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Describing Students' Utilization of Online and Physical References in Their Research Projects

Shamir L. Diamal[1], Ian Christopher P. Aniban[2], Janus G. Agustero-Naparan[3]

[1,2,3] Library and Information Science, Saint Columban College, Pagadian City, Philippines.

[1] *Coresspondence Email*: shamldiamal.ccs@sccpag.edu.ph

ABSTRACT

Libraries are the keeper of knowledge so libraries have the role to give their patrons knowledge that they need and that includes physical resources and online resources. This study sought to discover which resource researchers use in their research projects. The researchers gathered quantitative data from several bound theses throughout a five-year period from the library and all faculties of the school. Seven participants were interviewed to supplement the quantitative data. The quantitative results of the data analysis showed that there was a considerable difference in the utilization of resources throughout five years. The qualitative findings found that participants were mostly unaware about the services in the library thus it was hard for them to find relevant information in the library and relied mostly on online resources. The study concluded that online references were indeed the most used resources in research by undergraduate students. The study recommended that the library may need to advocate on activities that may increase library literacy on services like the Online Public Access Catalog (OPAC).

ABSTRAK

Perpustakaan merupakan lembaga yang menjaga ilmu pengetahuan, kehadiran perpustakaan memiliki peran untuk memberikan pengetahuan yang dibutuhkan oleh pengunjungnya, termasuk sumber daya fisik dan sumber daya daring. Penelitian ini bertujuan untuk menemukan sumber daya apa yang digunakan peneliti dalam proyek penelitian mereka. Para peneliti mengumpulkan data kuantitatif dari beberapa tesis terikat selama periode lima tahun dari perpustakaan dan semua fakultas di sekolah. Tujuh partisipan diwawancara untuk melengkapi data kuantitatif tersebut. Hasil analisis data kuantitatif menunjukkan adanya perbedaan yang cukup besar dalam pemanfaatan sumber daya selama lima tahun. Temuan kualitatif menunjukkan bahwa partisipan sebagian besar tidak menyadari layanan di perpustakaan sehingga sulit bagi mereka untuk menemukan informasi relevan di perpustakaan dan lebih mengandalkan sumber daya daring. Studi ini menyimpulkan bahwa referensi online memang menjadi sumber daya yang paling banyak digunakan dalam penelitian oleh mahasiswa sarjana. Studi ini merekomendasikan agar perpustakaan mungkin perlu mengadvokasi kegiatan yang dapat meningkatkan literasi perpustakaan pada layanan seperti Katalog Akses Publik Online (OPAC).

1. INTRODUCTION

Libraries are knowledge and information repositories for society. Following the development of the digital age, libraries' functions have expanded to encompass a wide variety of digital resources, online databases, and electronic books in addition to their traditional print collections to satisfy the patrons' thirst for information. Libraries help by promoting literacy, supporting research and education, and fostering intellectual development. Many Ph.D. researchers rely on their libraries for materials and services to aid their studies (Fazal and Chakravarty 2019). Libraries include a range of tools, including academic literature, encyclopedias, dictionaries, textbooks, and other research reference materials, as well as spaces where library patrons can work in a calm, ideal, and collaborative setting for their research. Libraries are the most often used sources of knowledge and information in the literature civilization. Libraries' information sources are trustworthy, relevant, and simple to use, and they have considerably assisted students in their continuous research (Humbhi et al. 2022).

The role of the library in the field of research, for the most part, is to disseminate relevant information for researchers to contribute to the field of knowledge. Libraries have the role of giving their patrons the information they want and need. Knowing the information-seeking behavior of patrons is an integral part of the library and for a librarian to give the patrons the best quality and up-to-date information that librarians can add to their library collection (Humbhi et al. 2022). Humbhi et al. (2022) consider that individuals' information requirements differ from one another. Information seekers employ various methods for studying, searching, selecting, using, and sharing. Such techniques, procedures, and strategies are information-seeking behavior (ISB). As a result, research students seek material from diverse sources, including libraries, books, periodicals, encyclopedias, theses, dissertations, and online research databases are examples of library information sources (Gowridevi et al. 2018; Humbhi et al. 2022). Khan and Khan (2020) stressed that it is vital to explore how students conducting research view the importance and contributions of libraries in giving information. Libraries have undergone numerous but substantial modifications in recent years. These changes have shaped the core ideas of librarianship, and libraries are no longer physical things but rather virtual realities. While numerous studies attempt to follow this transformation by examining the condition of academic libraries, most agree that academic environments are constantly changing due to technological advances, academic expectations, and user needs.

