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Evaluation of Computerized information systems of small business Organizations

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Abstract**—** *Computer is an important tool in which business organizations use in financial reporting and operational methods to obtain data recording systems as well as computer literacy is treated as an important asset in the modern business world. The study described the computer literacy of Small business staff and owners, the level of usefulness and seriousness of problems encountered in using computers. Further, the study determined the significant difference among the level of literacy, usefulness and seriousness of problems encountered by small business staff and owners in using computers. Rejecting the hypothesis, there is significant difference on the responses of Small business staff and Small business owners as to literacy, usefulness, and seriousness of problems being encountered by respondents in performing their work with the use of computer. Based on the findings, the extent of literacy on computer especially on the context of information systems that are present in the computer is very much literate. The level of usefulness of computer especially on the information systems in making financial reports according to the response of Small business staff is moderately useful. While for Small business owners, it is very much useful. The respondents commonly experience problems with their advancement using computerized information system. It implies that there are no serious problems being encountered by respondents in dealing with the aid of computer. The researcher recommends that Small business organizations (SBOs) should develop a different approach especially designed for the respondents. This could be done in coordination to multi-agency to provide adequate knowledge in utilizing the information systems that are being installed in the computer.*

Keywords**— *Small Business Organization, SBO, Computerized Information System, Information System, Small Business Owners, Small Business Staff.***

I. INTRODUCTION

Computer is an important tool in which business organizations use in financial reporting and operational methods to obtain data recording systems as well as computer literacy is treated as an important asset in the modern business world. Seyal et al. (2000) discussed that goods and services organizations have higher computer utilization intensities relative to those involved in manufacturing and delivery of materials. Burgess (2002) stated that small business and information technology literatures are riddled with what is now a widely common list of ' barriers ' to effective IT adoption in small business.

As for Fisher et al. (2007), their analysis of websites for small businesses shows that many small business owners do not take full advantage of the Internet, thereby hindering their transition to e-commerce.

On the contrary, Calver (2001) discussed that commercial enterprises and undertakings previously practiced by conventional means of transmission of information are now being implemented and practiced via the "Internet" and "web browsers."

Aliffi et al. (2009) emphasized that lack of a program capable of providing accurate information will lead to the loss of economic opportunities for a small business enterprise that cannot access funding through conventional methods and for financial institutions that fail to achieve otherwise viable production. Thus, Kelliher and Henderson (2006) explained that The underlying problem is that the learning curve for a general-purpose device, such as a computer system, may be much higher than initially expected by both the small business owner and the manufacturer of the information system.

Small business management as concluded by Street and Meister (2004) frequently finds itself in a revolving holding pattern, as daily operations and change plans take more and more of their personal time and attention, leaving less and less

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time to inform their management counterparts about what is happening in their part of the company.

II. CONCEPTUAL FRAMEWORK

In order to have a good IT support infrastructure for small businesses, one must be deemed literate, meaning that staff or managers must have extensive knowledge in software such as Microsoft Office, financial forecasting resources that go beyond the existing spreadsheets, and web page authoring and development tools to sustain the fast-growing pace of online trading (Riemenschneider & Mykytyn, 2000).

Inspired by the technology acceptance model and other related field research, Grandon and Pearson (2004) have identified four factors influencing the implementation of electronic commerce: organizational readiness, external pressure, perceived user-friendliness and perceived utility.

Thong (2001) concluded that the implication for small business management is that they should focus their efforts to reduce three forms of resource limitations, which are technological skill restrictions, financial constraints, and time constraints, in order to achieve a high level of successful implementation of the Information System.

III. OBJECTIVES OF THE STUDY

The study described the computer literacy of Small business staff and owners, the level of usefulness and seriousness of problems encountered in using computers. Further, the study determined the significant difference among the level of literacy, usefulness and seriousness of problems encountered by small business staff and owners in using computers.

IV. HYPOTHESIS OF THE STUDY

There is no significant difference on the responses of Small Business Staff and Small Business Owners as to literacy, usefulness, and seriousness of problems being encountered in performing their work with the use of computer.

V. METHODOLOGY

The study used descriptive method as it describes the present condition. Descriptive research involves defining the characteristics of a particular occurrence based on an empirical analysis, or investigating the association between two or more phenomena (Creswell and Creswell, 2017).

