



## Users' Satisfaction on the Online Services of Benguet State University - University Library and Information Services During the Pandemic

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### Abstract

The online services of academic libraries have made the library a one-stop center for the university's teaching, learning, and research activities during the pandemic. A library is functional if it can satisfy its users' information needs. This descriptive-survey study aimed to assess users' level of satisfaction on the online library services of Benguet State University during the Pandemic. The study focused on the undergraduate students of Benguet State University, La Trinidad, Benguet. Mean, rank, and one-way analysis of variance (ANOVA) were used to treat data. Results showed that the Benguet State University-University Library and Information Services online services, which are: online reference, electronic document delivery, information dissemination through Facebook, YouTube, WordPress, Online Public Access Catalog (OPAC), and online resources met the needs and expectations of its users during the Pandemic. When grouped in terms of college, significant differences were identified between the Online Reference Service and OPAC, with a particularly high significant difference noted for the Electronic Document Delivery Service.

### Introduction

The novel coronavirus (COVID-19) introduced unique challenges to library services. Academic libraries transformed their roles from physical to online services to address the demands of library users during the pandemic (Demir & Paracci, 2018). According to Shen and Chen (2014), an online library service is a library service within a university's online system that provides resources and databases to assist distance learners in researching and consulting information.

Like every other academic library, Benguet State

University-University Library and Information Services (BSU-ULIS) continues to serve its patrons virtually and layout changes in library rules and policies. Students, employees, and professors can request materials to be digitized and packaged for online delivery through an online document request process. The library likewise provides online reference services like answering queries through emails or Facebook chats. The BSU-ULIS has its Facebook page, YouTube, and WordPress where updates and notices are posted. In addition, it increases access to valuable databases and e-resources to help students in their academics and researchers in their studies (BSU-ULIS, 2021).



Tiemo and Ateboh (2016) affirmed that libraries are well-known for providing information resources and services to assist teaching, learning, research, and community services. To meet the users' needs and expectations, the quality of information resources and services provided should be based on recognized standards. Through the users, the librarians can determine if the library services rendered to users are satisfactory or not. Without its users, a library might simply become a storehouse. Thus, examining user satisfaction will guide the future development of library services.

This research determines if the online library services provided by the Benguet State University-University Library and Information Services met the expectations and needs of the users during the pandemic. The study specifically aims to tackle several key inquiries. Firstly, it seeks to assess user satisfaction levels regarding BSU-ULIS diverse online library services. These services encompass a wide array of functions, including Online Reference, Electronic Document Delivery, Information Dissemination via platforms such as Facebook, YouTube, and WordPress, the Online Public Access Catalog (OPAC), and the availability of Online Resources. Additionally, the study aims to investigate potential variations in user satisfaction among different colleges within the university. The researchers hypothesize that there is no significant difference in user satisfaction across the various colleges within BSU, providing a foundational framework for the subsequent analysis of gathered data.

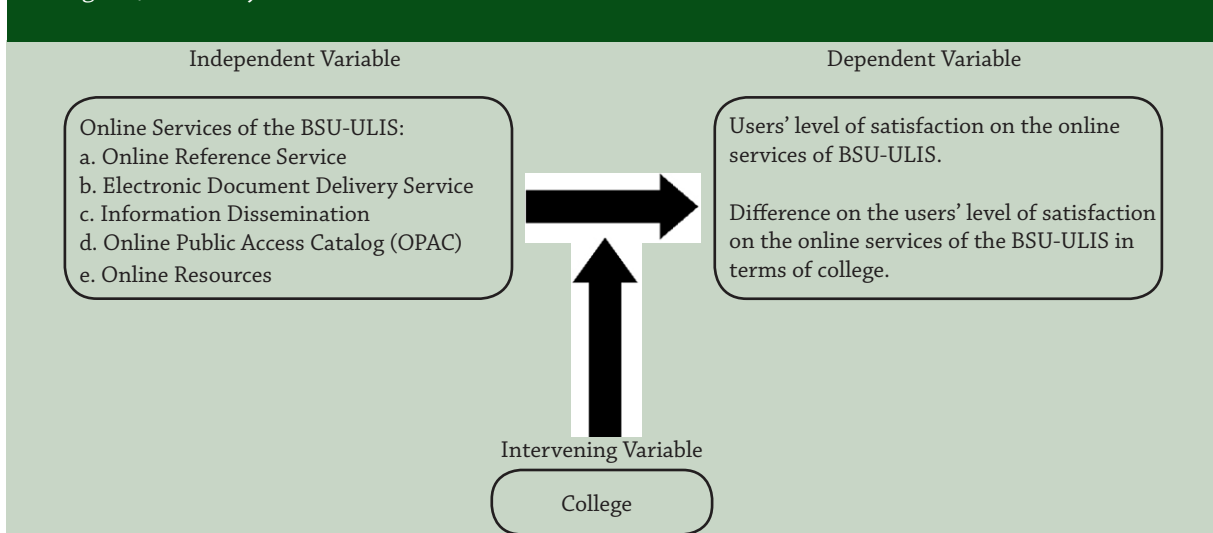
## Conceptual Framework

The primary objective of a library is to ensure that the needs and expectations of the users are met and users are contented with the services the library provides (Kalpana & Komathy, 2012). Iacobucci et al. (1995), studied several definitions derived from well-developed research studies and distinguished between the concepts of user satisfaction and service quality. User satisfaction is based on the user's experience of library services, qualities, and benefits, as well as the efforts associated with it. Service quality assesses the specific attributes that are designed to provide for users. Customer satisfaction is often defined as a component of service quality and vice versa.