As libraries evolve, evaluating how these changes affect library users and the overall effectiveness of library services globally is critical. While journal articles remain the primary source of scientific reading, libraries may no longer monopolize discovery and access. Numerous scholarly information sources are available to readers online (Tenopir et al. 2019). Further studies found that modern researchers and students find more value in accessing digital resources than physical resources (Khan et al. 2022; Lasig and Collantes 2022; Mama and Sarangani 2019; Nawaz et al. 2022; Norch and Adzakpa 2022; Tenopir et al. 2019). E-books, E-journals, and E-conferences, sometimes known as e-resources, save users time and money in various ways. One can see that the world is transitioning from print to electronic media. Technology has extended its productive arms to the four corners of the globe. There have been numerous developments in library management, such as users shifting to new technology-based library activities (Dhiman 2021; Mani et al. 2019). Aside from imparting a wealth of knowledge, the web also offers various information services such as table of contents pages, electronic document delivery, web-based reference services, database access, indexing and abstracting, referral services, and directory search (Murugan and Jeyshankar 2019). E-resources have grown in popularity in

academic contexts due to appealing qualities such as real-time delivery, predominantly remote access, ease of access to content, and flexibility (Habib et al. 2022). The development of the internet has resulted in an explosion of information services and the digitization of books, reference materials, and other printed media (Kumari and Sharma 2021). Electronic and web-based resources are an important part of the library information network, and students opt for them for academic activity (Oyedipe et al. 2018). Habiba and Islam (2022) conducted a study in which they asked faculty members about the sources they utilize while looking for information for academic or research objectives. According to the findings, over half of the participants frequently used Google Scholar and ResearchGate. At the same time, nearly half utilized general search engines, online journal databases, and academia; the rest frequently consulted the librarian. Furthermore, the study of Manjunath and Babu (2018) investigated and surveyed the information needs and information-seeking behavior of researchers at Bangalore University, Bangalore, with 130 participants. The study found that most participants (91.5%) frequently used Google search engines to find information resources for writing research papers.

The researchers noticed that all the related literature cited discussed how the majority of library users are leaning in favor of electronic resources and found a gap in the literature in understanding the effects of the sudden mass usage of electronic resources over print resources if it would reduce the value of print resources as an information resource for student researchers. The study specifically sought to answer the central question, "How do students use online and physical library resources in their thesis projects?"

Statement of the Problem

The study explored students' utilization of online and physical references in their research projects. The study focused on undergraduate researchers that finished their thesis projects at one of the private college institutions in Pagadian City, Zamboanga del Sur, Philippines as participants. The study was conducted during the 2023 school year.

The study specifically sought to answer the central question., "How do students use library resources in their thesis projects?" The findings provided answers to the following;
1. Which resources do students utilize in their study?
2. How do undergraduate students find relevant information?
3. What are their challenges in finding library resources for research?
4. How do they overcome the challenges of finding resources for their research?
5. What recommendations for improvement can they give to the library?

Theoretical Framework

This study is anchored on Davis (1989) Technology Acceptance Model, which serves as the basis of research. According to Davis (1989) the TAM was created to determine the relationship between external factors of user acceptance and existing technology used to understand these people's actions through knowledge of the usefulness and ease of use perceived by them. Thus, Davis' TAM model is built around Perceived Usefulness (PU) which describe the extent to which an individual believes that employing a specific system would increase performance of their work and Perceived Ease of Use (PEU) is in which an individual believes using an information system would be easy to use and understand. Through this theoretical framework, the study aims to explore students' utilization of online and physical references in their thesis project. The study investigates if electronic resources are more used in research than physical resources in one of the private college institutions in Pagadian City.

