
User Perspective of Library Services in the 21st Century in a Tertiary Based Learning Institution

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Abstract. Academic libraries worldwide have supported their parents' institutions to achieve their mission of providing quality education services to students and teaching faculty (Mahmood et al., 2023). These libraries include traditional services such as reading materials, textbooks, study hubs, manual loan systems and reference aids. Today, the digital revolution has introduced technological services such as printing, photocopying, online databases and artificial intelligence (AI) tools as referencing guides. However, while the academic libraries in the 21st century have drastically changed from traditional manual systems to technological driven operations (Momoh & Folorunso, 2019), there are various setbacks encountered by the academic libraries of Papua New Guinea (PNG) that cannot perform likewise. Unfortunately, there is lack of studies conducted in this area of which such evidence is required to enhance the quality of academic library services in PNG. This case study was conducted to examine the user's perception of the academic library services in a developing nation in the 21st century. A qualitative case study has been done with a data collection method of focus group interview and individual semi-interview. A purposive sampling of thirty library users were selected and interviewed in three focus groups and three individual semi-structured interviews. The data collected have been recorded, transcribed and thematically analyzed. The study revealed users were equally satisfied with library facilities and dissatisfied with digital services. Participants perceptions were consistent with satisfaction of conducive library environment such as *'I'm impressed of the set-up of the library, the space is big, very peaceful and quiet', adequate resources, 'easy to locate books..., the library has a lot of computers.* The participants have evenly expressed dissatisfaction in the current trend of technological services stating *'I haven't used the online database like JSTOR..., the problem is the WiFi network, some of the materials we cannot access'*, on the databases that were provided by the library. These responses indicate that users needed to be trained and guided with the technological services. The findings of this study recommend a need for more awareness and training to academic students and staff on new technological devices and systems that an academic library provides. Each user is to be trained by librarians to fully utilize technological services to enhance education and research spaces in Papua New Guinea.

Keywords: Academic libraries, service, 21st century

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1. INTRODUCTION

There are 2.8 million libraries established worldwide, 2.2 million school libraries, 410 000 public libraries and 85 600 academic libraries (International Federation of Library and Association, 2023). Libraries have been established to provide relevant information and quality services to users (Adeniran, 2011).

Among these libraries are academic libraries which are usually acknowledged as significant contributors to a country's human resource development (Okiy, 2010). These specific libraries are attached to their parent institution with the primary role to support the teaching and learning programs of the university (Mahmood, 2023). A recent study done by the International Federation of library and Association (IFLA), which is the largest body

of library organizations worldwide, indicated that these libraries are integral part of the endeavors of academic institutions (INFLA, 2025).

In the recent century (21st), the role of the academic libraries has experienced significant transformations (Anmol et al., 2021). These changes have largely been driven by advancements in technology and has affected the functionality of traditional and modern academic libraries (Olubiyo, 2022). The way information is created, organized and disseminated has taken a different course (Adeniran, 2010). The higher rate of digital tools has not only introduced new tasks for university libraries but have also introduced pressing issues in the field of Library and Information Management Science (Baryshev et al., 2020). For example, storage capabilities are now shifted from flash drives to cloud storage, printed documents can be saved as electronic documents and library resources are accessible through automated cataloguing systems such as Online Public Access Catalogue (OPAC) (Emezie & Nwaohiri, 2013).

These recent practices have been a challenge for all libraries worldwide. In response to these, the Australia Library International Association (ALIA) in its recent conference has acknowledged the sustainable development goals for libraries and have appealed and challenged the libraries in Australia and the international community to push their work forward to continue to bring vibrant and relevant services to library users and their communities (ALIA, 2024). Pacific Adventist University Library has been a recipient of this stand and has embraced the challenge of bringing relevant services to its users and the communities. But the question lies in what would be the best practice to implement going forward.

Studies have been conducted worldwide to identify the best practices, but the focus has been overly emphasized on implementing efficient library services and as a result the libraries have become self-centered rather than user centered (Mamood,2023). Only a handful of these studies have indicated that these digital services are only useful when the users have utilized these services and think otherwise that they are relevant. This will satisfy the ever-changing needs of its users (Ayiah & Tamakloe, 2023). This indicates that the users perception is considered the best approach to assessing effective library services as they are the only judges.

The lack of information on users' perception of academic library services is rare and unfortunate in the Pacific because it is the sort of evidence required to determine the relevance of services in the 21st Century in any such educational institutions of the Pacific and especially, Papua New Guinea (PNG).