A total of 250 respondents composed of 229 Small Business Staff and 21 Small Business Owners in Nueva Ecija were surveyed. The researchers utilized a likert-scale type questionnaire and utilized descriptive statistical analysis like mean, weighted mean, and ranking. Also, the researcher used t-test in assessing the significant difference among variables (Ruxton, 2006).

VI. RESULTS AND DISCUSSIONS

Table 1. Computer Literacy of Small Business Staff and Owners

INDICATORS	Small Business Staff			Small Business Owner		
	WM	VI	R	WM	VI	R
1. Plug-in the computer/laptop/net book	3.53	VML	1	3.48	VML	5
2. Starting the computer/laptop/net book	3.52	VML	2	3.48	VML	5
3. Using the computer for blotter entries	3.38	VML	5	3.48	VML	5
4. Utilizing Microsoft word in making reports and other documents.	3.41	VML	4	3.52	VML	4
5. Utilizing Microsoft excel in tabulating and statistical calculation.	3.36	VML	6	3.43	VML	6
6. Utilizing Microsoft publisher in preparing certificates, schedules, posters, manuals, notices etc.	3.34	VML	8	3.57	VML	3
7. Utilizing Microsoft power point in presenting reports, lectures and seminars.	3.31	VML	11	3.62	VML	2
8. Organizing movie clips using movie makers for lectures.	3.21	ML	16	3.57	VML	3
9. Opening flash drive, compact disk, diskettes etc.	3.32	VML	10	3.48	VML	5

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10. Savings files/folders.	3.35	VML	7	3.57	VML	3
11. Transferring, copying, posting files/documents.	3.34	VML	8	3.48	VML	5
12. Deleting files/folders.	3.32	VML	10	3.48	VML	5
13. Retrieving files/folders.	3.30	VML	12	3.48	VML	5
14. Retrieving deleted files/folders.	3.30	VML	12	3.67	VML	1
15. Using shortcut keys in savings, deleting, opening your files/ folders etc.	3.32	VML	10	3.43	VML	6
16. Searching words/files/folders	3.35	VML	7	3.52	VML	4
17. Using icons (ex. B, U , Paste, etc.)	3.23	ML	15	3.62	VML	2
18. Using toolbars (ex. Insert, page layout, reference, mailing etc.)	3.24	ML	14	3.48	VML	5
19. Operating media players (windows, etc.)	3.33	VML	9	3.48	VML	5
20. Inserting pictures, figures graphics etc.	3.31	VML	11	3.48	VML	5
21. Surfing/researching in website	3.25	VML	13	3.57	VML	3
22. Utilizing social networks like yahoo, face book, Skype, twitter etc.	3.38	VML	5	3.62	VML	2
23. Attaching files in email	3.20	ML	17	3.43	VML	6
24. Sending electronics mails	3.21	ML	16	3.43	VML	6
25. Removing computer virus or clearing files, reformatting, defragmenting	3.16	ML	19	3.29	VML	7
26. Utilizing information system in prospect and customer profiles, and inventory management, etc.	3.19	ML	18	3.48	VML	5
27. Troubleshooting on malfunction of computers	3.14	ML	20	3.43	VML	6
28. Downloading files attachments etc.	3.20	ML	17	3.62	VML	2
29. Detecting hacks and possible phishing sites through the net or computer technologies	3.21	ML	16	3.52	VML	4
30. Shutting down the computer/laptop/net book	3.45	VML	3	3.48	VML	5
Total Weighted Mean	**3.31**	**VML**		**3.51**	**VML**	

Legend :
1.00 – 1.74 Not Literate (NL)
1.75 – 2.49 Slightly Literate (SL)
2.50 – 3.25 Much Literate (ML)
3.26 – 4.00 Very much Literate (VML)

Table 1 presents the level of computer literacy among Small Business Staff and owners. On the response of Small Business Staff, the highest weighted mean obtained as tabulated is Statement 1 which is Plug-in the computer/laptop/net book and ranked as number 1 indicator. While the lowest weighted mean shown in this table is in Statement 27 which is Troubleshooting on malfunction of computers that ranked as number 20 indicator. The total weighted mean of all the indicators stated above as to the literacy of Small Business Staff is 3.31 and the verbal interpretation is very much literate. On the other hand, the response of Small Business Owners, in terms of computer literacy, shows that the highest weighted mean obtained on the response of Small Business Owners is in Statement 14 which is Retrieving deleted files and folders which ranked as number 1 indicator while the lowest weighted mean is in Statement 25 which is Removing computer virus or clearing files, reformatting, defragmenting that ranked as number 7 indicator. The total weighted mean of all the indicators above as to the literacy of Small Business Owners is 3.51 and the verbal interpretation is very much literate.