Further, this study determined the effects of the Technology Acceptance Model (TAM) in a reality setting and the information-seeking process from online sources and print sources among undergraduate students who have undergone their thesis writing. The findings of this study would inform undergraduate student researchers and librarians to be mindful of the results and utilize the information to use these findings on the challenges faced in library and research settings.

2. METHOD

The researchers adopted Cresswell's mixed method design, the Sequential-Explanatory Design approach, in which data were collected through mining artifacts and semi-structured interviews. The Sequential-Explanatory Design is one of the most popular research designs in which quantitative data is collected first, followed by qualitative data, to explain the results or a specific element of the findings in greater depth (Creswell 2015, as cited in Merriam & Tisdell 2016).

Research Instruments

The quantitative data was gathered by collecting bounded thesis projects for the last five years. Microsoft Access was used as the tool for listing the artifacts. The database has four (4) fields: book number, thesis year, physical reference, and online reference. The form was used for inputting data for easy queries and reports. Following the gathering of qualitative data, the main tool used for data gathering and analysis of the study was the researchers. And an interview guide that helped the researchers gather the data throughout the interview session.

3. RESULTS AND DISCUSSION

This category highlights quantitative data results and analysis after mining data from bounded thesis papers from the last five years, 2019-2023. The researchers have used descriptive statistics to identify the percentage of online and print references used each year by student researchers.

Online and Print references are the variables that the researchers will be investigating. Understanding how these variables affect the utilization of online and print resources on students' research projects is crucial to determining and answering the question of what resources researchers utilize in their study.

Table 1. Yearly records of bounded thesis

Year	No. of Bounded Thesis	Online		Print	
		Frequency	Percentage	Frequency	Percentage
2019	1	24	58.54%	17	41.46%
2020	0	0	0%	0	0%
2021	33	917	94.05%	58	5.95%

| 2022 | 52 | 1978 | 96.87% | 64 | 3.13% |
| 2023 | 39 | 1557 | 96.17% | 62 | 3.83% |

Table 1 shows the yearly record of bounded thesis data that the researchers have mined from the library and across all the department offices of the research environment. The researchers only found one bounded thesis for the year 2019 and none for the year 2020. Because the COVID-19 pandemic began in 2019-2020, researchers were not required to produce a bounded thesis. In 2019, The only bounded thesis that the researchers found had 41 references; 17 (41.46%) of the 41 are print references, and 24 (58.54%) of the 41 are online references.In 2021, COVID-19 cases started to lower, and physical classes were now allowed in certain places; thus, researchers were required to submit a bounded thesis. There were a total of 33 bounded books from all departments and a total of 975 print and online references. Of the 975 total references, 58 (5.95%) were print references, and 917 (94.05%) were online references.In 2022, there were a total of 52 bounded books across all departments and a total of 2042 print and online references. Of the 2042 references, 64 (3.13%) were print references, and 1978 (96.87%) were online references.In 2023, there were a total of 39 bounded thesis books and a total of 1619 print and online references. Of the 1619 references, 62 (3.83%) were print references, and 1557 (96.17%) were online references.

The data acquired from the bounded theses from 2019 to 2023 shows that in total, there were 125 bounded theses mined by the researchers, and a total of 4677 references, 4.30% of which were physical and 95.70% were online. The data indicates that there is a significant gap between the utilization of online and physical resources. As a result, we may conclude that online materials were the most utilized resource.

Problem 2. Methods in Finding Resources Used by Undergraduate Researchers

The researchers have probed further into determining the undergraduate researchers' methods in finding resources used in their research project, both online and physical. Accordingly, several sub-categories emerged based on the responses gathered from the one-on-one interview on their ways, strategies, and criteria for finding relevant resources in their research project.

Utilizing Online Research Platforms. During the one-on-one interview, the undergraduate researchers said they used platforms like Google Scholar to find relevant resources. The data from other sources stated that for finding relevant articles search engines such as Google Scholar and ProQuest were used by researchers because of their convenience and simplicity. It is because of its flexibility that researchers choose the internet to access online articles. Making online search engines and research platforms popular with undergraduate researchers in finding resources for their research projects.