Figure 1 below presents the concept of this study. The dependent variable of the study is the users' level of satisfaction regarding online services of Benguet State University - University Library and Information Services during the Pandemic. Meanwhile, the independent variable includes the online library services of the BSU which are online reference, electronic document delivery, information dissemination, online public access catalog, and online resources. Users utilized these services for different information needs and purposes according to college affiliation or degree program. Thus, different levels of satisfaction are affected or influenced by the intervening variable, which is the college.

**Figure 1**

*Paradigm of the Study*



### **Online Reference Service**

The Reference and User Services Association Guidelines of the American Library Association for 'Implementing and Maintaining Virtual Reference Service' define online reference service as an extension of an institution's existing reference service (RUSA, 2017). It is a means of assisting users through chat, mobile messages, e-mail, or blogs. Kemp, Ellis, and Maloney (2015) conducted research at the University of Texas at San Antonio Libraries, which resulted in implementing a proactive, context-sensitive chat system designed for online business. According to the survey results, the majority of the reference questions required the assistance of a librarian. The findings revealed that the system had decreased the inquiry bar for reference users, changing chat from a low-use alternative to a popular service that helps with academic research and literacy.

### **Electronic Document Delivery Service**

Li (2014), in her study, defines electronic document delivery service as a library service that copies non-returnable literature required by library users such as book chapters, journal articles, images, manuscripts, reports, maps, and other library collections which are sent to library users directly or indirectly. Compared with the traditional interlibrary loan service, document delivery is an efficient library service. Document delivery has become an innovative library service supported by today's information technologies.

### **Information Dissemination Service**

In the study of Tella et al. (2020), information dissemination refers to the active distribution and dissemination of all types of information to users. It is a method of informing people using social media platforms like Facebook, YouTube, blogs etc., newspapers, bulletin boards, or oral communication. In addition, library websites are being used in various libraries for marketing purposes and posting announcements to their clients. Every library should have a website that will enable information dissemination and access by all users.

### **Online Public Access Catalog (OPAC)**

Stephen and Murugan (2015) define the Online Public Access Catalogue as the library

catalog, an online database that lists all library resources. Patrons primarily use the library catalog to locate books and other library materials. It contains book availability, whether in the library or out on loan, call numbers, content, author, and publication. Brown and Meagher (2008) advised that OPACs should be more user-friendly and accessible. Libraries should convert catalog data into terms that library users understand, thereby enhancing the accessibility of books through OPACs and nurturing a sense of community surrounding library collections.

### **Online Resources**

Ekere et al. (2016) described online resources as any information accessed via the internet. In libraries, these resources are integrated content consisting of documents, e-books, e-journals, databases, links to other resources, and multimedia materials. According to Wu and Chen (2012), students frequently use library resources for research or assignments. Students may be unsure where to look for information and what resources they'll need to do their tasks. Resources that explore topics, present information literacy in a new way, or support an assignment can be perceived as valuable to students in their research process.

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## **Methodology**

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### **Research Design**

This study utilized the descriptive survey method, employing an online survey as the primary research instrument. The survey was designed to gather comprehensive data on various aspects of the online library services provided by the Benguet State University-University Library and Information Services during the pandemic. The data collected through the survey were analyzed using appropriate statistical techniques to draw meaningful conclusions and recommendations for enhancing the online library services.

### **Population and Locale of the Study**

The study was conducted on undergraduate students of Benguet State University, located at La Trinidad, Benguet. The respondents (Table 1) of the study were from the College of Veterinary Medicine (CVM), College of Information Sciences



(CIS), College of Teacher Education (CTE), College of Home Economics and Technology (CHET), College of Agriculture (CA), and College of Nursing (CN). These colleges have the greatest number of users who availed of the online library services during the pandemic from June 2020 to January 2022 based on the list of online users the researchers obtained from the BSU-ULIS. Further, the researchers utilized convenience sampling where users who actively availed the online services and subsequently answered the questionnaire were chosen as the respondents of this study. Convenience sampling, as a form of non-probability sampling, potentially introduces biases in any generalizations made from the sample. Despite this limitation, we employed methods such as computation of central tendencies and differences through ANOVA analysis to provide insights and strengthen the validity of our findings.

#### Data Collection Instrument

The researchers used a structured questionnaire to gather needed data adapted from the instrument by Cabfilan (2012). The questionnaire was divided into two parts. The first part asked for the college of the student while the second part was a checklist where it required the respondents to indicate their level of satisfaction with the online services of the Benguet State University-University Library and Information Services mentioned using a 4-point Likert scale.

