The effect of library services with information and communication technology application to students of Malabon National High School

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Abstract

Information and Communication Technology (ICT) based resources and services are fast replacing the traditional means of rendering library services in school libraries. No library can effectively provide the information needed of its users without the application of ICT in its day to day services. It is on this ground that this study examined the effects of library services with ICT applications in Malabon National High School students. The research design adopted for the study was quantitative survey research design, while structured questionnaire designed was used to ensure that the entire data sample can be analyzed fairly. The data is supplied in a numerical format, and can be analyzed in a quantifiable way using statistical methods. The population which was 3,791 comprised all the Junior High school students and 464 Senior High School Students that registered with the School for 2019-2020 academic session. A survey questionnaire of 60 library users was used to evaluate the figures with statistical tools so as to discover useful information. Percentages and statistical tables were used to analyze the collected data. The findings revealed that students in Malabon National High School were satisfied with the use of ICT-based resources and services, especially the use of computer and internet resources, in meeting their information needs within the school library.

Keywords: library; ICT; satisfaction; service quality; survey questionnaire

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1. Introduction

Libraries have always been and will still be the repositories of learning resources. From the earliest time, libraries have given access multitudes of information for ordinary people, scholars, and researchers. While the continually increasing amount of information being produced day by day, the every changing form and type of information, have continued to challenge the effectiveness of school libraries (Bobinski, 2007; Latrobe, 1998).

Within the school environment, the library is place wherein students are able to actively engage with their learning. Library usage is actually a strong predictor of student learning (Kuh & Gonyea, 2003). Onohwakpor (2006) mentioned that the library serve as storage of knowledge, which is indispensable to the achievement of any useful education. He further noted that instruction without the services of library is impractical education that can only produce narrow minded individual which will not be creative to their community. Hence, the understanding of how students perceived the library services is of crucial importance.

1.1 Information technology within the library

Information and Communication Technologies (ICTs) has transformed human life and activities; particularly in the development of speed and span of information fabrication, sharing and recycling, of which the library is the prime. The concept of ICT in the library encompasses the gathering (acquisition), organization (packaging), storage, retrieval and dissemination of information resources that can be in textual or numerical (books, documents), pictorial and vocal forms (audio-visual) or a combination of all the above (multimedia), using a combination of computers and telecommunications telephony (Lawal–Solarin, 2013). However, libraries within ICT have a dilemma of losing their relevance in the academic arena (Russo & Swan, 2015). This might be caused by the various influx of information within the library. Therefore, careful planning is a must.

Besides the above-mentioned responsibilities, Haneefa (2007) noted that ICT resources also include the various computer hardware and software which comprises of the following: computers, printers, scanners, CD-ROM, DVD, VCD, e-journals, e-books, and online public catalogue system or more commonly known as OPAC. ICT services found in the library according to Hussain, Khan, and Zaidi (2013) and Idiegbeyan-ose and Ilo (2013) are the services being provided with the combination of ICT resources to meet information needs of users. More specifically for the current age, these internet ICT related services are mostly social media based tools (Ekoja, 2011).

More important, with the current advancement of technology, the availability of the world-wide-web (internet) is an essential part of ICT (D'Elia, Jorgensen, Woelfel, & Rodger, 2002). Hence, the improve information flow within the library setup shall be able to ease the exchange and sharing of ideas between library users and Librarians (Muhammad, Garko, & Yakasai, 2012). Furthermore, Dhanavandan, Esmail, and Nagarajan (2012) also places information commons as part of ICT services rendered in the library. This so-called *information commons* is a group of network access points and associated ICT tools situated for the physical, digital, human and social resources organized in support of learning. In essence, all of these ICT based services can be considered as what the library are catering previously while now are being rendered both online and offline with the use of computers and internet services to library users.

1.2 Objectives of the study

This study is to systematically examine the effect of library services with information and communication

technology application to students of Malabon National High School. The specific objectives of the study are:

- ➢ To know the ICT used in MNHS library;

- ➢ To identify Purpose of using the computer;

- ➢ To know the Purpose of using the internet;

- ➢ To know the time spent on library resources per day;

- ➢ To measure the Satisfaction with library services; and

- ➢ To find out the Perception towards library services.

2. Methodology

The survey method has been used for the collection of data. The primary data has been collected with the help of a questionnaire. The basic purpose of the study was to determine the effect of library services with information and communication technology to students of Malabon National High School. A questionnaire was given to 60 users of the school library. All of the respondents filled up the questionnaire, without hesitancy. Each respondent will be asked the same questions, which ensures that the entire data sample can be analyzed fairly. The data is supplied in a numerical format, and can be analyzed in a quantifiable way using statistical methods.

