

# Quality of online library services and users' satisfaction

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**Abstract-** This study aimed to determine the quality of online library services and users' satisfaction at St. Paul University Surigao. A descriptive quantitative survey method was used in this study to solicit information to a total of 322 students and faculty of St. Paul University Surigao identified through a Slovin's formula and random sampling. The solicited data and responses were analyzed using mean and standard deviation. The results of the study indicate that the quality of library online services was very high while users' satisfaction was outstanding. Pearson moment correlation was used to measure the relationship between online library services and user satisfaction while Analysis of Variance (ANOVA) was used to determine the significant difference in the users' extent of satisfaction on online library services when they are grouped according to their profile. Results show that quality of online library services is significantly associated with users' satisfaction. Likewise, it was revealed that a no significant difference between the users' satisfaction on online library services when they are grouped according to their profile in terms of age and sex. Thus, the quality of online library services is a positive factor influencing user satisfaction. It is recommended to the administrators, librarian and staff and the faculty to strengthen and continue supporting the library with its projects and innovations for sustainability of the resources and services.

**Keywords:** Library Service Quality, Online Library Services, Users, Satisfaction

## INTRODUCTION

With the advent of the CoViD-19 pandemic, which began in 2019 up to this day, libraries have been faced with many challenges in order to continue providing information and staying relevant despite the pandemic. Libraries were temporarily closed and physical access to the collection and spaces were unavailable. As a result, libraries have experienced a major drawback due to the non-circulation of print resources and unavailability of seating space for patrons (Chigwada, 2021). Moreover, libraries are challenged with the need to deal with the new innovations in the society and evaluate how effectively an institution is performing in meeting the demands of the clientele.

Libraries have long been viewed as supporter and partner information hub of the academic institutions. With the change of times, facilities, resources, and services have been enhanced in order to address the needs of users towards satisfaction. Librarians have lead in making innovative ways to the academic community where librarians took advantage of the imminent closure to continue offering online services. The enhancement of virtual services was one of the major opportunities that libraries have made reaching a wide range of information seekers.

In the context of the library where the researcher is currently affiliated, the library has offered various online library services as an innovative way to meet the demands of the library clientele. Although this online services offered an advantage to the library clientele, however, some of the problems encountered by the department was the decrease in borrowing of library materials during the time of pandemic. In addition, there were patrons who could not avail of the online services because of poor internet connection especially library patrons living in remote areas. Hence, this study was conducted to determine the quality of online library services and user's satisfaction.

This paper was hence designed to the online library services of the college library of St Paul University Surigao .Particularly, this study had the following research objectives: 1. To determine the profile of the participants in terms of Age, Sex, and Department; (2) To assess the quality of online library services as to the: Olivia (Online Library Virtual Inquiry Assistance), Document Delivery Services, Information Literacy Program and Library Platforms (Facebook Page and Social Media Sites); (3) To assess user satisfaction; (4) To determine the relationship between the quality of online library services and users' satisfaction; and (5) To determine the significant difference in the user's extent of satisfaction on online library services when they are grouped according their profile. (6) Propose possible effective recommendations based from the findings.

## METHODS

In this study, the researchers used a quantitative descriptive-correlational research design utilizing a survey questionnaire. This design allowed the researcher to gather more precise and quantifiable information that is needed to quantify responses, which may lead to expected research outcomes with the identified appropriate indicators. Likewise, the design was employed to determine the association of the quality of online library resources with the users' satisfaction and also determine the significant difference in the users' extent of satisfaction with online library services when they are grouped according to their profile.

The participants of this study were the students and faculty of St. Paul University Surigao, Surigao City, during the academic year 2021–2022. The student participants of the study were determined using Slovin's formula and random sampling technique, and all

the faculty in the college department were also considered participants. There were a total of 332 participants, composed of faculty and students from all the different college departments.

The primary tool for gathering the data is the researcher-made questionnaires. A unified questionnaire was utilized for students and faculty. The questionnaires contain questions or indicators that inquire about the quality of online library services and the participants satisfaction specifically with OLIVIA, Document Delivery Service, Information Literacy Program, and Library Platform; the third part of the questionnaire is used to answer the extent of user satisfaction of the participants with Olivia, Document Delivery Service, Information Literacy Program, and Library Platform. Moreover, the researcher-made questionnaires were verified by using reviews and being validated by experts.

Prior to the gathering of data, the researchers obtained permission to conduct the study. A letter addressed to the Vice President for Academic Services of the university asking permission to conduct the study among the students and faculty in the College department. Upon approval, the researchers then distributed the research-made questionnaires to the participants. The data were tallied, treated, analysed, and interpreted.