#### Data Gathering Procedure

A letter requesting a list of the active users was sent to the library director for approval. In line with the Data Privacy Act, researchers assured that the personal profiles of the active users were kept with utmost confidentiality and were used for research purposes only. Researchers administered the questionnaires from February-March 2022 through Google Forms and were sent to the users' email provided by the BSU-ULIS. The data gathered from the respondents were analyzed, and a short interview with some librarians and users to support discussion of the data gathered.

#### Treatment of the Data

The data gathered were summarized and tabulated for easier representation. Mean,

**Table 1**

*Population of Benguet State University Online Library Service Users (June 2020-January 2022) and no. of Respondents per College*

College	No. of online library service users	Number of Respondents
College of Veterinary Medicine (CVM)	48	31
College of Information Sciences (CIS)	33	28
College of Teacher Education (CTE)	30	23
College of Home Economics and Technology (CHET)	25	17
College of Agriculture (CA)	18	12
College of Nursing (CN)	30	21
Total	181	132

frequency counts, and ranking were used in the study. For problem number 2, One-Way Analysis of Variance (ANOVA) was used to determine if there are differences between the means of three or more independent (unrelated) groups.

The levels of satisfaction of the users on the online services of the BSU-ULIS were determined using the 4-point Likert Scale.

Scale	Intervals	Descriptive Rating	Qualitative Rating
4	3.26-4.00	Very Satisfied (VS)	Service meets 75-100% of my information needs and greatly above my expectations.
3	2.51-3.25	Moderately Satisfied (MS)	Service meets 50-74% of my information needs and expectations.
2	1.76-2.50	Slightly Satisfied (SS)	Service meets 25-49% of my information needs and expectations.
1	1.00-1.75	Not Satisfied (NS)	Service meets 1-24% of my information needs and expectations.



## Results and Discussion

Academic libraries are lifelines for students, researchers, professionals, and many others in our society. According to Bhati and Kumar (2020), libraries are one of the best places where anyone may go to obtain knowledge without having to spend anything. During COVID-19, the most critical job of a library is to serve the entire community through a digital platform.

### Online Reference Service

Table 2 presents the level of user satisfaction with the online reference service of the library during the pandemic. As indicated by the overall mean of 3.56, users were very satisfied with the BSU-ULIS online reference during the pandemic. This is attributed to the availability of messenger chat and email services provided by the Benguet State University-University Library and Information Services, ensuring prompt assistance for users' queries or concerns. Benguet State University-University Library and Information Services has an active messenger chat and email to respond to users' queries or concerns. As

supported by Abubakar (2021), the online reference service has established a platform for delivering library services and information delivery irrespective of time and distance. Email, web-based chat, video conferencing, and instant messaging or texting services are among the online reference techniques most utilized for engaging with and meeting the information needs of the academic community during the pandemic.

Among the indicators mentioned in Table 2, librarians answering queries through messenger and email ranked the highest with a mean of 3.69. This can be attributed to the librarian's attitude and willingness to answer queries, response time, and the accuracy of answers they give to questions as much as possible based on the experience of some users. As commented by a user, "*The librarian is polite and friendly when entertaining my queries which made me comfortable to utilize this type of service* (CN, 117)." Results imply that librarians have positive interpersonal skills in interacting with their users, which builds strong virtual relationships. According to the behavioral guidelines published by the Reference and User Services Association (2004), librarians should be approachable, show interest in their patrons without judging them on their information requests, communicate well with patrons, and use information sources effectively. The professional competencies further elaborate on the qualifications of reference librarians and include knowledge of sources, access to the patron, ability to engage in marketing and outreach, ability to collaborate, and the ability to assess and evaluate the service.

Furthermore, providing online referral services to the other libraries and recommending particular titles or authors to readers based on familiarity with the collection bibliographies, reading lists have a mean of 3.50 and 3.48 interpreted as very satisfied. The former is attributed to the fact that BSU-ULIS coordinates with other libraries like the Baguio City Public Library to direct their users to appropriate sources of information when the resources needed are not available in the library. On the contrary, only a few libraries are open to accepting outside users during the pandemic. According to the Inter-agency Task Force (IATF), guidelines for the COVID-19 response, government agencies and instrumentalities must use a skeleton workforce on-site and alternate work arrangements approved by the head of the agency for areas

**Table 2**

*Level of User's Satisfaction on the Online Reference Service During the Pandemic*

Online Reference Service	Mean	DE	Rank
Librarian's answering queries through messenger and email.	3.69	VS	1
Librarian recommends particular titles or authors to readers based upon familiarity with the collection bibliographies, reading lists. (Reader's Advisory)	3.48	VS	3
Librarian provides online referral services to other libraries.	3.50	VS	2
Overall Mean	3.56	VS	

Legend: 3.26-4.00 Very Satisfied (VS)

2.51-3.25 Moderately Satisfied (MS)

1.76-2.50 Slightly Satisfied (SS)

1.00-1.75 Not Satisfied (NS)



under alert levels 4 and 5. Face-to-face classes or in-person operations are suspended, and universities operate under the guidelines of the Commission on Higher Education (CHED) (IATF, 2022). Aside from referral services, librarians also recommend particular titles or authors to readers, like posting book reviews on WordPress, one of the Benguet State University-University Library and Information Services social media platforms. Herald (2004) states the importance of reader advisory, which assists users in discovering new books, getting ideas, and becoming acquainted with other genres. Reader advisory also encourages library patrons to read.