3. Data analysis and interpretation

The paper deals with the analysis and interpretation of data which were collected through questionnaire. The collected data has been organized and tabulated by using tables. The purpose of this analysis is to shape data to intelligible and interpretable forms. The data analysis and interpretation are based on the 60 survey questionnaires, 53% of those who responded were men and 47% were women.

Table 1

Gender distribution of the respondents

Gender	N	%
Female	28	47
Male	32	53
Total	60	100

The above Table 1 shows the gender distribution of respondents. Where in from 60 respondents, 32 (53%) were male and 28 (47%) were female. While Table 2 shows the Grade Level distribution of respondents. Out of 60 respondents 36 (60%) were Grade 7, 17 (28%) were from Grade 8 and only 7 (12%) were from the Grade 9.

Table 2

Grade level distribution of the respondents

Grade Level	N	%
Grade 7	36	60
Grade 8	17	28
Grade 9	7	12
Total	60	100

In addition, Table 3 also shows the age groups of the respondents were found that maximum library users are in the age group 13 years 18 (30%), were as 3 (5%) users are 16 years old. While, Table 4 shows the frequency of respondents to visiting the library. Among respondents, 22 (37%) are once a week, while 16 (27%) respondents visit 2 to 3 times a week, were as 3 (5%) visit once a semester.

Table 3

Age group distribution of the respondents

Age	N	%
12	13	22
13	18	30
14	10	17
15	16	27
16	3	5
Total	60	100

Table 4

Frequency of library visit

Frequency of library visit	N	%
Daily	7	12
2 to 3 times a week	16	27
once a week	22	37
2 to 3 times a month	9	15
once a month	3	5
once a semester	3	5
Total	60	100

Furthermore, Table 5 shows that ICT used in the library, 22 (36.7%) used the computer rarely, and 18 (30%) are using the internet very often. However there are 30 (50%) respondents never use the projector. Furthermore, the users that are 26 (43.3%) respondents never used the DVD player. While, The table 6 shows that very often 20 (33.3%) respondents purpose of using the computer were school work followed by 18 (30%) to do research work, while the third reason were to use Microsoft word which were 11 (18.3%) respondents and to browse a website 11 (18.3%) respondents.

Table 5

Frequency of ICT used in the library

ICT used in your library	Never		Rarely		Sometimes		Very Often	
	F	%	F	%	F	%	F	%
use the computer	9	15	22	37	11	18	18	30
use the internet	13	22	17	28	12	20	18	30
use the projector	30	50	13	22	11	18	6	10
use the DVD player	26	43	18	30	8	13	8	13

Table 6

Purpose of using the computer within the library

Purpose of using the computer	Never		Rarely		Sometimes		Very Often	
	F	%	F	%	F	%	F	%
watch video	19	32	27	45	9	15	5	8
browse website	15	25	12	20	22	37	11	18
Microsoft excel	20	33	14	23	19	32	7	12
Microsoft word	19	32	16	27	14	23	11	18
Microsoft PowerPoint	15	25	22	37	13	22	10	17
research work	11	18	15	25	16	27	18	30
school work	9	15	13	22	18	30	20	33

For the internet use, Table 7 shows that very often 26 (43.3%) respondents purpose of using the internet were to get updates on Facebook which is then followed by 20 (33.3%) to watch you-tube, while the third reason were to read e-books which is 16 (26.7%). Rarely 26(43.3%) respondents purpose of using the internet were to read e-journal followed by 20 (33.3%) to read magazine, to read stories or novel and to check email.

Table 7

Purpose of using the internet

Purpose of using the internet	Never		Rarely		Sometimes		Very Often	
	F	%	F	%	F	%	F	%
read online news	15	25	16	27	21	35	8	13
read online magazine	14	23	20	33	24	40	2	3.3
read e-books	7	12	13	22	24	40	16	27
read e-journals	8	13	26	43	17	28	9	15
read stories/novels	5	8	20	33	23	38	12	20
check email	13	22	20	33	15	25	12	20
you-tube	10	17	12	20	18	30	20	33
Facebook	16	27	7	12	11	18	26	43

Table 8

Time spent on library resources

Time spent on library resources	Never		Rarely		Sometimes		Very Often	
	F	%	F	%	F	%	F	%
Print resources	27	45	13	22	14	23	6	10
ICT resources	13	22	21	35	19	32	7	12
Card catalog system	13	22	25	42	15	25	7	12

The above table 8 shows that majority, 27 (45%) of respondents never spent time on print resources while 21 (35%) of respondents rarely spent time on ICT resources and 25 (41.7%) rarely check card catalog system. In addition, Table 9 shows the satisfaction level of respondents towards library general services 33 (55%) are satisfied with the library hours. However, 34 (56.7%) of respondents were very satisfied with the Librarian helpfulness. Furthermore, there are 27 (45%) were very satisfied with the Librarian availability same as the Information coming from Librarian.