In analysing the data gathered, the researchers used the following statistical tools to get the most reliable and appropriate results on the quality of online library services and user satisfaction: (1) *Frequency count and percentage*. This statistical tool was used to describe the profile of the participants quantitatively; (2) *Means and Standard Deviation*. This statistical tool was used to measure the quality of online library services and user satisfaction at St. Paul University Surigao.

Upon statistical treatment, the data was discussed to infer and conclude, along with supporting ideas to answer problems 3 and 4, specifically on the quality of online library services and users' satisfaction; (3) *Pearson Product Moment Correlation* tool was used to determine the relationship of quality online library services and users' satisfaction. If the  $p < 0.05$ , there is a significant relationship between the quality of library online services and users' satisfaction thus, the null hypothesis is rejected; (4) *Analysis of Variance (ANOVA)* was also used to determine a significant difference in the users' extent of satisfaction with online library services when grouped according to their profiles.

In conducting the study and gathering data, the researchers strictly observed research ethics, wherein confidentiality of the participants' responses and identities was taken with ethical considerations adhered to under the provisions of the DPA Act of 2012, protecting the rights of the participants and the researchers. Moreover, this study used the following parameter for interpreting the data yielded from the participants' responses:

#### Quality of Online Library Services:

Scale	Range	Verbal Interpretation	Qualitative Description
5	4.51 –5.00	Strongly Agree	Very High
4	3.51 –4.50	Agree	High
3	2.51 –3.50	Neutral	Fair
2	1.51 –2.50	Disagree	Low
1	1.00 –1.50	Strongly Disagree	Poor

#### Satisfaction:

Scale	Range	Verbal Interpretation	Qualitative Description
5	4.51 –5.00	Always	Outstanding
4	3.51 –4.50	Oftentimes	Very Satisfactory
3	2.51 –3.50	Sometimes	Satisfactory
2	1.51 – 2.50	Rarely	Unsatisfactory
1	1.00 –1.50	Never	Poor

## RESULTS AND DISCUSSIONS

### Profile of the Participants

Presented in Table 1 is the demographic profile of the participants during the academic year 2021-2022 as to age, sex, and department.

**Table 1.** Profile of the participants

Profile Variables	f (n=250)	%
<b>Age</b>		
15-19 years old	14	5.60
20-24 years old	201	80.40
25-29 years old	11	4.40
30-34 years old	2	0.18
40-44 years old	2	0.18
Missing Data	20	8.00
<b>Sex</b>		
Male	85	34.00

Female	148	59.20
Missing Data	17	6.80
<b>Department</b>		
CECA	62	24.80
CBT	66	26.40
CCJE	46	18.40
COE	5	2.00
CHS	17	21.60
Missing Data	17	6.80

As shown in Table 1, out of the 332 identified sample participants, there were 250 who have answered yes which means that they have used or have availed the library online services and 82 have answered no which means that they do not use the library online services. As to their age, 14 or 5.60% are 15-19 years old, 201 or 80.40% are 20-24 years old, 11 or 4.40% are 25-29 years old, 2 or 0.18% are 30-34 years old, 2 or 0.18% are 40-44 years old and 20 or 8% are missing. In terms of sex, 85 or 34% were males, 148 or 59.20% were females, and 17 or 6.80% were missing data.

In addition, as to the department, 62 or 24.80% were CECA, 66 or 26.40% were CBT, 46 or 18.40% were CCJE, 5 or 2% were COE, 17 or 21.60% were CHS, and 17 or 6.80% were missing data.

### Quality of Online Library Services

**Table 2.** Quality of OLiVIA (Online Library Virtual Inquiry Assistance)

Indicators	M	SD	VI	QD
1. The library personnel are approachable and friendly.	4.67	0.64	Strongly Agree	Very High
2. The library provides consultation on information resources or other library resources.	4.52	0.70	Strongly Agree	Very High
3. The library responds to users' queries through chat, text, or mail.	4.43	0.74	Strongly Agree	Very High
4. The library has available online help through chat in times of need.	4.50	0.77	Strongly Agree	Very High
5. The library recommends other resources relevant to my needs.	4.51	0.76	Strongly Agree	Very High
6. The library provided quick assistance in locating and locating information relevant to my course needs.	4.57	0.75	Strongly Agree	Very High
7. The library provides information from credible sources.	4.63	0.68	Strongly Agree	Very High
8. The library recommends tools to access library resources.	4.62	0.67	Strongly Agree	Very High
Average:	4.56	0.71	Strongly Agree	Very High

Legend:

Scale	Range	Verbal Interpretation	Qualitative Description
5	4.20-5.00	Strongly Agree	Very High
4	3.40-4.19	Agree	High
3	2.60-3.39	Neutral	Fair
2	1.80-2.59	Disagree	Low
1	1.00-1.79	Strongly Disagree	Poor

Displayed in Table 2 is the mean distribution of the users' assessment on the quality of online library services in terms of OLiVIA (Online Library Virtual Inquiry Assistance). Among the indicators, the highest rating was on the *library personnel are approachable and friendly* (M=4.67, SD=0.64) verbally interpreted as strongly agree and qualitatively described as very high. This was followed by *the library provides information from credible sources* (M=4.63, SD=0.68), *the library recommends tools to access library resources* (M=4.62, SD=0.67), and *the library provided quick assistance in locating and locating information relevant to my course needs* (M=4.57, SD=0.75).