The gross enrolment ratio (GER) for tertiary education in East Asia and the Pacific have approximately reached 51% in the year 2020, this is an increase from 16% in 2000 (UNESCO, 2025). This indicates that there is more engagement in academic activities in the Pacific. However, Hinder (2011) strongly stated that there are more pacific students participating in tertiary education but there is little research on their information behavior in academic libraries engaged within their capacity.

The library of Pacific Adventist University in PNG has been serving the students, lecturers and staff with academic requirements for the past forty years of establishment. The library users are a composition of the Pacific Island nations and whilst the library has seen growth in its infrastructure, collections and systems over the years, it has equally stived to keep up with the current trend of adopting digital tools to meet user's satisfaction.

This study aims to provide a valuable contribution to the lack of literature in this topic and provide user – centered approaches to academic libraries of PAU, PNG and perhaps the pacific island nations.

The objectives of these studies are as follows:

- i. To assess the user's perception of library services;
- ii. To identify users' challenges with library services and;
- iii. To provide recommendations to enhance the university library services.

A qualitative case study method was best suited for this research using the phenomenal approach of Braun and Clark (2017) as similar studies have been conducted. This study is grounded on the theoretical framework of LibQual + Model which has been developed by the Association of Research Libraries (Cook et al 2010). A purposive sampling method (Bryman, 2016) was adopted for this study with a group interview of three (3) and three (3) individual interviews. The data was analyzed thematically with inductive coding and theme identification patterns.

This paper will further discuss the following sections: literature review, methodology, findings, discussions and conclusion derived from the findings, and implications and challenges from the study.

2. LITERATURE REVIEW

Academic libraries in the 21st century have changed from traditional manual systems to modern technology-driven operations, integrating digital resources. These libraries now provide a wide range of user-friendly services where information can be accessed remotely (Momoh & Folorunso, 2019).

Many studies have focused on the role of academic libraries and the rapid development encountered while few researchers have considered viewing the relevance of the academic libraries from a user's perspective (Mamood, 2023). The development of digital aids could be a benefit as well a challenge to academic users (Hinder, 2011). Global literature has revealed that users have considered the library as a convenient study hub and have accessed needed information with the aid of a librarian. Few studies have indicated the underutilized of the digital aids (Mushtaq & Arshad, 2022) thus Mamood (2023) strongly argued that seeking users' view and identifying their information behavior will very much benefit a library's course in the 21st century. The academic library of PAU determines to implement the echoed sentiment to identify user's perceptions, challenges and recommendations for improved services.

This study will employ LibQUAL+ model to assess users' perception in university libraries, with a specific focus on the three dimensions. The dimensions provide a structured basis for identifying service strengths and challenges from the user's perspective, that can provide recommendations for library improvement.

2.1 Theoretical Framework: LibQUAL + Model

LibQUAL is a conceptual framework grounded on the theoretical framework of SERVQUAL Model adapted especially for library environments (Cook et al 2010). LibQUAL measures users' perception of library service quality along three dimensions; Effect of service, library as a place and information control. This conceptual framework selected for this study reflects the purpose of this paper – to explore the perception of Pacific users and identify challenges and recommendations. Developed by the Association of Research Libraries in 2000, this theory assists library organizations to assess library services with a focus on the user's point of view. The users can best assess the services from their experience (Mahmood, 2023). This approach is suitable to academic libraries in Papua New Guinea and other developing Pacific nations.

Libraries worldwide have used this framework of LibQUAL tool that has given significant results. A public university in Indonesia (UINSU Medan) has found users to have access to library resources however, the information and communication needs were unmet (Sayekti et al. 2022). A study conducted in Yogyakarta revealed that library staff were polite and have met users' expectations however there was a significant gap of +0.58 and a superior gap of -0.10 (Saufa, 2023). The same study has indicated users to have utilized resources with an adequate gap of +0.53 and a – 0.44 superiority. Under the dimension 'library as a place', the data indicated good and clean space, meeting students' but improvements could be more. Zulfiqar and Khalid (2024) in their study in Southern Punjab University Libraries revealed the service quality of the libraries have met library standards but less gaps existed for information control and library as a place which are highlighted as future improvements. Manjunatha & Shivalingaiah (2004), evaluated customer's perception of service quality in Libraries. A quantitative study was carried out with the collection and analysis of numerical data from a large sample of 1252 respondents. The instrument of SERVQUAL model for data collection through self-administered questionnaires along with statistical analyses such as ANOVA and T- tests were conducted to assess differences in service quality perceptions among various customer groups. The findings showed that customer services provided by the librarians were quality however there is a need for improvement in service delivery.

The literature reviewed has outlined and discussed the perception of users of library services The digital revolution of the libraries has posed challenges for academic libraries while introducing technological advancements and developments. There are present challenges that each academic libraries have identified through research and have worked on to minimise the issues. Most of the literature in this review have conducted a quantitative study to understand the perception of various users in various library organizations. Many of the findings have revealed that library services, inclusive of digital tools and systems provided, however, were underutilized and require consistent awareness and training.