Table 9

Users' satisfaction with library general services

Satisfaction of general services	Very Dissatisfied		Dissatisfied		Satisfied		Very Satisfied	
	F	%	F	%	F	%	F	%
Library hours	4	7	4	7	33	55	19	32
Librarian helpfulness	0	0	5	8	21	35	34	57
Librarian availability	3	5	4	7	26	43	27	45
Information from librarian	3	5	4	7	26	43	27	45

Table 10 shows the satisfaction level of respondents towards library Circulation services 27 (45%) were very satisfied with the Library registration, Borrow duration, Number of circulations. However, 28 (46.7%) of respondents were very satisfied with the Number of e-circulations. Furthermore, there are 29 (48.3%) were satisfied with the Wideness of categories and 26 (43.3%) of respondents were satisfied with Timeliness of circulations and Items availability. In addition, Table 11 indicates that, 41 (68.3%) of respondents are Very Satisfied and 13 (21.7%) were Satisfied with cleanliness of the library. In the same way, 39 (65%) of respondents Very Satisfied and 15 (25%) were Satisfied with Lighting. Furthermore, there are 37 (61.7%) of respondents were Very Satisfied and 17 (28.3%) were Satisfied with Seating arrangement. However, there are 36 (60%) of respondents were Very Satisfied and 18 (30%) were Satisfied with Reading space of Library. In case of Furniture (tables/chairs) and Book arrangement 35(58.3%) of respondents were very Satisfied and 19 (31.7%) were Satisfied. Even as the Environment 34 (56.7) were Very Satisfied as 20 (33.3%) were Satisfied, while only 6 (10%) are dissatisfied on all the Physical Appearances of the library.

Table 10

Users' satisfaction with library circulation services

Satisfaction of library circulation	Very Dissatisfied		Dissatisfied		Satisfied		Very Satisfied	
	F	*%*	*F*	*%*	*F*	*%*	*F*	*%*
Library registration	3	5	4	7	26	43	27	45
Borrow duration	3	5	4	7	26	43	27	45
Number of circulations (*dami*)	3	5	4	7	26	43	27	45
Number of e-circulations	3	5	4	7	25	42	28	47
Wideness of categories (*lawak ng sakop*)	5	8	6	10	29	48	20	33
Timeliness of circulations (*bago*)	3	5	7	12	26	43	24	40
Items availability	3	5	7	12	26	43	24	40

Table 11

Users' satisfaction with library's physical appearance

Satisfaction of physical appearance	Dissatisfied		Satisfied		Very Satisfied	
	F	*%*	*F*	*%*	*F*	*%*
Cleanliness (*malinis*)	6	10	13	22	41	68
Lightning (*maliwanag*)	6	10	15	25	39	65
Seating arrangement	6	10	17	28	37	62
Reading space	6	10	18	30	36	60
Furniture (tables/chairs)	6	10	19	32	35	58
Book arrangement	6	10	19	32	35	58
Environment (*tahimik*)	6	10	20	33	34	57

Table 12 shows the satisfaction level of respondents towards ICT 37 (61.7%) were very satisfied with the Internet speed. However, 36 (60%) of respondents were very satisfied with the Computers, Wi-Fi speed, projector in the library. Furthermore, there are 35 (58.3%) were very satisfied with the Number of computers and DVD player.

Table 12

Users' satisfaction with ICT

Satisfaction of library ICT	Dissatisfied		Satisfied		Very Satisfied	
	F	*%*	*F*	*%*	*F*	*%*
Number of computers (*bilang*)	6	10	19	32	35	58
Computers (*nagagamit*)	6	10	18	30	36	60
Internet speed	6	10	17	28	37	62
Wi-Fi speed	6	10	18	30	36	60
Projector (*linaw*)	6	10	18	30	36	60
DVD player	6	10	19	32	35	58

Lastly, Table 13 shows the perception towards library services that Teachers can use the library in their lessons 42 (70%) respondents strongly agree. However, 41 (68.3%) of respondents were strongly agree that Teachers can hold classes inside the library. In addition, 39 (65%) viewed Learning how to use the library is important. Beside 36 (60%) of respondents strongly agree that Library ICT is important for learning, Library is important for learning, Library should be air conditioned, Library should have eBook collection. Moreover, 35 (58.3%) of respondents strongly agree that Library should automate its services (card catalog system), Library should have a digital collection section (DVD/VCD). Furthermore, there are 34 (56.7%) of respondents strongly agree that Library should have educational board games available, Library should have faster internet, Library should have Wi-Fi available for students and teachers.

