainability**

Indicators	CSWD Personnel		IT Experts		Total WM	VI
	WM	VI	WM	VI		
4.7.1 The system can be modified to reduce dependencies <b>(Modifiability)</b> .	4.57	Strongly Agree	4.81	Strongly Agree	4.69	Strongly Agree
4.7.2 The system can be tested using tool for functional testing <b>(Testability)</b> .	4.28	Strongly Agree	4.87	Strongly Agree	4.58	Strongly Agree
<b>Total Weighted Mean</b>	<b>4.42</b>	<b>Strongly Agree</b>	<b>4.84</b>	<b>Strongly Agree</b>	<b>4.63</b>	<b>Strongly Agree</b>

Table 4.7 evaluates the Web-Based Community Profiling System in terms of Maintainability. The system can be modified to reduce dependencies got a weighted mean of 4.57 with verbal interpretation of Strongly Agree. While the system can be tested using tool for functional testing got a weighted mean of 4.28 or Strongly Agree, conforms by the CSWD personnel. The IT experts conforms that the system can be modified to reduce dependencies got a weighted mean of 4.69 or Strongly Agree, furthermore, the system can be tested using tool for functional testing got a verbal



interpretation of Strongly Agree or a weighted mean of 4.58.

In general, Modifiability and Testability of the system got a total weighted mean of 4.63 with verbal interpretation of Strongly Agree. Thus, the Web-Based Community Profiling System is Maintainable.

**Table 4.8 Evaluation of the Proposed System in terms of Portability**

Indicators	CSWD Personnel		IT Experts		Total WM	VI
	WM	VI	WM	VI		
4.8.1 The system is adaptable when there is a change on platform <b>(Adoptability)</b> .	4.78	Strongly Agree	4.87	Strongly Agree	4.83	Strongly Agree
4.8.2 The system is easy to install <b>(Installability)</b> .	4.92	Strongly Agree	4.87	Agree	4.90	Strongly Agree
4.8.3 The system can be easily replaced <b>(Replaceability)</b> .	4.85	Strongly Agree	4.81	Strongly Agree	4.83	Strongly Agree
<b>Total Weighted Mean</b>	<b>4.85</b>	<b>Strongly Agree</b>	<b>4.85</b>	<b>Strongly Agree</b>	<b>4.85</b>	<b>Strongly Agree</b>

Table 4.8 evaluates the Web-Based Community Profiling System in terms of Portability. The CSWD personnel evaluated the system with installability (WM=4.92), Replaceability (WM=4.85) and Adoptability (WM=4.78), each got a verbal interpretation of Strongly Agree. Moreover, the IT experts evaluated the system with Instability (WM=4.90) with verbal interpretation of Strongly Agree; Replaceability and Adoptability,

each got a weighted mean of 4.83 or Strongly Agree.

Overall, the Portability of the Web-Based Community Profiling System got a weighted mean of 4.85 or Strongly Agree. Hence, it shows that the Replaceability, Adoptability and Installability of the Web-Based Community Profiling System is Portable.

**Table 4.9 Summary of the Evaluation of the Proposed System  
in terms of  
ISO/IEC 25015:2011 Software Quality Characteristics**

Indicators	CSWD Personnel		IT Experts		Total WM	VI
	WM	VI	WM	VI		
4.1 Functional Suitability	4.83	Strongly Agree	4.83	Strongly Agree	4.83	Strongly Agree
4.2 Performance Efficiency	4.80	Strongly Agree	4.75	Strongly Agree	4.77	Strongly Agree
4.3 Compatibility	4.53	Strongly Agree	4.28	Strongly Agree	4.40	Strongly Agree
4.4 Usability	4.63	Strongly Agree	4.65	Strongly Agree	4.64	Strongly Agree
4.5 Reliability	4.88	Strongly Agree	4.28	Strongly Agree	4.85	Strongly Agree
4.6 Security	4.69	Strongly Agree	4.43	Strongly Agree	4.56	Strongly Agree
4.7 Maintainability	4.42	Strongly Agree	4.84	Strongly Agree	4.63	Strongly Agree
4.8 Portability	4.85	Strongly Agree	4.85	Strongly Agree	4.85	Strongly Agree
<b>Total Weighted Mean</b>	<b>4.70</b>	<b>Strongly Agree</b>	<b>4.61</b>	<b>Strongly Agree</b>	<b>4.69</b>	<b>Strongly Agree</b>

Table 4.9 shows the summary of the evaluation of the proposed system in terms

of the ISO/IEC 25010:2011 Software Quality Characteristics. The total weighted mean of 4.70 with verbal interpretation of Strongly Agree as evaluated by the CSWD personnel and a total weighted mean of 4.61 with verbal interpretation of Strongly Agree as evaluated by the IT experts. Overall, the proposed Web-based Profiling System for Taguig City as evaluated by the respondents complied with the ISO/IEC 25010:2011 Software Quality Characteristics with a total weighted mean of 4.69 or verbally interpreted as Strongly Agree.