Assessing the Article's Authenticity. According to the participants, one method of finding articles is to examine the article carefully. These undergraduate researchers read and comprehend the collected online articles. Triangulation with other researcher's states that confirming the authenticity is usually done through reading and skimming through the articles and checking whether it is relevant to their topic. It is essential to read the article first to confirm if it is accurate and reliable.

Asking Help from Others. Some undergraduate researchers mention that their teachers, research advisors, and friends help them find relevant articles for their research projects. The methods in finding relevant information for undergraduate researchers are by using search engines such as Google Scholar, which is mostly used by students while using keywords to narrow down the topic of interest, checking the contents and those involved in the articles to verify if it is authentic, and asking help from their research adviser, instructor and panelist.

The data from different sources indicates that their research advisors and other teachers did provide and recommend some reliable websites and databases for researchers to locate their RRL. Databases such as ScienceDirect, Elsevier, ERIC, Google Scholar, and going as far as providing accounts for ProQuest since the school library has subscribed to such databases. Furthermore, the triangulation participant mentioned that they were also taught how to broaden their searches for related articles by not focusing only on their research title but also on the possible topic that may relate to their study.

Problem 3. E-Challenges Encountered while Finding Resources

The researchers interviewed the participants about the challenges they encountered while finding resources. Understanding the unique struggles faced by students doing their academic research is essential.

Choosing the Right Article. Searching the vast internet for information can be quite a challenging task. The online-participants stated that finding relevant article journals for their research project is difficult. Different sources state that it is challenging to find relevant resources in Google Scholar due to the numerous articles that are available in the database. Furthermore, another source stated that articles in Google Scholar are mostly old articles and can be time-consuming to find newer articles.

The participants express the difficulty of dealing with a large number of journal articles and research papers available on the internet. They mention that searching for relevant articles can be difficult due to the enormous amount of information. Expressing their frustration of finding relevant resources for their research. They describe the process of finding what appears to be relevant articles but then realizing that the content does not match their research needs. This process can be time-consuming and frustrating. While the process might seem straightforward, they indicate it is far from easy in practice.

Searching Articles is Exhausting. The online-participants mention that finding relevant information on the internet can be physically tiring. According to other researchers, it is physically taxing on the body to search for articles online because they are having difficulty finding relevant information to their topic. It is tiring, straining in the eyes, and a reason for staying up late, causing sleepiness during the day. This highlights the physical, mental, and emotional challenges that undergraduate researchers face when seeking relevant journal articles, notably the exhaustion and strain involved in the search for relevant research articles. They explain its toll on the physical and mental, emphasizing eye strain and the stress of meeting deadlines.

Mostly Outdated Library Collections. During the one-on-one interview with the physical-participants, they mostly encountered challenges while looking for relevant information in the library, such as the old and outdated collection the library houses. The triangulation data from multiple sources opposed the physical-participants' claims that the library collections are not outdated but new books that look old. Furthermore, the librarians also questioned the participants for their responses if they genuinely did their research and tried to look for books in the library.

The data mined by the researchers proves that the librarians' claims during triangulation are indeed correct. The library holdings for ITE courses are not outdated but meet the Minimum Requirements for Libraries of Higher Education Institutions Common to All Programs or the Commission on Higher Education MEMORANDUM ORDER (CMO) Number 22 Series of 2021. CHED (2021) stated that for each undergraduate program offering, the library shall provide five (5) relevant book titles for each major subject published within the last five (5) years, in a combination of print and electronic resources.

Table 2 shows the number of library holdings for the courses of the ITE program. The table is categorized into *Courses, Number of Titles, Number of Titles, Copyright 2017 and below, and Copyright 2018 to latest.*

There are 16 total courses with a corresponding number of titles. The courses; Theory of Automata and Formal Language, System Analysis, and Management Accounting failed the required five (5) relevant book titles for each major subject published within the last five (5) years of the CMO No. 22 Series of 2021 Memorandum.