Findings of the study reveal that quality of online reference assistance is evident and performed by the library. As stipulated in the guidelines for the behavioral performance of reference and information service provider, librarians must be approachable for a

successful reference interaction (ALA, 2008). The librarians should serve to welcome the users and to place them at ease. Similar to the statement of Stockton and Lambert (2019), librarians always shows willingness to assist users in locating and verifying the reliable sources they require for academic work or personal pursuits.

On the other hand, the *library responds to users' queries through chat, text, or email* (M=4.43, SD=0.74) was the indicator with the lowest mean, although it was still rated as *strongly agree*. This is indicative in a busy chat reference service where users' information demand might be affected or not met (Dempsey, 2017). This is in consonance to the study of Mawhinney (2020), that library users preferred modes of communication are personal, informal, perceived as safe and secure and conversational.

In general, library users assessed OLIVIA with a mean of 4.56 reflected as *strongly agree* indicating quality of online reference assistance provided by the library. Moreover, all the eight (8) indicators were rated as *strongly agree* which describes as *very high*. As the library aimed to cater all the users' queries, the use of online reference assistance offered an opportunity for the librarians and information seekers to save time in searching for answers.

### Quality of Library Document Delivery Service

**Table 3.** Quality of Library Document Delivery Service

Indicators	M	SD	VI	QD
1. The library personnel are approachable and friendly during queries, request and borrowing of library materials.	4.64	0.68	Strongly Agree	Very High
2. The library has information resources required in the course that I am currently enrolled in.	4.58	0.71	Strongly Agree	Very High
3. The library resources are recent and updated.	4.58	0.70	Strongly Agree	Very High
4. The library provides online request form for borrowing, photocopying and scanning of library materials.	4.58	0.76	Strongly Agree	Very High
5. The library provides access of resources through the OPAC or Online Public Access Catalog.	4.54	0.72	Strongly Agree	Very High
6. The library delivers requested materials for borrowing on time	4.58	0.73	Strongly Agree	Very High
7. The library delivers requested materials at the specific location.	4.59	0.74	Strongly Agree	Very High
8. The library has adequate number of resources in the course that I am currently in.	4.50	0.79	Strongly Agree	Very High
Average:	4.57	0.73	Strongly Agree	Very High

Legend:

Scale	Range	Verbal Interpretation	Qualitative Description
5	4.20-5.00	Strongly Agree	Very High
4	3.40-4.19	Agree	High
3	2.60-3.39	Neutral	Fair
2	1.80-2.59	Disagree	Low
1	1.00-1.79	Strongly Disagree	Poor

As can be gleaned in Table 3, the *library personnel are approachable and friendly during queries, request and borrowing of library materials* (M=4.64, SD=0.68) was the highest among the DDS indicators which was verbally interpreted as *strongly agree* and qualitatively described as *very high*. This was also followed by the *library delivers requested materials at the specific location* (M=4.59, SD=0.74), and the *library provides online request form for borrowing, photocopying and scanning of library materials* (M=4.58, SD=0.76). This findings indicates that the library users observed positive behavior exhibited by the library personnel as perceived by the online library users. According to Sullivan (2019) librarianship is, above all, a career of service exhibited with high-quality service to users, as well as the ability to interact with them.

Moreover, the library has taken special effort to make the print collection available to its users. Provision of online request form for making available the borrowing, scanning and photocopying for users.

Meanwhile, the *library has adequate number of resources in the course that I am currently in* was ranked as the last (M=4.50, SD=0.79) which was verbally interpreted as *strongly agree* and qualitatively described as *very high*. Although the library has an adequate number of resources, the user may not avail of the service. This could be due to their preferred source of information either print or online materials. Samzugui (2019) study revealed that library users do not only preferred the use of print materials alone but fostering the use of both print and electronic resources for wider access of knowledge. Hybrid collection optimize resources as it provides users with more access choices between the two formats.

With the overall rating of the quality of document delivery services ( $M=4.57$ ), a very high results was obtained. This findings show that library users were aware and have availed of the said service thus quality is evident.