### Electronic Document Delivery Service

Table 3 displays the users' level of satisfaction regarding document delivery services during the pandemic. Overall, document delivery service is interpreted as very satisfied with a mean of 3.63. This is due to the increased utilization of electronic document delivery services during the pandemic, as users cannot visit the library in person to request materials. Furthermore, users prefer electronic document delivery for their information needs rather than searching via Google and other search engines because librarians give the specific and exact information they are looking for, which saves them time. This is supported by Radford et al. (2021) in their research, which shows that even before the pandemic, students preferred to seek materials

online because it was more convenient. He said that students were able to research with librarians without leaving their dorms or homes. They can ask for journal papers and other shared e-resources or obtain the help they need to do their assignments.

Among the indicators in Table 3, the online document request form has the highest mean of 3.70 (very satisfied). This is attributed to the library's use of Google Forms as a medium familiar to students. In addition, librarians' language in stating the instructions and questions inside the form is clear and easy to understand. As explained by Basic (2017), when providing services to a digital space, librarians should first consider the customers' current experience and needs, decide what content to include, how to structure it and visually present it on the website, and test the usability of the design with the actual library users. This implies that using a user-friendly form to consider first the customers' needs before providing digital services results in a more satisfying delivery of library services or documents.

The preciseness of the document delivered has a mean of 3.63, followed by response time with a mean of 3.56 but still very satisfactory. Preciseness is attributed to how librarians ensure that the document they deliver is complete what their users need. In addition, the library has digitization equipment to produce a good quality e-copy of the document/s requested. This serves the purpose of document delivery which is to provide a good electronic copy of documents from books, journals, and other research materials available in the library and assists users in pursuing their academic and research interests (Bansod & Kamble, 2012).

The response time ranked third as librarians engage in additional research to guarantee accurate resource provision. Furthermore, when librarians receive simultaneous document requests, it will take some time to digitize these materials since only limited equipment is used for digitization. Also, only one or two librarians are assigned to provide this service. Dekker and Waaijer (2001) emphasized that users expect the documents requested to be provided on time, in a legible format, and with the information they require. Moreover, Lippincott (2010) mentioned that the high number of queries that librarians receive could be overwhelming. Users' service

Table 3			
<i>Level of User's Satisfaction on the Electronic Document Delivery Service During the Pandemic</i>			
Document Delivery Service	Mean	DE	Rank
Online document request form	3.70	VS	1
Response time (speed in giving the materials requested)	3.56	VS	3
Preciseness/accuracy of the document delivered.	3.63	VS	2
Overall Mean	3.63	VS	

Legend: 3.26-4.00 *Very Satisfied (VS)*  
 2.51-3.25 *Moderately Satisfied (MS)*  
 1.76-2.50 *Slightly Satisfied (SS)*  
 1.00-1.75 *Not Satisfied (NS)*



satisfaction will be affected if they cannot assist users within a less reasonable time.

### Information Dissemination Through Facebook, YouTube, and WordPress

Table 4 reflects the user's satisfaction with the Information Dissemination through Facebook, YouTube, and WordPress. Further, the table shows that the library users are very satisfied with the information dissemination indicated by the overall mean of 3.58. This is due to the active engagement of the Benguet State University-University Library and Information Services social media platforms, which disseminate valuable information tailored specifically for their audience, including students, faculty, and other researchers.

Also, users commented that they appreciate the creativity of the librarians in presenting information through posts on social media platforms. Gupta et al. (2014) stated that social media platforms have gained popularity as an exciting and valuable library tool. He asserts that the scope of social media platforms in libraries includes increasing awareness of library resources (e.g., new arrivals), interaction with library users, user education, contact with the user community, marketing of library services, and receiving library feedback on its services.

Updates on current library activities have the highest average mean of 3.65. This is because students follow BSU-ULIS social media platforms like Facebook and get notified every time the library posts new updates. In addition, users, not only students of Benguet State University, are also given a chance to participate in their planned programs and activities during the pandemic. Last November 2021, The Benguet State University Library and Information Services hosted online library activities, which included a library quiz bee, scrabble tournament, and book quotation photo contest in line with the celebration of Library and Information Services Month of 2021. Posters about the event were shared on the social media platforms of BSU-ULIS, and anyone regardless of their year, college, or school was encouraged to join these activities. According to Sumadevi and Kumbar (2019), the library can utilize social media to promote planned events or activities, reaching out to present and potential patrons. These announcements instantly spread when users share the information with their

**Table 4**

*Level of User's Satisfaction on the Information Dissemination Through Facebook, YouTube, and WordPress During the Pandemic*