Table 13

Perception towards library services

Perception towards library services	Disagree		Agree		Strongly Agree	
	F	*%*	*F*	*%*	*F*	*%*
Library should automate its services (card catalog system)	6	10	19	32	35	58
Library should have a digital collection section (DVD/VCD)	6	10	19	32	35	58
Library should have eBook collection	6	10	18	30	36	60
Library should have educational board games available	6	10	20	33	34	57
Library should have faster internet	6	10	20	33	34	57
Library should have Wi-Fi available for students & teachers	6	10	20	33	34	57
Library should have tablets-PC (iPads)	6	10	19	32	35	58
Library should be air conditioned	6	10	18	30	36	60
Library is important for learning	6	10	18	30	36	60
Library ICT is important for learning	6	10	18	30	36	60
Learning how to use the library is important	6	10	15	25	39	65
Teachers can held classes inside the library	6	10	13	22	41	68
Teachers can use the library in their lessons	6	10	12	20	42	70

4. Major findings of the study

The following are the major findings of the study:

➢ The gender distribution of respondents, wherein from 60 respondents, 32 (53%) were male and 28 (47%) were female.

➢ The Grade Level distribution of respondents. Out of 60 respondents 36 (60%) were Grade 7, 17 (28%) were from Grade 8 and only 7 (12%) were from the Grade 9.

➢ The maximum age of library users were 30% 13 years old, and 27% were 16 years of age, and only (5%) of respondents are 16 years old.

➢ The frequency of visiting the library were, 22 (37%) respondents are visiting the library once a week, while 16 (27%) respondents visit 2 to 3 times a week, were as 3 (5%) visit once a semester.

➢ The study shows how often the respondents used ICT in the library, 22 (36.7%) used the computer rarely, and 18 (30%) are using the internet very often. However there are 30 (50%) respondents never use the projector. Furthermore, the users that are 26 (43.3%) respondents never used the DVD player.

➢ It is observed that the purposed of using the computer in the library were very often 20 (33.3%) respondents were school work followed by 18 (30%) to do research work, while the third reason were to use Microsoft word which were 11 (18.3%) respondents and to browse a website 11 (18.3%) respondents.

➢ Majority was found very often 26 (43.3%) respondents purpose of using the internet were to get updates on Facebook followed by 20 (33.3%) to watch you-tube , while the third reason were to read e-books which is 16 (26.7%). Rarely 26 (43.3%) respondents purpose of using the internet were to read e-journal followed by 20 (33.3%) to read magazine, to read stories or novel and to check email.

➢ Time spent in library resources were found, 27 (45%) of respondents never spent time on print resources while 21 (35%) of respondents rarely spent time on ICT resources and 25 (41.7%) rarely check card catalog system.

➢ Study revealed that the satisfaction with regards to library resources were 33 (55%) are satisfied with the library hours. However 34 (56.7%) of respondents were very satisfied with the librarian helpfulness, Furthermore there are 27 (45%) were very satisfied with the librarian availability same as

the Information coming from librarian.

➢ It was found that the satisfaction level of respondents towards library Circulation services were 27(45%) very satisfied with the Library registration, Borrow duration, Number of circulations. However 28(46.7%) of respondents were very satisfied with the Number of e-circulations, Furthermore there are 29(48.3%) were satisfied with the Wideness of categories and 26(43.3%) of respondents were satisfied with Timeliness of circulations and Items availability.

➢ Respondents opinion indicates that, 41 (68.3%) are Very Satisfied and 13 (21.7%) were Satisfied with cleanliness of the library. In the same way, 39 (65%) of respondents Very Satisfied and 15 (25%) were Satisfied with Lighting. Furthermore there are 37 (61.7%) of respondents were Very Satisfied and 17 (28.3%) were Satisfied with Seating arrangement. However, there are 36 (60%) of respondents were Very Satisfied and 18 (30%) were Satisfied with Reading space of Library. In case of Furniture (tables/chairs) and Book arrangement 35 (58.3%) of respondents were very Satisfied and 19 (31.7%) were Satisfied. Even as the Environment 34 (56.7) were Very Satisfied as 20 (33.3%) were Satisfied, while only 6 (10%) are dissatisfied on all the Physical Appearances of the library.