**Table 4.** Quality of Library Information Literacy Program

Indicators	M	SD	VI	QD
1. The library provides topics that are timely and relevant programs/course to my course need.	4.55	0.76	Strongly Agree	Very High
2. The library quickly responded to the participant's clarifications on the topics they had attended.	4.52	0.77	Strongly Agree	Very High
3. The library allotted sufficient time for the information literacy programs.	4.58	0.70	Strongly Agree	Very High
4. The library disseminates clear and comprehensive information for the activity to be conducted through the library platform such as facebook and library website.	4.59	0.72	Strongly Agree	Very High
5. The library provides speakers proficient in the topics of the program.	4.61	0.72	Strongly Agree	Very High
6. The library sends a response through acknowledgement and confirmation of the activity to be conducted and participated in.	4.60	0.71	Strongly Agree	Very High
Average:	4.57	0.73	Strongly Agree	Very High

Legend:

Scale	Range	Verbal Interpretation	Qualitative Description
5	4.20-5.00	Strongly Agree	Very High
4	3.40-4.19	Agree	High
3	2.60-3.39	Neutral	Fair
2	1.80-2.59	Disagree	Low
1	1.00-1.79	Strongly Disagree	Poor

The data in Table 4 presents quality of library information literacy program. Out of the six indicators, it was reflected on the *library provides speakers proficient in the topics of the program* as the highest among the six indicators under IL program ( $M=4.61$ ,  $SD=0.72$ ), verbally interpreted as *strongly agree* and qualitatively described as *very high*. This was followed by *the library sends a response through acknowledgement and confirmation of the activity to be conducted and participated in* ( $M=4.60$ ,  $SD=0.71$ ), and *the library disseminates clear and comprehensive information for the activity to be conducted through the library platform such as facebook and library website* ( $M=4.59$ ,  $SD=0.72$ ).

The findings imply that proper coordination with concerned participants of every library activities were notable keeping the library users or participants informed on the progress of the activities and providing an effective speaker. Moreover, having a highly confident speaker is viewed as being more accurate, competent, credible, intelligent, knowledgeable, likable, and believable with the topic being presented (Khoury, n.d.)

In particular, the *library quickly respond to the participant's clarifications on the topics they had attended* ( $M=4.52$ ,  $SD=0.77$ ) got the lowest rating, which was verbally interpreted as *strongly agree* and qualitatively described as *very high*. Although the library personnel responds quickly to the participants concerns since it was rated very high, it is possible that participants do not ask for clarifications of the topic implying that they have already understood the main point of the activity they have attended. It can be possible that they do not asked since the speaker's delivery of the topic was effective as reflected in the above table.

**Table 5.** Quality of Library Platforms

Indicators	M	SD	VI	QD
1. The library platform is accessible using mobile and computer devices or any internet-supported devices.	4.64	0.73	Strongly Agree	Very High

2. The library platform contents presents readable text, enough contrast between colors and font colors, etc.	4.62	0.67	Strongly Agree	Very High
3. The library platform is accessible in different browsers such as internet explorer, firefox, chrome, etc.	4.60	0.72	Strongly Agree	Very High
4. The library platform provides guidelines on how to avail online library services.	4.66	0.66	Strongly Agree	Very High
5. The library platform system interface is user-friendly.	4.57	0.70	Strongly Agree	Very High
6. The Library uses pictures and graphics in the platform.	4.64	0.66	Strongly Agree	Very High
<b>Average:</b>	<b>4.62</b>	<b>0.69</b>	<b>Strongly Agree</b>	<b>Very High</b>

Legend:

Scale	Range	Verbal Interpretation	Qualitative Description
5	4.20-5.00	Strongly Agree	Very High
4	3.40-4.19	Agree	High
3	2.60-3.39	Neutral	Fair
2	1.80-2.59	Disagree	Low
1	1.00-1.79	Strongly Disagree	Poor

Table 5 presents that the *library platform provides guidelines on how to avail online library services* (M=4.66, SD=0.66) was rank as the highest, verbally interpreted as *strongly agree* and qualitatively described as *very high*. This was followed by *the library platform is accessible using mobile and computer devices or any internet-supported devices* (M=4.64, SD=0.73), and *the library uses pictures and graphics in the platform* (M=4.64, SD=0.66).

The finding imply that the platform provided was useful for users. Users were able to access the needed information through the provision of the library guidelines, the internet and graphical representations of the services that can be found in one platform. According to Omini and Osaulale (2019), use of social media platforms helps promotes the resources and services in the libraries, making connections with library users easily, and provides forum for feedback and increases library users usage and providing up-to date information in campus as the least.