Information Dissemination	Mean	DE	Rank
Updates on current library activities	3.65	VS	1
Information Literacy (user education, library orientation etc.)	3.64	VS	2
Library notices and announcements	3.56	VS	6
Updates on library services	3.60	VS	5
Updates on Library Policies	3.61	VS	4
Newly Acquired Materials	3.63	VS	3
COVID-19 pandemic information	3.43	VS	7
Overall Mean	3.58	VS	

Legend: 3.26-4.00 Very Satisfied (VS)  
 2.51-3.25 Moderately Satisfied (MS)  
 1.76-2.50 Slightly Satisfied (SS)  
 1.00-1.75 Not Satisfied (NS)

friends via social media. This implies that social media platforms like Facebook, YouTube, and WordPress are a good way for the library to advertise its activities and increase its users.

Information literacy which involves user education, library orientation, etc., ranked second with a mean of 3.64. The BSU-ULIS also creates educational videos and posters providing helpful information for students who visit their pages. The BSU-ULIS Information Literacy Development Solutions (BUILDS) is a library education program that enhances the students' competence in 21st-century skills, specifically information literacy (BSU-ULIS, 2021). During the pandemic, the BSU library posted an Information Literacy video series on its social media platforms, aiming to improve the students' ability to understand information needs, identification of sources, retrieve information, evaluation, and ethical use of information. Concerning this, Eje and Dushu (2018) assert that a social media platform improves the usage of information and educational-related materials. Social media platforms such as Facebook and LinkedIn can serve as a means for academic libraries to engage



with students and deliver educational content. Further, this is also an effective way for the library to help students enhance their information literacy skills.

Newly acquired materials (3.63), updates on library policies (3.61) and services (3.60), and library notices and announcements (3.56) ranked third, fourth, fifth, and sixth, respectively, with very satisfying results. These services are made known to the public by posting on the library's social media platforms. The library posts monthly highlights of what is new in its collections and services on the BSU-ULIS Facebook page. In addition, the library makes announcements whenever some of their online services will be unavailable, for example, the OPAC undergoing server maintenance. In line with this, Cabfilan (2012) states that library staff immediately create notices for posting upon making new decisions regarding library operations. This is done to provide massive dissemination to all library customers. Further, students of BSU are highly encouraged to follow the social media platforms of BSU-ULIS to keep them updated on what is happening in the library.

The library also provided COVID-19 information during the pandemic, with a mean of 3.43 ranked as the lowest though very satisfied. The BSU library shared e-resources on their Facebook page, which contains reliable information about COVID-19. International Federation of Library Institutions. (2020) reported that libraries worldwide are being affected by the emergence and spread of the coronavirus. It prompted librarians worldwide to organize and produce a collection of valuable and reliable information on coronavirus to provide people with a source they can trust. On the other hand, other reliable agencies like DOH provide COVID-19 information aside from the libraries. During the pandemic, most students prefer to visit these government pages to be aware of the number of positive cases in their community and the health protocols they need to follow.

### Online Public Access Catalog

Table 5 manifests users' satisfaction with the online public access catalog during the pandemic. Based on the table, library users are very satisfied with the OPAC as displayed with an overall mean of 3.61. This is attributed to the users' primary reason for using the OPAC, which

**Table 5**

*Level of User's Satisfaction on the Online Public Access Catalog During the Pandemic*

OPAC	Mean	DE	Rank
Displays accurate information	3.66	VS	3
Accessibility	3.72	VS	1
User friendly/Easy to use (navigation)	3.62	VS	5
Searching through keywords.	3.61	VS	6
Available 24/7.	3.38	VS	8
Allows checking of the availability of books on the shelves.	3.64	VS	4
Free from typographical errors (e.g. misspellings)	3.58	VS	7
Comprehensiveness (the number of materials encoded for the OPAC)	3.70	VS	2
Overall mean	3.61	VS	

Legend: 3.26-4.00 Very Satisfied (VS)

2.51-3.25 Moderately Satisfied (MS)

1.76-2.50 Slightly Satisfied (SS)

1.00-1.75 Not Satisfied (NS)

is to browse the library's collection without personally going to the library, as stated by Morrumpisi and Mooko (2006). Further, OPAC is advantageous for users because of its features which include accessibility through the internet, it is possible to display complete bibliographic information as it appeared on reprints, search independently by author, keyword, title, or year, and use hypertext links to facilitate navigation through bibliographic records (Sadah, 2009). These features make the OPAC even better compared to the traditional card catalogs.

Further, the table shows that accessibility marked the highest mean among the indicators. This is because users can directly and effectively use the OPAC of the library on any electronic devices they prefer, either on phones or computers. Additionally, the Web OPAC is accessible beyond the vicinity of the University. This serves the ultimate function of an OPAC emphasized by Ukpebor (2012) that it provides the public with direct access to a library





bibliographic database. In line with this, Gohain (2013) added that OPAC offers users a means of searching and accessing information. Users can see each library document's collections and issue status, and reserve and renew a document of their interest when needed. Moreover, Ukpebor (2012) stated that multiple users could simultaneously query the database, unlike the traditional catalog.