The user centered approach is one that each academic library in these literatures have preferred to identify and measure the quality-of-service delivery and satisfaction of each academic library service. However, it is identified that there is certain inconsistency with the user's perception. Despite the quality service each academic library has used; the users have not fully utilized those services which is unfair feedback to each study. The library spaces are only used for personal preference as the services remain inactive. These literatures have lacked qualitative studies and mixed methods to analyze the perception of each user.

Most of these studies have been conducted worldwide. There is lack of information of similar studies in the Pacific (Hinder, 2011) and Papua New Guinea. It is significant to address these current gaps of library service for any academic and public libraries in the Pacific and the country. In focus of this study there is a need to find strategies to maintain relevant and updated library services for students and teaching staff in spite of technological advancements in PAU. This research will examine the factors that hinders the full use of library services among the users and provide relevant strategies to enhance learning in the university.

3. METHODOLOGY

This chapter outlines the research methodology applied in this study which includes information on the research design, method, data collection, sample, data analysis, study limitations and ethical considerations.

3.1 Research Design

This study has employed a qualitative study collecting primary data from individual interviews and focus group to gather insights into user perspectives on academic library services. The qualitative case study method was selected as it involved the analysis of the phenomena which is possible to derive knowledge of a wider phenomenon from a specific case study (Gorman and Clayton, 2025).

Interview and focus group investigation allows the users to express their views in their own words. The interview and focus group technique (Slovák et al., 2023) is widely used to collect data from the target population. This technique has widely proven effective research techniques to the research platforms. This technique will allow face-to-face discussion, individual perceptions, verbal conversation, group interactions and active listening to acquire important information. In the interview and focus group method, all participants view are respected. (Vogi et al., 2023).

According to Lambert & Loiselle (2008), the integration of focus group and individual interview data makes three main contributions. Firstly, it creates a useful back-and-forth process, where an early model of the phenomenon helps explore individual experiences, and those experiences help improve the understanding of the phenomenon.

Secondly, it identifies the personal and situational factors around the phenomenon, which helps explain how it works. And thirdly, it shows agreement on the key features of the phenomenon. This results in central themes which emerge across the responses which enhanced trustworthiness of findings.

The LibQUAL project for instance, conducted interviews with users of research libraries across North America to gather insights into their perceptions of quality library services. These interviews were part of the initial phase of the LibQUAL initiative, which aimed to develop a standardized tool for assessing library service quality from the user's perspective.

The data collected was through individual interviews and focus groups which allowed users to express their views openly and honestly. This method also encouraged room for personal views to be expressed without fear or favor where views are not dictated by others. An interview guided questions were provided and made available beforehand. Karatsareas, (2022) explains that this method of interview includes predetermined open-ended questions but allows the interviewer to explore new topics that emerge during the conversation. It balances structure with conversational freedom, enabling in-depth exploration of the participant's experiences, opinions, and perspectives. According to Rabiee, (2004), a focus group is a technique that involves the use of in-depth group interviews in which participants are selected through purposive sampling of a specific population to focus on a topic.

3.2 Sample

This recruitment of this study has taken several approaches. Firstly, an invitation was sent to specific student who have met the study criteria. The recruitment and sampling of this study is best known as purposive as the team gathered information from participants who are firsthand users of the library services in Pacific Adventist University.

The Inclusion criteria included participants of more than three years with experience of the PAU Library services or have experienced the PAU Library service environment as a researcher and a current student and or faculty studying abroad. The exclusion criteria included anyone who is not a library user at PAU and who is not a PAU student, faculty, and Alumni with less than three years. A verbal and written consent was sent to each participant and printed. Printed consent was distributed to each participant in a focused group. The participant who wished to withdraw at any time during the study were advised to do so during the study and sign off in the consent form. The research team screened all participants from the initial stage.

The following is the group of participants employed for this study.

- Two Undergraduate focus group (6 individuals)
- One Post graduate focus group students (2 individuals)
- Three faculty individual interview (3 individual interview)

3.3 Data Analysis

Data was analyzed thematically using reflexive inductive coding where patterns of themes have emerged and identified. Participant interviews were conducted at a convenient time at a selected time to the participants availability. A private room of the library was organized and used as a space of interview. The interview for each session lasted 25 – 40 minutes. The participants were emailed consent forms to sign before participation. Other participants were given the consent forms and advised of the ethical standards prior to the interview. The digital audio recorded verbal interactions in focus group and individual interviews which were transcribed by two members of the team. To attain an in- depth information, the interviews were transcribed verbatim. These interviews were analyzed thematically. The interview was facilitated by research personnel which allowed a neutral person presented in front of the participants for the interview sessions. This allowed participants to share their experiences and perception openly to the research topic. This gave the opportunity for every information to be shared and not held back.