## **Chapter 5**

### **SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS**

This chapter presents the summary of the project study undertaken. The conclusions drawn, and the recommendation made as an outgrowth of this study. The development and the design of the proposed Web-based Community Profiling System for Taguig City was specifically sought to attain the following objectives:

1. Mobile application that was both capable in the collection and transmission of data on a real-time basis to the database server and on an off-line mode to a smartphone for later transmission.
2. Provide web-based application with the following features:
  - 2.1 search profile that would satisfy the need of information for health and education program in terms of individual, family, and barangay profile;
  - 2.2 provide flexibility on reports generation by allowing the user to define the column or parameters that would satisfy the need of information for

health and education program in terms of Individual, family, and barangay;

2.3 provide real-time dashboard that will aid in the analysis of the local government in identifying and addressing the needs of the city's constituents in health and education;

3. Evaluation of the proposed system based on the International Standardization Organization (ISO/IEC) International Standardization Organization (ISO/IEC) 25010:2011 software product quality characteristics in terms of functional suitability, performance efficiency, compatibility, usability, reliability, security, maintainability, and portability.

### **Summary of Findings**

The salient findings of the study were able to provide and demonstrate to the respondents or evaluator of the proposed system the features and functionality in conformance with the International Standardization Organization (ISO/IEC) 25010:2011 software quality characteristics as follows:

1. Presentation 1 showed that the proposed system has provided a mobile application that was capable of gathering data in an on-line and off-line mode. Proper validation of user or survey-taker was defined in the accessibility with strict security feature.
2. Presentation 2 showed that the proposed system can search profile (individual, family, barangay), generated reports (individual, family, barangay) and it provided analyzing tool through dashboards. The added flexibility feature in selecting the

column or parameters satisfied the needs of information for the TCISS used, community health and education / scholarship programs.

3. Presentation 3 showed result of the evaluation of the proposed application based on the ISO/IEC 25010:2011 software quality standard as follows:

**Table 4.1.** The proposed web-based community profiling system conformed a high acceptance of its functionality from the respondents, in general got a weighted mean of 4.76 or Strongly Agree.

**Table 4.2.** The Performance Efficiency of the proposed web-based community profiling system got a weighted mean of 4.77 or Strongly Agree. The resource utilization, time behavior, and capacity performance of the Web-based Community Profiling System were Efficient.

**Table 4.3.** The evaluation of the respondents on the proposed web-based community profiling system in general got a weighted mean of 4.26 or Strongly Agree. The system adapted a high acceptance of its Compatibility from the respondents.

**Table 4.4.** The evaluation of the respondents on the proposed web-based community profiling system in general got a weighted mean of 4.64 or Strongly Agree. The system conformed a high acceptance of its Usability from the respondents.

**Table 4.5.** Overall, the reliability of the web-based community profiling system got a weighted mean of 4.85 or strongly agree. The maturity, availability, and recoverability of the web-based profiling system were Reliable.

**Table 4.6.** The security of the proposed web-based community profiling system got a weighted mean of 4.56 or strongly agree. The confidentiality, integrity, and non-refutation characteristics of the web-based community profiling system had security.

**Table 4.7.** The evaluation on maintainability of the proposed web-based community profiling system in general got a weighted mean of 4.63 or Strongly Agree. The system adapted a high acceptance of its Compatibility from the respondents.

**Table 4.8.** The evaluation of the respondents on portability of the proposed web-based community profiling system in general got a weighted mean of 4.85 or Strongly Agree. The system conformed a high acceptance of its Portability from the respondents.

**Table 4.9.** The proposed web-based community profiling system conforms a high acceptance from both the CSWD personnel and IT experts on its software quality characteristics based on the ISO/IEC 25010:2011 with a total weighted mean of 4.69 or verbally interpreted as Strongly Agree.