Comprehensiveness, the accuracy of the displayed information, and checking the availability of books are interpreted as very satisfied with a mean of 3.70, 3.66, and 3.64, respectively. This is attributed to librarians' efforts to ensure the completeness and accuracy of the data displayed in the OPAC, as the library strives to enable access to its diverse holdings. As stated by Swaminathan (2017), OPAC allows users to view the collections and issue status of each library document and reserve and renew a document of their choice. In addition, Clark (2000) attested that OPAC's functions include providing a comprehensive record of resources owned by the library, identifying what the library holds by a certain author, on a specific subject, and with a specific title, and making it easy to locate library books.

On the other hand, user-friendly and searching through keywords have a mean of 3.62 and 3.61, respectively interpreted as very satisfied. Even though satisfaction is felt by most of the users, some students are not familiar with using the OPAC, especially on the search interface. Respondent 46 from CA commented, "*Han ko ammu nu enya ti ikabil ko nga specific word idjay search bar. Kunak nu kasla google nga mabalin ti sentence* (I don't know what specific keyword should I put in the search bar. I thought that it's like Google wherein I can input a whole sentence in the search bar)." Another said, "*I can conduct a basic search, but I find it confusing to use the power search in the OPAC* (CHET, 13)." This is attributed to the users' lack of basic skills to search on OPAC, tending not to use all its features. Kumar and Vohra (2013) opined that users are often confused by search options such as Boolean or keywords provided in OPACs. As a result, OPAC user training and fine-tuning of search approaches and procedures that are more user-friendly and inclined, easy to comprehend, and capable of producing desired results should be focused (Breeding, 2007). In addition, user education to improve the users' information skills will enable them to effectively utilize the OPAC and tap from the benefits that come with it.



Moreover, free from typographical errors (3.58) and available 24/7 (3.38) ranked the lowest. Typographical errors can be attributed to human errors since different library personnel can input data in the OPAC and the process of encoding data, especially if there are a lot of new resources that need to be added to the system. This is supported by Cabfilan (2012) study where he mentioned that when rushed encoding of the library collections is performed, the quality of the records is sacrificed. This implies the need for proofreading and editing of bibliographic records to be constantly done by librarians. When it comes to the availability of the OPAC, most users do not know or are not even aware that the OPAC is accessible outside the university 24/7. The study analysis by Nisha and Naushad (2011) at the Indian Institute of Technology, Delhi, showed that 75 percent of respondents were aware of the OPAC through the intranet, whereas 25% were completely unaware. Setting up an OPAC without informing the target users about its purpose, operations, and advantages is a waste of resources. Despite having plenty of advertisements done by the BSU Library to promote the use of OPAC, the library should devise a more effective strategy to increase users' awareness. Another reason why the OPAC is sometimes unavailable is due to the maintenance it undergoes to solve issues in its system and improve its performance and functionality for the users. This is supported by Fattahi (1995), who stated that online catalogs tend to have a more complicated yet more flexible structure than other library catalogs because they include features such as allowing access to circulation status and holding information. In addition, Breeding (2007) emphasized that OPAC's basic features, capabilities, and abilities must be maintained.

### Online Resources

Table 6 presents the users' satisfaction with the online resources offered by the BSU library during the pandemic. The table indicates that library users are very satisfied with the online resources, with an overall mean of 3.41. This is attributed to the fact that users depend solely on the internet during the pandemic, which is why they expect the online library service to ease the accessibility of information sources. This is supported by Ray and Day (1998), which stated that students use online information resources for faster and easier access to a broader range of information. Respondent 9 from CTE stated,

**Table 6**

*Level of User's Satisfaction on the Online Resources of the BSU Library During the Pandemic*

Online Resources	Mean	DE	Rank
Digitized thesis and dissertation	3.51	VS	1
eBooks	3.49	VS	2
The Essential Electronic Agricultural Library (TEEAL)	3.46	VS	3
CABI Abstract (cabdirect.org)	3.38	VS	5
CABI eBook (cabi.org/cabebooks)	3.40	VS	4
Wordbook online (worldbookonline.com)	3.35	VS	6
eLibraryUSA (elibraryusa.state.gov)	3.33	VS	7
Overall mean	3.41	VS	

Legend: 3.26-4.00 Very Satisfied (VS)  
 2.51-3.25 Moderately Satisfied (MS)  
 1.76-2.50 Slightly Satisfied (SS)  
 1.00-1.75 Not Satisfied (NS)

"Kanaun ak agrerequest ti eBook idjay library ta libre ken updated py compared from other websites nga kailangam gatangen karkaru nu barbaru (I always request for eBooks in the library because it is free and recently published compared to other websites where I need to first purchase their ebooks)."

It shows that digitized thesis and dissertations (3.51) ranked first, followed by the availability of eBooks with a mean of 3.49 interpreted as very satisfied. This is attributed to the fact that the library digitizes some of its collections to become available online.