In addition, the library platform is accessible using mobile and computer devices or any internet-supported devices. Study revealed the using devices with internet connectivity like mobile phones bring ease of access for searching e-books, e-journals, the library website and the catalogue and the internet's ability to be accessed from anywhere at any time (Chaputula & Mutula, 2018) On the other hand, *the library platform system interface is user-friendly* (M=4.57, SD=0.70) was the indicator with the lowest mean. The findings reveal that users' *strongly agree* with the quality offered by the library through the platform. However, this may imply that there is little need to improve the platform for a maximum and easy access of the library resources and services. A library services platform is important as the next generation of library management systems that provides the capabilities to better manage our collections in all formats, and handle the ever-growing means of access to electronic resources and print materials (Pradhan, 2019).

As a whole, the participants assessed the quality of online library service in terms of library platforms as *strongly agree* (M=4.62, SD=0.69). All the specific indicators reflected on the library platforms were also rated as *strongly agree*. This means that library platforms offered by the library provides users with access to various online services and likewise access to the library collection.

**Table 6.** Summary of the Quality of Online Library Services

Indicators	M	SD	VI	QD
OLiVIA	4.56	0.71	Strongly Agree	Very High
Document Delivery Services	4.57	0.73	Strongly Agree	Very High
Information Literacy Program	4.57	0.73	Strongly Agree	Very High

Library Platforms	4.62	0.69	Strongly Agree	Very High
Average:	4.58	0.72	Strongly Agree	Very High

Legend:

Scale	Range	Verbal Interpretation	Qualitative Description
5	4.20-5.00	Strongly Agree	Very High
4	3.40-4.19	Agree	High
3	2.60-3.39	Neutral	Fair
2	1.80-2.59	Disagree	Low
1	1.00-1.79	Strongly Disagree	Poor

Data in table 6 show that the overall services (M= 4.58, SD=0.72) obtained the interpretation as *strongly agree*. Moreover, among the four online services, library platforms obtained the highest rating (M= 4.62, SD=0.69). The library platform serves as a one-stop-shop information source where all users could find and locate the online services of the library.

#### Satisfaction on OLiVIA ((Online Library Virtual Inquiry Assistant)

**Table 7.** Users' Satisfaction on OLiVIA ((Online Library Virtual Inquiry Assistant)

Indicators	M	SD	VI	QD
1. Approachable and friendly staff dealing with my queries is available.	4.48	0.77	Always	Outstanding
2. Whenever I consult the library for my assignments and research projects the library staff are always available.	4.42	0.78	Always	Outstanding
3. My queries are promptly responded or attended by the library staff through chat, text, or email.	4.41	0.81	Always	Outstanding
4. Reliable information are provided.	4.48	0.76	Always	Outstanding
5. Other sources of information relevant to my course need is recommended by the librarian.	4.45	0.77	Always	Outstanding
6. Tools for quick & to access online databases relevant to my needs such as EBSCO, OPAC, and other open education resources are provided.	4.48	0.77	Always	Outstanding
7. Online help are always available in times of need.	4.39	0.79	Always	Outstanding
Average:	4.44	0.78	Always	Outstanding

Legend:

Scale	Range	Verbal Interpretation	Qualitative Description
5	4.20-5.00	Strongly Agree	Very High
4	3.40-4.19	Agree	High
3	2.60-3.39	Neutral	Fair
2	1.80-2.59	Disagree	Low
1	1.00-1.79	Strongly Disagree	Poor

As can be gleaned in Table 7, the *approachable and friendly staff dealing with my queries is available* (M=4.48, SD=0.77) was rated as the highest among all indicators. This was followed by *tools for quick access to online databases relevant to my needs such as EBSCO, OPAC, and other open education resources are provided* (M=4.48, SD=0.77), and *reliable information are*

provided ( $M=4.48, SD=0.76$ ). The library personnel equipped with RUSA Guidelines for Behavioral Performance of Reference and Information Table 8.

Services Providers such as approachability, interest, listening/ inquiring, searching, and follow-up, are effective in increasing user satisfaction (Kwon & Gregory, 2007). In addition, the librarian's first step in initiating the reference interaction is to make the patron feel comfortable in a situation that can be perceived as intimidating, confusing, or overwhelming (University of Utah Libraries Research Guides, n.d.).

Meanwhile, the indicator ranked as the lowest was the *online help are always available in times of need* ( $M=4.39, SD=0.79$ ). Despite the eight hours service rendered for online queries, library personnel extends its service to entertain users' queries beyond the regular office hours. Moreover, there were also other users who will not utilized the online services instead, they visit directly the library. Library users were more satisfied visiting the library physically. According to the study of Veena and Kotari (2016), 59.0% of the respondents visited the library on a daily basis and are extremely satisfied with the collection of text books (53.3 percent). In addition, majority of respondents said they went to the library to study and borrow books (Mohindra & Kumar, 2015).