The difference between the response of Small Business Staff and Small Business Owners as to computer literacy is the total weighted mean as shown above. Small Business Staff obtain 3.31 while Small Business Owners obtain the highest weighted mean which is 3.51 although they have the same interpretation.

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Table 2. Level of usefulness of computer in making sales and other reports

INDICATORS	Small Business Staff			Small Business Owner		
	WM	VI	R	WM	VI	R
1. Utilizing Microsoft word in the following financial reports such as;	3.36	VMU	4	3.67	VMU	3
1.1 sales report	3.40	VMU	3	3.67	VMU	3
1.2 inventory report	3.42	VMU	1	3.71	VMU	2
1.3 expenses report	3.42	VMU	1	3.67	VMU	3
1.4 tax report	3.40	VMU	3	3.81	VMU	1
1.5 Balance Sheet	3.32	VMU	5	3.57	VMU	5
1.6 Report on changes of equity	3.30	VMU	6	3.62	VMU	4
1.7 complaint and feedback (from customers)	3.25	VMU	7	3.52	VMU	6
2. utilizing Microsoft excel in the following	3.41	VMU	2	3.62	VMU	4
2.1 tabulating sales volume	3.17	MU	9	3.52	VMU	6
2.2 statistical calculation of inventory turnover	3.09	MU	14	3.52	VMU	6
3. utilizing Microsoft publisher in preparing schedules, posters, manuals, notices etc.	3.12	MU	12	3.52	VMU	6
4. utilizing Microsoft power point when attending seminars (such as DTI and other seminar)	3.14	MU	10	3.38	VMU	8
5. organizing movie clips using movie makers	3.07	MU	15	3.52	VMU	6
6. sending electronics mails	3.23	MU	8	3.71	VMU	2
7. utilizing information system in prospect profiling and analysis, inventory management, etc.	3.10	MU	13	3.52	VMU	6
8. retrieving information posted on website	3.13	MU	11	3.57	VMU	5
9. utilizing social media information in connection to business.	3.07	MU	15	3.57	VMU	5
10. installation of website in relation to traffic generation for more prospects and customers.	3.03	MU	16	3.43	VMU	7
Total Weighted Mean	**3.23**	**MU**		**3.60**	**VMU**	

Legend :
1.00 – 1.74 Not Useful (NU)
1.75 – 2.49 Slightly Useful (SU)
2.50 – 3.25 Much Useful (MU)
3.26 – 4.00 Very much Useful (VMU)

Table 2 presents the level of usefulness of computer in making sales and other reports. The response of Small Business Staff, as to the usefulness of computerized information system among which the highest weighted mean tabulated is in Statement 1.2, is Inventory Report and 1.3 Expenses Report which ranked as number 1. While the lowest weighted mean is in Statement 10 which is the installation of website in relation to traffic generation for more prospects and customers that ranked as number 16. The total weighted mean on the response of Small Business Staff as to the usefulness of computerized information system is 3.23 with the verbal interpretation of moderately useful.

On the other hand, the response of Small Business Owners, as to the usefulness of computerized information system being installed in the computer, shows that the highest weighted mean is in Statement 1.4 which is Tax Report which ranked as number 1. While the lowest weighted mean is in Statement 4 which is utilizing Microsoft Power Point when attending seminars (such as DTI and other seminar) that ranked as number 8. The total weighted mean on the response of Small

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Business Owners as to the usefulness of computerized information system is 3.60 with the verbal interpretation of very much useful.

On the response of Small Business Owners, computerized information system is very much useful to them because it is necessary for them that all the information system installed in the computer must be very much useful in the organization to reduce the time needed. While the response of Small Business Staff, it is moderately useful in the organization.