The courses Theory of Computer Mathematics, Management Information System, Computer Programming, Programming Language, Data Structure and Algorithms. Database Management System, Architecture of Computer Systems and Operations, Software Design and Development, Advance Topic in Computer, Experimental Electronics, Management Science, Production and Operation Management, and Administrative of Organizational Behavior passed the required five (5) relevant book titles for each major subject published within the last five (5) years of the CMO No. 22 Series of 2021 Memorandum.

Table 2. Library holdings on the course ITE

ITE Course	Number of Titles	Copyright Year	
		2017 and Below	2018 to Latest
Theory of Automata and Formal Language	6	2	4
Theory of Computer Mathematics	15	6	9
System Analysis	3	1	2
Management Information System	41	26	15
Computer Programming	49	21	28
Programming Language	17	5	12
Data Structure and Algorithms	14	5	9
Database Management System	16	9	7
Architecture of Computer Systems and Operations	28	17	11

Software Design and Development	54	25	29
Advance Topic in Computer	19	3	16
Experimental Electronics	21	13	8
Management Science	34	19	15
Management Accounting	6	3	3
Production and Operation Management	28	13	15
Administrative of Organizational Behavior	29	11	18
Total	**380**	**179**	**201**

There are a total of 380 number of titles, 179 holdings of Copyright 2017 and below, and 201 Holdings of Copyright 2018 to latest. The data shown in Table 2 is evidence strengthening the claims of the physical-participants that the library collections for the ITE courses are outdated to be incorrect. Instead, it proves the librarians' claims to be correct about the up-to-date ITE titles being relevant and useful for academic purposes, including research.

The ocular findings revealed that the ITE books purchased by the school have not been used even once by the students under the program. The borrower's card at the back of the book appears blank and has no signs of being used. The books appear old and outdated even if it is new because of factors that can cause the collections harm. Factors include dust, light, humidity, pollution, and the nature of the book itself.

A participant expressed frustration with the situation, explaining that the library's collection does not meet the requirement of having recent information. Instead, the library primarily contains 2000, 1990, and 1997 materials. While a participant point out that the library's collection contains outdated and non-latest books. However, they acknowledge that the availability of up-to-date materials depends on the specific library. In their experience, most of the materials they encountered in the library were from around 2010 and even older, which presented challenges for their research.

Overall, these statements highlight the frustration and challenges faced by researchers who experienced looking for physical references in the library. The limited availability of recent materials can be a significant obstacle when conducting research that requires current data and knowledge. Researchers may need to find alternative sources or work with the available materials, which may not meet the requirements for their research projects.

Being Unaware of the Library Classification and Services. The physical-participants stated that library collections are disorganized and confusing to locate; such problems are primarily because of being not informed about the library's different library services. These claims by the participants about the disorganization of the library collection in the library are opposing the statements of the librarians during our triangulation. They stated that the library collections are all classified using Dewey Decimal Classification (DDC), which belongs to the number 000 to 099 Computer Science, Information and General Works for

the ITE courses. Specifically, the numbers 000 to 006 all focus on the subject relating to Information Technology (IT). They even state that they hold library orientation each year for the first-year students and students on what they need to know about the library. However, other sources disclosed that they are unaware of the library classification and the Online Public Access Catalog (OPAC) and would only find books using the signage of book subjects as a guide to finding books.

Some participants stated that the library collections are disorganized because they lack awareness of how these materials are arranged. The fault of this situation is both the students and the librarian. They should know how to ask for assistance if they are unfamiliar with the library materials. Librarians and library staff are trained for such services and would be more than willing to help.

Paying for Journal Article. The participant mentioned having trouble accessing some journal articles that are closely related to their research, most articles on the internet are inaccessible because you would need to pay money to access the journal articles.

The challenges discussed are not unique to the participant but are common among researchers. This issue is not limited to one individual, but it is a shared experience. According to students, many databases are locked behind a paywall, denying them from viewing articles on the sites and only seeing the abstracts.

Flipping Through Pages. The one-on-one interview probe that challenges physical-participant experience in looking for relevant information in the physical library is the manual browsing of pages on a book. Various sources asserted that it is more of a hassle finding physical references than online references because online, it is easier to find relevant information compared to physical, which requires manually skimming through pages of books to find relevant information. In books, there is no direct way of finding the correct information.