3.4 Ethical Procedure

The PAU Research Committee have permitted the study to commence with guided considerations. A written consent was distributed to each participant in a focused group and individual and an audio - record was utilized to collect data. The participant who wished to withdraw was able to do so during the study and sign off in the consent form. This was made known in the participants consent forms and also addressed verbally before interviews. It was also made known that their identity will not be made known. The data was stored securely in a flash drive and the department drive with encoded password. The head librarian has filed the consent form in her office and will be disposed after three years.

4. FINDINGS

4.1 Introduction

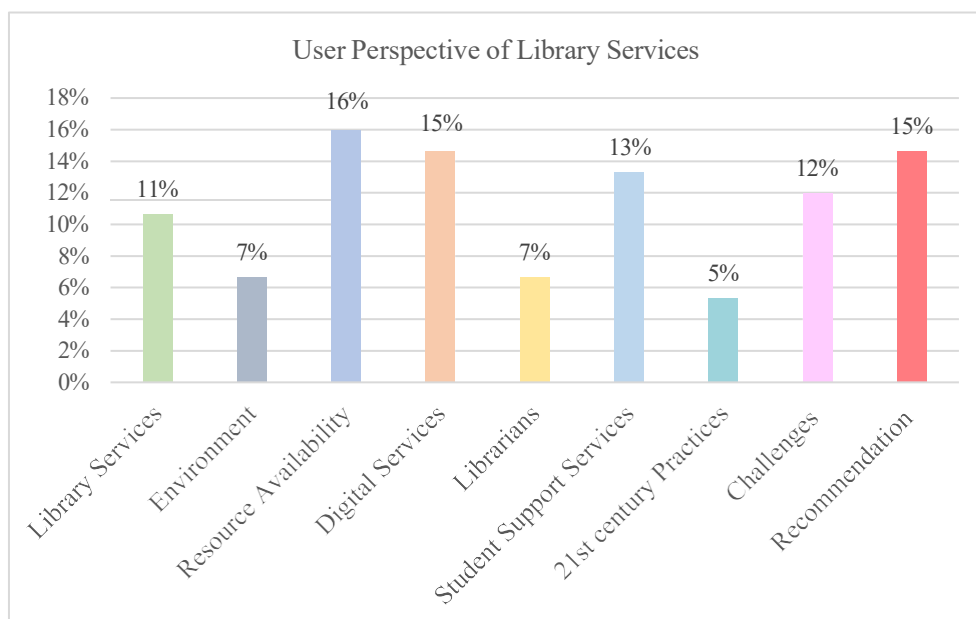
This section presents the findings done in PAU academic library in Papua New Guinea. Using the thematic approach, key themes have emerged from the research which includes library services, conducive environment, resources, digital services, student support, user challenges and recommendations. These themes have been categorized under the LibQUAL dimension and will provide further understanding and experience of user's perception of academic library services.

Table 1 highlights the context of the study which was focused on user’s perception and experience of library services. First, this table shows that all users have indicated their experience on various library services for more than three years. This suggests that library users are active participants as lecturers, staff and students during the academic calendar of the university. The research records that the library services are open and accessible to all users in the campus under university credentials indicating that only students and staff members of the university are eligible users. Interestingly, the table reveals an alarming trend where resources are underutilized with the (21st century) practices by the users and the spacious building have recently become limited with study tables and chairs due to higher enrollment.

Many users have indicated the general satisfaction of the library services with space, various learning resources, conducive environment, availability of resources, and student support and have addressed challenges and possible recommendations. Fig. 1 shown below shows the responses on the library services.

Table 1. User Perception of Library Services

Variable (x)	TotalPercentage (y)	
Library Services	8	11%
Environment	5	7%
Resource Availability	12	16%
Digital Access Librarians	11	15%
Student Support Services	5	7%
	15	13%
21 st Century Practice	7	5%
	8	
Challenges	9	12%
User Recommendation No response	0	15%
		100%