Table 3. Level of Seriousness of Problems encountered in the use of Computers

INDICATORS	Small Business Staff			Small Business Owner		
	WM	VI	R	WM	VI	R
1. Lack of existing plans regarding the use of computer.	2.10	SS	1	1.71	NS	2
2. Unsatisfactory management support	1.91	SS	5	1.62	NS	4
3. Unsatisfactory assistance from colleagues	1.91	SS	5	1.52	NS	5
4. Improve allocation of funds	1.98	SS	2	1.90	SS	1
5. Insufficient computer part/s in the office	1.89	SS	6	1.71	NS	2
6. Lack of participation from the subordinates in education regarding computer literacy	1.92	SS	4	1.67	NS	3
7. Lack of interest in using computer	1.96	SS	3	1.52	NS	5
8. Inadequate knowledge about computers utilization to generate sales or profit	1.86	SS	7	1.43	NS	6
9. Insufficient skills in utilizing computer equipment	1.80	SS	8	1.52	NS	5
10. Unpleasant experience in using computers	1.89	SS	6	1.67	NS	3
Total Weighted Mean	**1.92**	**SS**		**1.63**	**NS**	

Legend :
1.00 – 1.74 Not Serious (NS)
1.75 – 2.49 Slightly Serious (SS)
2.50 – 3.25 Much Serious (MS)
3.26 – 4.00 Very much Serious (VMS)

Table 3 presents the level of seriousness of problems encountered in the use of computers. The response of Small Business Staff shows that the highest weighted mean is in Statement 1 which is lack of existing plans regarding the use of computer and ranked as number 1 problem. While, the lowest weighted mean is in Statement 9 which is insufficient skill in utilizing computer equipment that ranked as number 8 problem. The total weighted mean as to the seriousness of problems being encountered by respondents in dealing with the computer is 1.92 with the verbal interpretation of slightly serious.

On the other hand, the response of Small business owners, according to the seriousness of problem being encountered by respondents in using computers, shows that the highest weighted mean is in Statement 4 which is improve allocation of funds and ranked as number 1 problem while the lowest weighted mean is in Statement 8 which is inadequate knowledge about computers utilization to generate sales or profit that ranked as number 6. The total weighted mean as to the seriousness of problems being encountered by respondents in using the computer is 1.63 with the verbal interpretation of not serious.

Small Business Staff and Small Business Owners have different views according to the seriousness of problems being encountered by respondents in using the computer because of the results of the total weighted mean as tabulated above.

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T TEST OF UNEQUAL VARIANCE

T-Test: Two-Sample Assuming Unequal Variances		
	Variable 1	Variable 2
Mean	2.818516816	2.906599833
Variance	0.084560907	0.022057014
Observations	229	21
Hypothesized Mean Difference	0	
df	36	
t Stat	**-2.337813482**	
P(T<=t) one-tail	0.012536122	
t Critical one-tail	1.688297714	
P(T<=t) two-tail	0.025072243	
t Critical two-tail	**2.028094001**	
The critical value is higher than t stat		

Reject HO

There is significant difference on the responses of Small business staff and Small business owners as to literacy, usefulness, and seriousness of problems being encountered by respondents in performing their work with the use of computer.

VII. CONCLUSIONS AND RECOMMENDATIONS

The extent of literacy on computer especially on the context of information systems that are present in the computer is very much literate. Small business staff and Small business owners have different view on computer literacy in terms of computerized information system. The study that determined that Small business staff are very much literate when it comes to plugging the computer/laptop/net book, while on the response of Small business owners, they are very much literate when it comes to retrieving deleted files or folders. This shows that they have different values when it comes to utilizing the computer.

The level of usefulness of computer especially on the information systems in making financial reports according to the response of Small business staff is moderately useful. While for Small business owners, it is very much useful. These two different values imply that they have different appreciation when it comes to the program relative to the strategic positioning especially on the information systems that can easily be accessed through the information system in managing financial reports.

The respondents commonly experience problems with their advancement using computerized information system. Small business staff and Small business owners have different views when it comes to the seriousness of problem being encountered in dealing such paper works or others that have relation to the problem. Small business staff says that they encountered problems, slightly serious when it comes to lack of existing plans regarding the use of computer while Small business owners says that this problem is not serious due to the result of their answers to the questions provided. It implies that there are no serious problems being encountered by respondents in dealing with the aid of computer.

The Small business organization should develop a different approach especially designed for the respondents. This could be done in coordination to multi-agency to provide adequate knowledge in utilizing the information systems that are being installed in the computer. This is to enhance their capability in utilizing Microsoft word in the following entries on reports such as sales, tax, expense, inventory, balance sheet, changes in equity, and complaint and feedback. These reports are example of online information systems that the Small business organizations used today.

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