Librarians also harvest and purchase eBooks to support the institution's academic programs. According to Ugwu and Orso (2012), online information resources are adequate teaching and learning tools in higher education. They are effective in motivating students and providing tools for lifetime learning. Furthermore, The Essential Electronic Agricultural Library (TEEAL) ranked third with a mean of 3.46. TEEAL allows users to read peer-reviewed research articles in agriculture and allied fields without the requirement for internet access (Cornell University, 2017). This is very beneficial for BSU

**Figure 2**

*BSU-ULIS E-Resources and Databases*



students especially those under the College of Agriculture (CA), College of Veterinary Medicine (CVM), College of Forestry (CF), and Engineering and Agricultural Technology.

Indicators CABI eBook (3.40), CABI Abstract (3.38), Worldbook online (3.35), and elibraryUSA (3.33) are interpreted as very satisfied. Like TEEAL, the CABI provides customers with immediate access to over 10 million international research records in agriculture, the environment, and applied life sciences (cabi.org). It incorporates two bibliographic databases: CABI Abstracts and CABI eBook. Worldbook Online is a suite of online research tools that includes primary source collections, encyclopedia articles, student activities, educator tools, pictures, audio, and video, complemented by current periodicals and related websites (Champaign Library, 2021). Meanwhile, elibraryUSA is a digital collection of trusted information resources from the United States with quality journals, dissertations, newspapers, magazines, books, and award-winning films and videos (American Center, 2022). Figure two below shows the e-resources and databases of the Benguet State University-University Library and Information Services.

On the contrary, some users are unaware and lack advanced searching skills to utilize the stated databases. A student commented, "I do make out time of browsing the Worldbook for academic purposes, but I do not often know which online resources are related to my work (CHET, 5)." Another respondent suggested that the "library can also try to subscribe to databases focusing on other fields (CN, 115)." These concerns from students imply that even if there are available subscribed databases some users do not find the information they need, and they will not continue to use these online resources since these are generic in scope. This is supported by Wu and Chen (2012), who found that students frequently use library materials that are considered beneficial in their research process and fulfill their school's requirements.

### **Summary of the Users' Level of Satisfaction with the online services of the Benguet State University-University Library and Information Services During the Pandemic**

Table 7 displays the overall level of satisfaction of the users on the different online library services of BSU-ULIS during the pandemic. The

**Table 7**

*Summary of the Users' Level of Satisfaction on the Benguet State University-University Library and Information Services Online Services During the Pandemic*

Indicators	Mean	DE	Rank
Online Reference Service	3.56	VS	4
Electronic Document Delivery Service	3.63	VS	1
Information Dissemination through Facebook, YouTube, WordPress	3.58	VS	3
Online Public Access Catalog (OPAC)	3.61	VS	2
Online Resources	3.41	VS	5
Overall mean	3.56	VS	

Legend: 3.26-4.00 Very Satisfied (VS)  
 2.51-3.25 Moderately Satisfied (MS)  
 1.76-2.50 Slightly Satisfied (SS)  
 1.00-1.75 Not Satisfied (NS)

overall mean of 3.56 indicates that the users are very satisfied with the online services provided by the BSU library. Individually, all the indicators also registered a very satisfied rating. The result implies that the online services of the Benguet State University-University Library and Information Services are effective and meet the information needs of the users during the pandemic. As Rodrigues and Mandrekar (2021) supported, academic libraries should make reasonable initiatives to enable remote access, host webinars, provide an online article request service, conduct panel discussions on all current subjects, and act as a catalyst for effective information distribution. Further, Demir and Paracci (2018) point out that academic libraries must be innovative to provide services that meet the demands of their users.

The users of the online library rated Electronic Document Delivery the highest of the above-stated services. This is the reason that electronic document delivery has become an essential service for users due to its convenience during the pandemic. The Online Public Access Catalog (OPAC) ranked second with a mean of 3.61, interpreted as very satisfied. This is because the OPAC provided users with a means of searching and accessing the information resources



available in the library. Information dissemination through Facebook, YouTube, and WordPress ranked third, followed by the online reference service with a mean of 3.56. Benguet State University-University Library and Information Services updates and notifies its users of what is happening in the library through their social media platforms, as reflected in the indicators mentioned in Table 4. Aside from information dissemination, social media platforms also serve as a means for librarians to conduct online references and interact with their users. Lastly, the online resources have the lowest mean compared to all the indicators. Online resources like digitized theses and dissertations, eBooks, and subscribed databases are available in the BSU library. Still, some students commented that they were not aware of the library's online resources, and others also said that these resources have been difficult to understand or use. About this, Muteshwa (2004) stated users encounter challenges in accessing them, such as a lack of understanding of how to utilize e-journals, lack of facilities, and lack of time and awareness.

#### **Significant Difference on the Users' Level of Satisfaction with the Online Services of the Benguet State University-University Library and Information Services in Terms of College**

Table 8 presents the significant difference in users' satisfaction with the online services of Benguet State University-University Library and Information Services in terms of their college during the pandemic. Overall, results show no significant interpreted as no significant difference in the users' level of satisfaction in terms of

college. Thus, the null hypothesis is accepted, which means that the level of satisfaction of users with the BSU-ULIS online services during the pandemic was not affected by their college. In relation to this, Simmonds and Andaleeb (2001) stressed that academic library users have varying needs and expectations since they serve students who are studying with different bachelor's degrees. Thus, it is the responsibility of the library staff to know these needs and expectations and strive to provide quality services and satisfaction to users.