The same table presents that as a whole, OLiVIA was rated as *very satisfactory* ( $M=4.44, SD=0.78$ ). This means that users were very satisfied with the assistance offered by OLiVIA. This hold true to the online library services survey conducted by Kailani (2021), that students were very satisfied with the chat a librarian and email a librarian services, ranked and rated higher than the other services.

**Table 8.** Users' Satisfaction on Document Delivery Services

Indicators	M	SD	VI	QD
1. Requested materials for borrowing are delivered on time.	4.36	0.78	Always	Outstanding
2. Requested materials for borrowing are delivered on time at a specific location.	4.38	0.78	Always	Outstanding
3. Approachable and friendly staff is available.	4.59	2.62	Always	Outstanding
4. Online resources in the OPAC or Online Public Access Catalog are accessible.	4.47	0.79	Always	Outstanding
5. Recent and updated library resources are available.	4.44	0.75	Always	Outstanding
6. Guidelines for borrowing, photocopying and scanning of resources are provided and available.	4.44	0.81	Always	Outstanding
7. Online request form for borrowing, photocopying & scanning are provided and available.	4.42	0.78	Always	Outstanding
Average:	4.44	1.05	Always	Outstanding

Legend:

Scale	Range	Verbal Interpretation	Qualitative Description
5	4.20-5.00	Strongly Agree	Very High
4	3.40-4.19	Agree	High
3	2.60-3.39	Neutral	Fair
2	1.80-2.59	Disagree	Low
1	1.00-1.79	Strongly Disagree	Poor

Data in Table 8 shows that library users were very satisfied with the document delivery service because the library personnel is always *approachable and friendly staff is available* ( $M=4.59, SD=2.62$ ). This proves that the staff was always available in dealing with the users' queries. According to Duke University, libraries strive to exceed users' expectations by being approachable, attentive, and proactive, regardless of whether patrons' questions are general or specific, simple or complex or whether researchers are in person or online, part of our local or global communities.

Morover, the second highest indicator satisfies library users because *online resources in the OPAC or Online Public Access Catalog are always accessible* ( $M=4.47, SD=0.79$ ). This result indicates that users find it more convenient to access the OPAC especially in locating library materials. This validates the statement of Kumar et al. (2018) that library users use OPAC than other online resources because it is found to be convenient in terms of document retrieval for their information needs.

Meanwhile, the indicator ranked as the last was *requested materials for borrowing are delivered on time* ( $M=4.36, SD=0.78$ ). Although the rating was very satisfactory, being the least among the indicators may imply that there is a need to improve prompt delivery of users' requests. At present, the library has only a few personnel that could cater the needs of the users. This may be the reason why indicator no. 1 rated as the least.



According to the study of Reed (2013), users are satisfied when they meet their expectations and need. In addition, competent library personnel contribute in helping the library to effectively utilize the library resources and services it provides. Furthermore, as to achieving the objectives of the library which were to meet the informational and research needs of its patron (Abukari, 2019). As to the satisfaction on document delivery, the overall mean was 4.44 verbally interpreted as always and qualitatively described as very satisfactory. This finding imply that users were very satisfied with document delivery services of the library. The library always ensures that users' requests for borrowing, photocopying or scanning is catered as well making accessible the information sources online.

**Table 9.** Users' Satisfaction on Information Literacy Program

Indicators	M	SD	VI	QD
Topics that are timely and relevant to my course are provided.	4.44	0.76	Always	Outstanding
Clarifications and verifications on the topic conducted are quickly responded.	4.43	0.78	Always	Outstanding
Time allotted for each library literacy topics are sufficient.	4.40	0.79	Always	Outstanding
Clear and comprehensive information in the library literacy to be conducted are disseminated through facebook and library website.	4.47	0.77	Always	Outstanding
Speakers who are proficient on the topic for the library literacy program are available.	4.46	0.78	Always	Outstanding
Acknowledgement and confirmation on the activity conducted and participated are promptly attended by the library personnel.	4.44	0.78	Always	Outstanding
Average:	4.44	0.78	Always	Outstanding

Legend:

Scale	Range	Verbal Interpretation	Qualitative Description
5	4.20-5.00	Always	Outstanding
4	3.40-4.19	Oftentimes	Very Satisfactory
3	2.60-3.39	Sometimes	Satisfactory
2	1.80-2.59	Rarely	Unsatisfactory
1	1.00-1.79	Never	Poor

Looking at the table, it can be gleaned that participants were very satisfied with information literacy because of a *clear and comprehensive information in the library literacy to be conducted are disseminated through facebook and library website* (M=4.4,SD=0.77). The library always inform the academic community of the activities to be conducted by posting information in the website or facebook account beforehand to ensure and encourage students and faculty participation.