➢ Majority of respondents were content towards ICT 37 (61.7%) respondents were very satisfied with the Internet speed. However 36 (60%) of respondents were very satisfied with the Computers, Wi-Fi speed, projector in the library. Furthermore there are 35 (58.3%) were very satisfied with the Number of computers and DVD player.

➢ Lastly, the study shows that the perception towards library services were Teachers can use the library in their lessons 42 (70%) respondents strongly agree. However 41 (68.3%) of respondents were strongly agree that Teachers can hold classes inside the library. In addition 39 (65%) viewed Learning how to use the library is important. Beside 36 (60%) of respondents strongly agree that Library ICT is important for learning, Library is important for learning, Library should be air conditioned, Library should have eBook collection. Moreover 35 (58.3%) of respondents strongly agree that Library should automate its services (card catalog system), Library should have a digital collection section (DVD/VCD). Furthermore there are 34 (56.7%) of respondents strongly agree that Library should have educational board games available, Library should have faster internet, Library should have Wi-Fi available for students and teachers.

5. Conclusion

From the analysis of results of this study, results state that there is a positive perception on the effect of library services with ICT application of MNHS students. The students in Malabon National High School, uses ICT-based resources such as computer and internet very often than the LCD projector and DVD player. Along with services in the MNHS Library in meeting their information needs and their level of satisfaction with accessibility to the Internet is satisfactory. The accessibility to the internet further make the users to be satisfied with the use of computer for homework and assignment, subject research, browsing website, and to construct it with the use of Microsoft word. They usually use the internet for Facebook, watch You-tube videos, and read eBooks. Customer of the library frequently use ICT resources more than print resources. This findings conforms with the ICT services rendered in the library according to Hussain, Khan, and Zaidi (2013), Idiegbeyan-ose and Ilo (2013) that services rendered using a combination of ICT resources shall meet the information needs of library users.

Besides having the physical ICT facilities within the library, users' satisfaction is also quite important. Determining the users' satisfaction ratings may help the library administrators find out which areas of the library are in need of updating or maintenance. In addition, high users' satisfaction ultimately leads to repeated service. Furthermore, users also communicate their service experiences to others; hence it is helpful to know what the users are feeling. Basically, the level of users' satisfaction with general services like library hour, librarian

availability and Information given by the librarian are satisfied but for me library hour and librarian availability is so limited, because of the classes of the librarian.

Furthermore, within the study the librarian helpfulness or friendliness proved to be very satisfactory. Surprisingly users are satisfied with the circulation such as the library registration which is still manually recorded in registration logbook, the number, wideness and timeliness of the circulation but for the record the collection of MNHS is so old and we didn't purchased book we only rely in the donation of the friends of the library. The users is very satisfied by the physical appearance of the library proof positive in cleanliness, lighting, seating arrangement, reading space, furniture, book arrangements and the environment is in essence silent but for me the area is so small for 4,255 junior high school student population for a 40 seating arrangement or capacity, sometimes students seat on the floor in order to accommodate the users. And they are very satisfied with the ICT number of computers, internet speed, projector and DVD player while so many users want to use the computer there are only 6 computer that can be used, you often see queues when students would like to employ the workstation. These findings also conformed to the study of Dhanavandan, Esmail and Nagarajan (2012) that put information commons as part of ICT services rendered in the library. Information commons is a group of network access points and associated ICT tools situated in the context of physical, digital, human and social resources organized in support of learning. ICT based services are those services which were traditionally rendered in the library which are now being rendered electronically both online and offline with the use of computers and Internet services to library users.

The finding of the study further revealed that users strongly agree that Library should have automated catalog, digital collection, faster internet, additional tablets, educational board games, air conditioning system. Furthermore users want their teachers to hold their classes inside the library. This findings conforms with Sharma and Bhardwaj (2009) which stated that library's collection, products and services, staff as well as goals and objectives of the library (mission statement) are practical to library users.

5.1 Recommendations

Based on the various findings above, the current study recommends the following proposals for the administration of the MNHS:

➢ The possibility of expansion of the library to incorporate a wider area for students;

➢ Improvement and/or increasing the capacity of the ICT resources and facilities, such as the improvement of internet speed and additional computer units;

➢ Additional ICTs in terms of tablet-PC might also be consider to minimize precious library space; and

➢ Update current library books so as to keep the interest and motivate students towards reading.

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