## **Conclusions**

Based from the foregoing summary of findings, the proponent herewith drawn the following conclusions:

1. Mobile application with real-time and off-line mode functionality in collection of data, save time and cost and deliver great services to have an evidence based on planning and designing for the program of Taguig residents to improve the performance of the enumerators to be more efficient on their assigned task.

2. Web-based application with search and generation of reports capability of the application give ease to the user to attain its needs based on what the systems possess for the office and people of Taguig.
3. Evaluation of the proposed application based on the ISO 9126 standard are all interpreted as Strongly Agree and developed to enhance the capability of the personnel in-charged in the Taguig City Integrated Survey System office in collection and archiving the community's profile, storing uniform records and extremely beneficial for barangay or for the local government for use of health and education programs.

## **Recommendations**

Based on the foregoing conclusions, the proponent herewith drawn the following recommendations:

1. The data gathered from the survey may be preserved each year to generate an automatic assessment of the community that can help in decision making of the LGU officials in creating programs for health and education.
2. The GPS capability may be used as an added feature in the mobile application to transmit information of the house being surveyed.
3. The computers from the other offices in Taguig City Hall may be networked to the TCISS to have an access to the system with provided security measures for the defined data accessibility.

4. There may be an online community accessibility wherein an individual may have an access to update own record and automatically be notified by the system for the possible health and education program they can avail or can be granted for them.

## **REFERENCES**

Alkema, L., & Jones, G. (2016). Levels Of Urbanization In The World's Countries: Tesing Consistency Of Estimates Based On National Definitions. J Pop Research. Doi: 10.1007/SI2546-013-9109-X



- Borgman, C., (2015). Big Data, Little Data, No Data: Scholarship In The Networked World. Mit Press
- David H. and William S.,(2017) The Paperless Office: A Case Study of the State Department's Foreign Affairs Information System". American Archivist, Vol 45, No. 2, Spring
- Greenwood, P. (2016, March). Securing information in a paper-efficient environment. Computer Fraud & Security, 2012(3), 18-20.  
[http://dx.doi.org/10.1016/S1361-3723\(12\)70055-6](http://dx.doi.org/10.1016/S1361-3723(12)70055-6)
- Fenella, G. (2016, February). Using a Web-Based Survey Tool to Undertake a Delphi Study: Application for Nurse Education Research. Nurse Education Today 33(2013) 1322-1328
- Jones, S. (2012). Egovernment Document Management System: A Case Analysis Of Risk And Reward. International Journal Of Information Management, 32(4), 396-400. <http://Dx.Doi.Org/10.1016/J.Ijinfomgt.2012.04.002>
- Jmir Mhealth Uhealth, 3:E75. Doi:10.2196/Mhealth.4183
- Khamsiriwatchara, A., Et Al (2015). Effectiveness Of Using Mobile Phone Image Capture For Collecting Secondary Data: A Case Study On Immunization History Data Among Children In Remote Areas In Thailand.
- Kumari, M., & Godara, S. (2016). Comparative Study Of Data Mining Classification Methods In Cardiovascular Disease Prediction. Doi:10.1.1.219.6038
- Lutteroth, C. & Weber, G. (2017). Going Paperless - On The Evaluation Of Electronic Form Technologies." In 2012 23rd International Workshop On Database And Expert Systems Applications. IEEE Computer Society, 14-18.  
<http://Doi.Ieeecomputersociety.Org/10.1109/Dexa.2011.38>
- Mills-Senn, P. (2016). How safe are your digital documents? University Business, 17(5), 27-30.  
<http://www.universitybusiness.com/article/how-safe-are-your-digital-documents>
- Plaza, I., Et Al, (2013). Mindfulness-Based Mobile Applications. Jmir Mhealth Uhealth, 2:E24. Doi:10.2196/Mhealth.2733
- Remedios, G., Et Al. ( 2015). "Road Flood Sensor With Web And Mobile Application Support". <http://www.Slideshare.Net/Markanthonymuya/Road-Flood-Sensor-With-Web-And-Mobile-Application-Support>
- Selvi, S., Khan, S., Rani, U., Prasad, B. N., Paul, A. K., & Biswal, A. K. (2016). Document management system-go green 'a paperless office' for steel plants. Steel

Times International,35(8),39-41.

<http://trove.nla.gov.au/work/161246654?versionId=175779343>

Velte, T., Velte, A., & Elsenpeter, R. C. (2018). Going paperless. In B. Reed (Ed.), Green it: Reduce your information system's environmental impact while adding to the bottom line (pp. 103-127). New York, NY: McGraw-Hill, Inc.