The participants contrasted the experience of searching for books online, where they can easily access a wealth of information about their queries. In contrast to physical books, where you may need to manually browse through the book's pages to find the relevant information. Highlighting the convenience and speed of conducting research online compared to the time-consuming and less efficient process of physically searching through books in a library.

Experiencing Slow Internet Connection. One online-participant stated that they've experienced unreliable or unstable internet connection upon searching for information on the internet. According to different sources, the internet in Pagadian City is dependent on the signal strength of the area, especially in rural areas. Furthermore, if the subscribed network's service cellular data capacity is insufficient or limited, it will also affect the speed of the connection.

The internet connection in Pagadian City is indeed slow. Some reasons for such problems are the service provider's fault and the rural areas where signals are weak. Even here in downtown Pagadian, many people still experience poor internet connection. Searching the internet would sometimes take more than a minute to load; instead of the internet being a convenience, it would be more of a hassle.

It is important to note how taxing and exhausting these challenges researchers face in their search for information. This calls for coordinated efforts for teachers, librarians, and administrators to enhance the research ecosystem by investing in databases with the latest library materials and providing researchers with assistance and training to solve these challenges effectively. Librarians and library staff may need to consider making the library services more effective. They should work on putting up more informative signs, such as

labeling the sections with large, easy-to-read signs that are informative and helpful for library users.

Problem 4. Managing Challenges Encountered while Finding Resources

This category will present and analyze the responses of the participant during one-on-one interviews on how they manage their encountered challenges while finding relevant resources for their studies.

Finding Resources Needs Determination. During the interview, the researchers probe that one of the participants' ways of overcoming their challenges in finding relevant resources is to have a strong will. According to other researchers, determination in finding related literature is significant. Even if the body demands sleep and breaks, the determination to continue searching until they find suitable articles. Moreover, other researchers state that being proficient in finding articles online is important. Researchers need to know the right websites where to search to get the right results. All participants emphasized the importance of determination and patience when searching for relevant resources for their research. They acknowledge the difficulties involved in finding resources but stress the need for patience, perseverance, resilience, and the importance of hard work in reaching one's goal. This shows how the participants overcame the challenges of choosing articles on the internet, slow internet connection, and the physical strain they felt during the making of their research project. It is their will, patience and the goal of graduating that pushed them to overcome these challenges. These responses provide insight into the researchers' experience and coping strategies of individuals engaged in academic research and the challenges they encounter when seeking relevant resources for their research project. A great factor in managing these challenges is the access to e-resources.

Asking Help from Others. According to the data collected during the interview, undergraduate researchers ask help from others to overcome their challenges in finding relevant articles. The data from other sources states that undergraduate researchers help each other in completing their research. The group often does sleepovers to make up for the unfinished research. They mention that it is their goals in life that motivate them to do the research. Thus, it is important to persevere to pay off all the hard work they invested in the completion of the research. The data highlights the strategies that undergraduate researchers use to overcome challenges in finding relevant information. They seek help from both their peers and advisors when they have difficulties regarding their research topic and confirming the validity of the articles. The participants describe how they overcame the challenges they encounter in the search for relevant information. The old library and lack of awareness in the library services the data shows that they overcame such challenges by asking help from other people to help them navigate the library. The challenges about the paywall behind some articles and their challenges on flipping through pages they manage to overcome through teamwork which boosted their will in fishing the research. The findings of our study show how students or researchers should be information literate, as it is one of the skills researchers should possess in doing research. This skill will help researchers search for relevant information both online and physical more efficiently and faster. Libraries can hold seminars related to information literacy to educate students on information retrieval.

Problem 5. Recommendations for Improvement in the Library

In order to assess the effectiveness and efficiency of the library, it is important to hear out the suggestions of the users. It is important to learn this recommendation to know what the library is lacking and what needs to be improved.