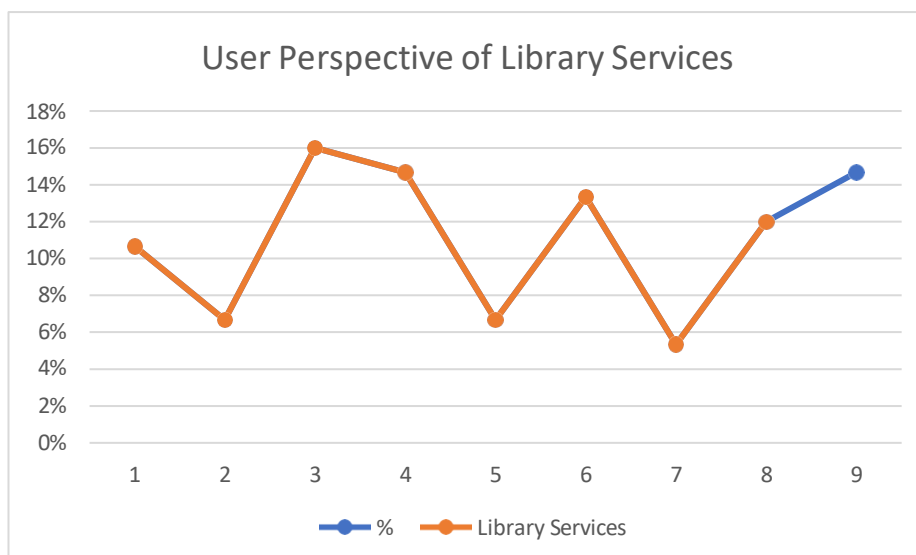


Fig. 1. Responses on the library services

4.2 Library as a Place Library Services

An interesting finding emerged when assessing the services provided by the academic library. All nine participants expressed similar views of the services provided in the library. This response is echoed in the quote from P2: *“The library is providing an excellent service in terms of database. There’s printing available; you have all these computers there, the students can utilize whenever they can, everyone is always present in the library.”* All users have shared the same sentiment which they have witnessed the impact to their academic work. Another response reflected in the quote from P7 which states *“It’s excellent, most of the books I need are here”*. This was a response from a theology student who prefers to use the library books to find answers to his assignment questions.

Students have significantly indicated the importance of the library as a place of learning packed with various resources. As reflected in the response in the quote from P6 which says, *“A library contains everything that you want to learn and get knowledge to abstract from.... For example, you can learn about business or subjects focusing on success, spiritual life, social aspect of life or anything.”* A post graduate student shares his views of an academic library from his firsthand experience with the services he consistently utilizes whilst his studies.

When asked about their views and experience about the general services of the library, few students and faculty who were alumni to the institute had a good comparison of what the service was like in the past and what it is like at present. P1 had this to say *“compared to my time here before, the services have significantly improved. I am very impressed not only with space but with books and now there’s this online data thing for the students to use, I like it, It’s nice”*. The online database has become an introduced practice to the current students where former students have not utilized to search for specific information they needed for research purposes. This was an additional service embraced by a returning student who passed out as an educator when the institution was in its college state. He has experienced the manual service of topic search in the library and have acknowledge a new development.

As a result, their view of the library service found in these institutes are ideal of an academic library in the pacific. This situation underscores the importance of better facilities and technological aid the library could have provided in a developing country in the pacific. Users as P1 have only being exposed to the present academic library and have tried to provide similar services in the school he last taught and was employed.

4.2.1 Conducive Environment

Regarding the physical environment, users have expressed positive views and evenly addressed few challenges they have faced in the library.

P1 said *“The set up is good...A quiet learning environment, you can do your private study. I come almost daily to the library.”* This user claims to be a married student who is accommodated in the campus in the student

village and has a preference to remain at home and study but very much chooses to study in the library. He further states that *“there are tables that student’s book for combine study and discussion. Now I can’t really see whether they are around here...students would want to sit down together because you don’t really have the space outside ...But I like that part in which there’s an allocation of group.”* This student has pointed out that the library atmosphere is suitable for group study as well as apart from his personal studies. Though there is a big landmass in the campus where suitable benches are available outdoors, such an atmosphere of quietness and study setting is not suitable thus the library becomes an ideal place for group study. The user additionally addresses his observation of group study tables that are not available which he reckons must be reintroduced.

Responses from students and faculty have highlighted that the library provides a conducive environment for learning and a place of collaboration between the student and the lecturer as reflected in the interview with a faculty member as stated in the quote from P2, *“I can see that we are given the opportunity to access the information and it’s an excellent way of us to work as a team where lecturers and students get the most.”* The lecturer has indicated that the library not only serves the information needed of students and faculty but also provides a platform for students and lecturers to interact with each other and utilize the opportunity.

A participant claims that the library is not only a conducive study zone but is also a healthy place to study as P6 addressed, *“The library is clean”*. Then P1 additionally said *“The restroom is provided but needs to improve as the que increase”*. The latter user shares his concern for hygiene in the area. Since the building is always clean and has a welcoming atmosphere, there are also clean restrooms provided to ease students’ health needs. Students prefer to use the toilets in the library often because of the condition of cleanliness and health standards. Therefore, this has resulted in long waiting lines.