Moreover, the availability of *speakers who are proficient on the topic for the library literacy program* (M=4.46, SD=0.78) satisfies the participants of the library activity. This proves that the topics of library activities is delivered and fully satisfies the need of the participants. The library ensures that the topic is successfully delivered by inviting speakers who experts on the field.

In like manner, the lowest of all the six (6) indicators was the *time allotted for each library literacy topics are sufficient* (M=4.40, SD=0.79). Although the indicator was the lowest, but still it was rated as always and very satisfactory. The time allotted in each activity may differ the way the speaker presents his/her topic.

For the overall rating, the participants were very satisfied with the information literacy program provided by the library. The study revealed that information literacy skills are needed for undergraduates to gain maximum satisfaction in the use of library resources (Okuonghae & Ogiamien, 2016).

**Table 10.** Users' Satisfaction on Library Platforms (Website and Social Media Sites)

Indicators	M	SD	VI	QD
1. Access to the library platform using mobile and computer devices or any internet supported devices is available.	4.54	0.72	Always	Outstanding
2. Access to the library platform in different browser such as internet explorer, chrome, firefox, etc. is available.	4.44	0.77	Always	Outstanding
3. Contents in the library platform are clearly presented such as readable text, enough contrast between colors and font colors, etc.	4.45	0.78	Always	Outstanding
4. Photographs and graphics are visible in the platform	4.50	0.70	Always	Outstanding
5. The system interface is user-friendly	4.49	0.77	Always	Outstanding

6. Library guidelines on how to avail the online library services are provided.	4.49	0.68	Always	Outstanding
Average:	4.49	0.74	Always	Outstanding

Table 10 presents that the library users were very satisfied with the library platform reflected as *access to the library platform using mobile and computer devices or any internet supported devices is always available* (M=4.54, SD=0.72) This indicates that users find it easy to access the library website whatever gadget is available with them.

Moreover, an indicator stating that *photographs and graphics are visible in the platform* (M=4.50, SD=0.70) was considered important and a major feature of a platform. Use of photographs gives more clarity to texts and supports what the text is and will aid better understanding of the platform (Liez, 2016).

*Access to the library platform in different browser such as internet explorer, chrome, firefox, etc. is available.* (M=4.44, SD=0.77) was ranked as the last indicator. Users find the browser least important in navigating the platform. A web browser would still be the most practical choice to view and enjoy a multitude of diverse content, applications, and functions. However, nowadays, applications may be the preferred choice of users on mobile devices for convenience (Cleint News, 2019).

As to the general rating, the participants were very satisfied with the library platform. Libraries have adopted the use of library platform such as designing website, social media accounts to cater the users' needs especially those living in remote areas. One way of reaching people, especially if they're not able to come to the library in person, is through social media. Using popular platforms is one of the most effective and creative ways to promote your library (Sabat, 2018).

**Table 11.** Summary of the Satisfaction of Online Library Services

Indicators	M	SD	VI	QD
OLiVIA	4.44	0.78	Always	Outstanding
Document Delivery Services	4.44	1.05	Always	Outstanding
Information Literacy Program	4.44	0.78	Always	Outstanding
Library Platforms	4.49	0.74	Always	Outstanding
<b>General Average:</b>	<b>4.45</b>	<b>0.83</b>	<b>Always</b>	<b>Outstanding</b>

Legend:

Scale	Range	Verbal Interpretation	Qualitative Description
5	4.20-5.00	Always	Outstanding
4	3.40-4.19	Oftentimes	Very Satisfactory
3	2.60-3.39	Sometimes	Satisfactory
2	1.80-2.59	Rarely	Unsatisfactory
1	1.00-1.79	Never	Poor

Table 11 shows that users were more satisfied with the library platforms (M=4.49, SD=0.74). The results show that library users view the Library Platforms to be far more useful and important in locating and retrieving information. Despite the fact that other online services received a very satisfactory ratings, users regarded the library platforms to be simple and convenient to use.

### Significant Relationship between Quality and Users' Satisfaction on Online Library Services

**Table 12.** Significant Relationship between Quality and Users' Satisfaction on Online Library Services

Source of Association	r	p-value	Decision
Quality of library online services and Users satisfaction	0.80	0.000	Reject H <sub>0</sub>

*Reject if p<0.05*

Table 12 shows that there is a significant association between the quality of library online services and the users' satisfaction. Therefore, the null hypothesis was rejected. Result shows that the quality of online library services is a major factor that can contribute to the satisfaction of users. Likewise, library online services are effective and functioning excellently. This finding agreed with Cristobal (2018) that library service quality and customer satisfaction are related. Moreover, the results proved that users' satisfaction was dependent on the set of performance standard and the actual performance of a service as perceived by the consumer (Jiang & Klein, 2009). This means that users will be satisfied when reliability, assurance, tangibles, empathy, and responsiveness are available and offered in the online library services. In addition, satisfaction on online services provided by the university library improved and increases when the users have all accessed and utilized the resources in their academic requirements (Wagwu & Obuezie, 2019).