Among the indicators shown in the table, the online reference service, document delivery service, and OPAC have a p-value lower than 0.05. Online reference and OPAC are interpreted as significant, while document delivery is highly significant. This means that the users' college has a bearing on their level of satisfaction with the mentioned online services of the Benguet State University-University Library and Information Services. The significant difference in the online reference and electronic document delivery is attributed to resource reliability and librarian's responsiveness which the users' value more. Students from different colleges tend to have complex questions which needed further research for the librarian to give the exact information the user needed. This is supported by Francoeur (2001), which stated that reference librarians face various challenges when interacting with users during virtual reference. Certain types of questions, including "complex reference inquiries from users," are more difficult to answer in the virtual environment, which is one of the challenges of virtual reference service. For example, users

**Table 8**

*Significant Difference on the Users' Level of Satisfaction in Terms of Their College During the Pandemic*

Indicators	CIS Mean	CVM Mean	CTE Mean	CN Mean	CA Mean	CHET Mean	p-value
Online Reference Service	3.78	3.67	3.53	3.59	3.61	3.45	0.01*
Electronic Document Delivery Service	3.88	3.76	3.70	3.55	3.52	3.47	0.001**
Information Dissemination through Facebook, YouTube, WordPress	3.67	3.61	3.63	3.58	3.51	3.52	0.08 <sup>ns</sup>
Online Public Access Catalog (OPAC)	3.73	3.64	3.69	3.56	3.60	3.49	0.03*
Availability of Online Resources	3.50	3.47	3.36	3.43	3.35	3.29	0.37 <sup>ns</sup>
Overall mean	3.71	3.63	3.58	3.54	3.51	3.44	

Legend: Legend: \*\*=highly significant, \*= significant, ns = not significant



under the College of the Veterinary Medicine often conducts more research that is why having their own college library and librarian to assist on their information needs is an advantage for them compared to other colleges. Meanwhile, in the document delivery service, late responses can be due to the limited equipment for digitization, especially if there are many documents to be digitized requested by different colleges. However, delays in response can also be due to the users' requests that are not specific or clear, and some are also not aware to check their emails properly if they have already received the document. This implies that users are also responsible for being specific on what they are requesting and checking their emails for the document requested. Dube (2013) pointed out that for the online request system to be effective, both the library staff and users need to acquire tech-savvy potential and good communication skills. Library users are also encouraged to be self-sufficient to learn how to utilize this type of service and the proper way to request the information resources.

When it comes to the Online Public Access Catalog, a significant difference in the user's satisfaction per college is attributed to users' familiarity with using the OPAC. The table shows that CIS has the highest mean of 3.73 compared to the other five colleges because students under this college are knowledgeable on using the OPAC considering that it is on the nature of their course. On the contrary, users from other colleges like CA commented that they know how to conduct a basic search, but they find it confusing how to use the power search of the OPAC. This implies the importance of library instruction and information literacy, particularly in using the OPAC and other online resources to strengthen the concept of self-help and independence of users. As Eserada (2019) emphasized in her study, efforts should be directed at teaching university students the knowledge and skills needed to use the OPAC, allowing users to take advantage of the prevailing benefits that come with it.

On the other hand, indicators of information dissemination and availability of online resources have a higher  $p$ -value than 0.05, interpreted as not significant. There is no significant difference in information dissemination due to the type of information the Benguet State University-University Library and Information Services posts

are intended for any audience, regardless of their college. In addition, the BSU-ULIS Facebook page, including the page of VetMed and CN library, is active in providing updates to all the users. The availability of online resources is also not significant because digitized dissertations and ebooks are available for each of the colleges of BSU, which the users can request to the library. On the contrary, users suggest an additional subscribed database for other specializations like education or nursing to improve their online resources.

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## Conclusions

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The study found that the BSU-ULIS online services and their availability met the needs and expectations of its users during the pandemic. It revealed significant differences between the Online Reference Service and OPAC, with a particularly high significant difference noted for the e-Document Delivery Service. The high satisfaction with the online services during the pandemic held true across colleges, suggesting that users from different academic backgrounds had consistent experiences when they utilized the BSU-ULIS online offerings.

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## Recommendations

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Based on the study's findings, recommendations have been proposed to enhance the online services of Benguet State University-University Library and Information Services. These include expanding the range of online resources by subscribing to databases focusing on various specializations like medicine to meet the diverse information needs of users. It was suggested that all librarians handle online reference and document delivery services to ensure consistency and efficiency. Additionally, providing more digitization equipment can expedite responses to users' requests. Finally, regular postings and intensified sharing of informative videos, particularly focusing on online library service functionalities like the OPAC, can keep users, especially new students, updated and effectively disseminate information. These recommendations aim to improve user experience and utilization of the library's online resources.



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