4.3 Information Control

4.3.1 Resources

The study findings have identified the available resources which users have indicated in the library to enhance their research progress and meet their information needs and have highlighted specific resources that have benefited them. Others (4 out of 9) have addressed the challenges of each resource used which will be covered in the other category under **challenges**.

For example, P1 said *“The library is very good, very impressive not only with space but with books, and the online data... the students use, I like it, it’s nice.”* Books have been one of the main resources provided in the library. Students use a lot of books to find content applicable for academic purposes. A faculty member further states in the quote from P3 *“I don’t think our focus has been on information.... It’s been on books for a long time”*. The user has addressed his hope to provide information on various platforms apart from books that has been the main source of resources. P7 however shares the same sentiment in finding valuable resources in books who said *“Most of my research books I need are here”*.

All participants, however, have also addressed the need to gather information online using computers in the library. P6 stated that *“Computers are connected to the Wifi”*. P7 share the same views *“the computers in the library have fast internet speed so they (students) choose to use these computers”*. P4 further adds *“Most of the students here depend on computers so they rush to occupy a computer in the library.”* The findings suggest that computers provide a notable benefit to students learning. The agreement among students’ participants indicates that computers offer benefits such as research, updates journals, updated e-books and internet preferences. This proposes that the computers have effectively support students in developing necessary research skills and have provided a platform for research.

4.3.2 Digital Services

Given the existing services in the library, participants expressed the benefit of accessing resources through digital platforms. This is affirmed by a faculty member stating:

“I think PAU Library is providing an excellent service in terms of another database. What we (library) are providing is excellent services.... Theres’s printing available, you have all these computers available there, the students can utilize whenever they can...for me those databases are very excellent source of knowledge

where students should access information from like up-to-date information....”

The students have shared the same views indicating that online databases, printing machines and computers are digital services used in this space. P9 specifies which digital service is used commonly “*The most accessed (online database) is JSTORE.*” Another participant said in the quote from P8 “*I use JSTORE and ERIC quite a lot*”. The various online databases provided by the library system have met various research for students and faculty. The digital service available in the form of the library system has eased students with locating resource on the shelves as reflected by P6 “*It’s easy to locate them (books) using the online database.*”

4.4 Effect of Service

4.4.1 Librarians

The librarians play a significant role in enhancing the library services. This have been revealed by the participants as shared by P1 “*I like the way the staff address the students and ensuring that things are done right in here. Even just to bring their bags in, they remind students to take their caps off and the bags to be left there, not bringing them in and ensuring that there is this quietness they walk around. I normally see them walking around and looking at people and that seems to me they are caring. And they are professional in terms of their approach to look after the library*”. Looking beyond immediate roles and challenges, an academic participant (P4) raised a critical point about the library staff “*When I was first year, I wasn’t sure where to locate resources...who would be available to assist me, who is more open so I can ask for assistance ...I would like more library assistance and enough space for more updated resource books.*”. This suggests that the librarians are the key personnels to serve students and be aware of the individual student challenges that they may address their challenges where necessary. Library services are greatly impacted by librarians and the users greatly depend on one.

4.4.2 Student Support Service

The users have made known of the support needed and given to them during their experience of encountering library services. All the participants valued the support given to them provided by the library staff as reflected by P3 stated in the quote “*....and also the student support services, it would be nice if students make a booking with student support.*” The majority (7) of participants reported collaborating with librarians for services needed to support them in their academic progress. These connections provided a valuable support network for the users.

Other support include spiritual emphasize to enable growth in faith as reflected by P1 “*I love the 3pm prayers*”. A theology user reflected in the quote from P7 “*The prayer at 3pm is good.*”. These suggest that extracurricular activities are a means of support and wholesome growth.

Users who are students and parents also utilize the library resources for their children. The reading level of their children is enhanced when parents borrow reading books from the library to educate their children and uplift the literacy level of their children. P8 indicated “*My library card is mostly to borrow books for my children.*”.

Looking beyond the challenges of providing student support, participants have also indicated the need to serve student communities such as exhibitions. One participant elaborated in seeing the Adventist community served by the library especially the heritage and archives center becomes the common place to learn of the Adventist history “*I would like to see more historical work done in our archives like not just the history of PAU but the church in PNG, the work of the church in PNG and maybe history about the Pacific. It could be a place where we bring people to learn about the history of our church*” indicated P8.