### Significant Difference in the Users' Extent of Satisfaction on Online Library Services when they are grouped according to their Profile

**Table 13.** Significant Difference in the Users' Extent of Satisfaction on Online Library Services when they are grouped according to their Profile

Profile	Dependent	SS	df	MS	F	P-value	Decision
Age	OLiVIA (Online Library Virtual Inquiry Assistant)	0.20	4	0.05	0.10	0.984	Do not reject H <sub>0</sub>
	Document Delivery Services	0.08	4	0.02	0.03	0.998	Do not reject H <sub>0</sub>
	Information Literacy Program	0.68	4	0.17	0.33	0.859	Do not reject H <sub>0</sub>
	Library Platforms (Website and Social Media Sites)	0.05	4	0.01	0.03	0.998	Do not reject H <sub>0</sub>
Sex	OLiVIA(Online Library Virtual Inquiry Assistant)	0.50	1	0.50	0.95	0.330	Do not reject H <sub>0</sub>
	Document Delivery Services	0.06	1	0.06	0.09	0.762	Do not reject H <sub>0</sub>
	Information Literacy Program	0.29	1	0.29	0.55	0.458	Do not reject H <sub>0</sub>
	Library Platforms (Website and Social Media Sites)	0.19	1	0.19	0.40	0.530	Do not reject H <sub>0</sub>
Department	OLiVIA (Online Library Virtual Inquiry Assistant)	7.00	4	1.75	3.51	0.008	Reject H <sub>0</sub>
	Document Delivery Services	7.48	4	1.87	3.04	0.018	Reject H <sub>0</sub>
	Information Literacy Program	7.39	4	1.85	3.80	0.005	Reject H <sub>0</sub>
	Library Platforms (Website and Social Media Sites)	8.50	4	2.13	4.80	0.001	Reject H <sub>0</sub>

*Reject if p < 0.05*

Table 13 presents the significant difference in the library users' extent of satisfaction on online library services when they are grouped according to their profile. Data revealed that there is no significant difference in the users' extent of satisfaction on online library services when they are grouped according to their age and sex. This is evident given the p-values obtained are greater than the required level of significance marked at 0.05. Thus, there is a sufficient reason to accept the null hypothesis.

Results explained that no matter how old or young the library users are, they have the same level of understanding and regard as to quality of online services. In addition, no matter their age levels are older or younger, it did not create any variation as far as their level of quality of online library service is concerned. Despite of library users' age, when it comes to the retrieving of information, the library offers them equal opportunities for accessing the online library services that would result them being satisfied.

In terms of sex, the results posed no significant difference as to the responses based on the greater p-values obtained. Thus, the hypothesis is accepted. The results implies that regardless whether the users are males or females, both have equal opportunities to avail the online library services.

The same table shows that there is a significant difference in the users' extent of satisfaction on online resources when they are grouped according to department. The table above also shows that the p-value is less than the 0.05 level of significance. Therefore, the null hypothesis was rejected. According to the result claimed by Zibihi et al. (2015), having come from different departments differs on the information desires. He found out that satisfaction of students and faculty in various departments varies with the use of online resources because they do not have the same level of understanding of the library's knowledge about their assignments and activities to accomplish.

## CONCLUSION AND RECOMMENDATIONS

Based on the significant findings of the study, it was concluded that the quality of online library services is a positive factor influencing user satisfaction. In addition, users' satisfaction differs according to their department. Providing online services such as OLiVIA, information literacy program, document delivery, and library platform are a solid components to ensure information needs are addressed by bringing value-added elements of quality service. Therefore, librarians need to ensure sustainability of library services highlighting various measures that would respond to the ever changing landscape of education and knowledge sharing.

Taking into consideration the findings and conclusions of the study, the researchers recommend (1) that the administrators may continue supporting the library with its projects and innovations for sustainability of the resources and services. Moreover, it is also recommended (2) that the librarians and staff may strengthen the promotion of online services through various innovation and collaboration with the college faculty. The findings of the study may also be presented to the faculty of the university (3) that they may always encourage students to use online library services by giving assignments and projects that will require the use of the library services. Lastly, this may help future researchers (4) that they may consider exploring other factors aside from quality of online services and satisfaction, and include the faculty who may provide information of their own information needs.

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