Fixing the Internet Zone. Some of the participants during the one-on-one interview recommended how fixing and maintaining the internet zone can be beneficial for them and for others. In 2012, the institution renovated the College Library and changed its name to Learning Commons. This change was because of the rapid growth the school experienced, and it was designed to accommodate a diverse set of users, allowing them to be more comfortable while in the library. Introducing many spaces that are more modern and unique compared to the other College Library in the City of Pagadian. The Internet Zone was one of the spaces that were introduced. It serves as a space allowing the users to access the internet. There, users can encode, research, and do other academic activities.

The researchers triangulated with the librarians and discovered the units in the Internet Zone indeed need to be replaced. The Internet Zone or the NetZone has nine (9) individual spaces intended for the computer units. Four (4) of the units are available, and only two (2) are functioning, while the other two (2) are completely broken. The librarian explains the reason for the units being broken is because they are old. However, they did come up with a solution for the problem and requested a purchase of ten (10) new computers to replace the broken units in the NetZone during the Budget Hearing they held annually together with the admins. The request was rejected because of the construction of new buildings.

The admin of the institution confirms the statements of the librarians. They stated that the 30% allocated budget for the library will be allotted to the construction of the four new buildings while the 70% allocated budget will be allotted to the acquisition, maintenance, staff development, library services, and capital outlay. However, according to the other source, the request for new computers units was rejected for the reason of concentrating the funds of the school to facilities and amenities to the new college campus, located in Buenavista and that the construction of new buildings was not the reason they rejected the request. The source clarified that it is better if we allocate the funds to the Buenavista campus, for the College Library will inevitably be transferred to the Buenavista campus, as well as all offices because the old campus will be turned into a senior high school focused campus, and a senior high school library does not need to have a computer zone.

Increasing Book Copies. One of the suggestions of the participants is to increase the library collection. Below are the responses of the participants. According to the librarians, library books have about 3 to 4 copies if it is part of the reserved collection while non-reserved collections have about 1 to 2 copies. These copies are exclusive for students unable to buy their textbooks, so the library provides one. Copies of books depend on the population of the students and libraries cannot cater to all these students. Furthermore, if the library insists on providing more copies and titles, the library would have insufficient funds to operate and maintain other facilities.

The participants indicate the need for the improvement of the library collection to better service the users. They express their thoughts on the limited copies of books, which compels them to take pictures of the books to share via messenger, which results in being blurry.

Hiring More Staff. Library personnel are the cell that makes the library function, making sure of its efficiency and quality of library services. The participants recommend this idea during the interview. According to the library staff, hiring more student assistance would be a great help to the library. The library has only four (4) staff members on the main campus, and more is needed to cater to both students and library work at the same time. It is a challenge for them to focus on arranging the books, working in the reserved

area, checking bags for possible theft, logging in, borrowing equipment, and assisting users.

The participants highlight a common challenge between library users, the difficulty of locating a specific resource. They emphasize that it would be much faster to search for resources in the library if there is help that would be of assistance. According to Commission on Higher Education MEMORANDUM ORDER (CMO) Number 22 Series of 2021 CHED (2021) stated that for every 1000 and below user population student, faculty and staff combined the institution shall provide at least (1) full-time licensed librarian and at least (1) full-time support staff and with every addition of 3000 user population the institution should at least provide (1) additional licensed librarian and an additional of (3) full-time support staff which the school has satisfy. However, student assistants may be an augmentation to provide the necessary support services. But the number of hours rendered by student assistants should be equivalent to the number of hours rendered by the required number of full-time support staff.

The findings of this category indicated where they are lacking in terms of environment, collection, space, and services. The findings would help the library and the librarians in knowing the different suggestions and recommendations of the students to improve the library further.

4. CONCLUSION

This mixed method study found that undergraduate student researchers from the years 2019-2023 mainly utilized online resources rather than physical resources. There is a significant disparity in the use of both resources, along with participants using online search engines like Google Scholar, online article databases like ProQuest, and other sites suggested by their research advisors in finding articles related to their topic. Because some participants were not well-versed about library services and therefore unable to use physical resources, while others were unable to obtain books due to just having one holding of a book. The library may need to focus on seminars to increase library literacy, and librarians should consider keeping two or more holdings of a book to avoid being unable to utilize a book in research.

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