4.4.3 21st Century Learning Practices

The study findings suggest that the academic library provides technology learning aids and the agreement among students suggests that the current trend practices are available for users to utilize during their interaction with the library. P6 had this to say, “*When I was in first year, the library link was installed in my phone to search for books on the*

shelves, I use it and when I don't I ask the librarians who assist me". Records indicate that phone applications were installed in users' phones to search for items in the library. This application was user friendly and was used to ease the need to use a computer or seek support from a librarian. A user, P8 indicated the use of a reference management tool known as Zotero recommended by the library team. P8 stated in the quote " *...I use Zotero, maybe six weeks ago, the Zotero on my laptop kind of crash and I could not use it anymore. But you know things like that be updated with software like Zotero or Mandalay that can help us, and them stay on top of things so when students need help, we can give them the help they need*". Two post graduate participants utilize the software's provided and strongly urged the librarians to stay abreast of the current trends.

4.4.4 Challenges faced by users

All parties involved – students and academics expressed concern about each library services and performance. The faculties have indicated the need to address challenges. A faculty member acknowledged this gap, stating *"I don't think we are open to change because we are doing things the same way for a long time. Maybe we want to change but we do not know how to, like I go downstairs, and I look at some of the book's downstairs, I've seen encyclopedias.... You go to a modern library; the encyclopedias are no longer published because the information is outdated. So, I see us continuing with what we know and not quite sure how to progress toward the modern academic library should be like.*

Student users echoed the same concern acknowledging the existing challenges. P6 indicated *"Most of the books for Nursing is not updated. The online library, we are aware of it, but they (librarians) need to come to each school and explain to us more about it."* P5 also addressed *"During my first year, I also faced some difficulties but then now I began to realize that the librarians need to be updated with the latest information like the textbook and reference, news and all things. They need to be updated daily so they can feed us with new information"*. Students have acknowledged notable benefits from the library services and anticipate better services.

4.4.5 Recommendation by Users

Looking beyond the immediate challenges, all users expressed views of improvement and developments. An academic participant raised a critical point: *"If I were to talk about the building, it should probably be open a bit longer late at night"*. This suggests that users value the learning atmosphere to spend longer periods into late night studying. This is supported by another academic participants who states, *"The library needs expanding"*. A student lamented, *"with the increase with enrollment, the space is limited. It is ok at night but during the day the library seems crowded so some sit on the floor"*. P5 shares, *".... Resources are available and relevant to the 21st century but because of the limited space and textbooks. P4 recommends "...extend Wifi services, customer service and be presentable (librarians) to students"*.

All users recommended valid aspects to improve library services, indicating, updated physical resources and digital services, consistent support system, controlled users, training and networking.

5. DISCUSSION

The discussion of this section is focused on library services, conducive environment, resources, digital services, librarians, student support services, 21st century learning practices, user challenges and recommendation.

5.1 Library Services

The findings from the interviewees on library services revealed an interesting perspective. First, the distribution of responses highlighted that a significant portion of respondents, totaling five, addressed their views of an academic library as a learning center. This suggests that all participants have similar views about the role of an academic library based on their current experience of their library. This is in consistent with the findings of Abubakar, (2022) who highlighted that academic libraries provide access to relevant and up-to-date research

information and provide training and support for students' learning needs through a variety of mechanisms. The findings further highlight that libraries help individuals battle poverty, deprivation, and illiteracy by providing information. Furthermore, academic libraries are often acknowledged as vital contributors to a country's human resource development. Academic libraries provide relevant information to educate a country's citizens to be informed and to stay abreast of all academic activities and provide a general worldview of the world around the users. This not only supports an academic but also an ordinary citizen who interacts with a student user.

5.2 Conducive Environment

The physical environment of the library plays a significant role in promoting very good research practices and conducive study habits. As it frequently emerged as a theme during data collection. This aligns with the findings from Monu et al., (2020) the study done in a developing country, Nigeria which highlighted the importance of libraries to provide ideal environment and vital information resources for students to develop and sustain good study habits that are necessary for outstanding academic performance. This stands consistent with the findings from Adeniran (2011) which states that a conducive environment is created for teaching and research activities; readers will be encouraged to visit and use the library resources frequently.

5.3 Resources

Resources are the main component of a library service that a user seeks to utilize. The findings highlight the main resources used by the participants which are books. Three of the users have indicated the books were outdated while the majority of users have specified the availability of online journals which are updated and useful. It is unfortunate that these online journals resources have been underutilized because students have leaned towards the internet options which give them alternate information freely and on time. However, online journals have provided academic credential content and are very appropriate to use for academic purposes. According to Upadhyay & Chakraborty (2008), the use of online journals provides a vast array of research material and publication and up to date materials.

Resources such as computers are also applicable in a library where it is used to provide information such as online journals and other relevant internet explorers. This is suitable for a developing nation where the economy is a challenge to provide various mechanisms of content delivery. Resources available in printed and non-print materials are required in a library to deliver research and educational content in different forms that can be user friendly. (Thompson, 2012) indicated that students who use computers in the library are more likely to use other library services and physical collections. This holds true to the use of computers to access databases, printing and accessing other research avenues.

5.4 Digital Services

The digital services have been an integrated practice since the revolution of technology. Despite the various mediums provided and utilized by users, the online database stands significant in this study. The libraries' consistent providence of updated materials through online databases, journals, encyclopedia and peered research reviews are significant to the user's academic work. The use of online journals provided updated work and ease the task of searching and filtering specific information (De Groote & Dorsch, 2001).

5.5 Librarians

The librarians play a vital role in the services provided. They drive the services forward and implement developments in the field of information. They are recommended to stay abreast of all information and be able to direct a user to the right content where and when necessary (Shank et al., 2011). Librarians can also be educators whilst directing users to search for specific information online or either locating a resource on bookshelves or training a user to use software's such as Zotero reference management guide.

5.6 Student Support

The intellectual well-being of a user is considered vital while utilizing the library services. The user is considered paramount and is given priority to make their experience one that is important to enhance positive mental health and wellbeing. The data collected from 6 out of 9 participants indicated most users as students. This promotes the need for student support model where various activities are conducted by the academic library to provide a wholesome learning experience (Bladek, 2021). The data collected indicated various student support service recommended; this includes spiritual emphasis, children's learning platforms, conducive environment, hygienic restrooms and community exhibitions. However, the student support model requires appropriate documentation, research and review for effective practice in developing nations.

5.7 21st Learning Practices

Since the introduction of technological developments, libraries have adapted the trend of using 21st century devices to enhance user experience (Solomon, 2024). This is revealed also in these studies where users have opted to use digital tools to enhance research and academic work.

All participants have indicated the use of digital tools including the use of Artificial Intelligence assistance. These tools include devices and systems. All student participants have had their mobile phones installed during their first year of enrollment with the library (liberty) link applications to access library collections while their laptops were installed programs by the Information communication and technology (ICT) department to access the library page via internet explorers such as chrome.

The availability of reference management software, known as Zotero, was also introduced and trained by librarians to all users. This software has been updated incorporating the latest version integrated with AI. The data reveals that only a (1 out of 9) user had this installed in the laptop which was used, however, had experienced technological problems while doing so. The challenge is for librarians to stay abreast of information and developments in the field of information so challenges encountered by users can easily be solved. (Shank et al., 2011).

5.8 Limitations of the Study

These study findings could be difficult to generalize to universities in PNG and the pacific island nations due to its focus on a single university. The study may not have captured the diverse experience of all library users and the long-term impact of the university support system on users' outcome.

6. CONCLUSION

Resources were a recurring theme throughout the study. Despite recognizing the role of academic library services from users' perception, users have highlighted the need for challenges to be addressed and have provided recommendations for each category.

While library services offer opportunities to be educated and grow with digital experiences, five out of nine have struggled to utilize the services. Nevertheless, future developments such as the 21st century practices, student support model, source of various academic resources, and informed library staff remain evident.

The university library research project is moving in the right direction by conducting relevant research studies of concerned areas and to bring about developments from the solutions recommended. Reviewing policies and procedures, training and overcoming challenges could be beneficial.

The academic library anticipates to provide a platform for a 21st century academic learning center, educational benefits, wellness center and community literacy hub for the university but a robust support model is crucial to benchmark and evaluate its performance consistently.

6.1 Implications of the Findings

The study revealed that practical research skills are necessary to be utilized during academic work at Pacific Adventist University. Additional factors like training individual students, access to resources and student support are crucial. The findings highlight the limitations of Pacific literature. The case study conducted in a developing country has economic constraints that can have significant effect on the role of users and libraries going forward.

For researchers and universities, the study provides valuable insights for designing effective library service assessment which can utilise the LibQUAL + Model to serve specific users whose second language is English. These could include business houses, financial aids, extension designs, mentorship programs, community support and infrastructure. The study emphasizes the need for collaboration and networking with universities in the Pacific and calls for consistent planning and flexibility.

While academic libraries evolve to suit the needs of the users in the 21st century, it calls for consistent assessment and support from the parents' institutions and founders. This is important for a wider impact on universities.

6.2 Potential areas for further research

It is important to conduct more research involving other universities in PNG to assess the visibility of the findings. Exploring factors like cultural context, political environment and economic development can impact the role of digital libraries. It is important to track users' performance and challenges encountered and overcame during their experience and to see if this experience were applicable in their academic progress.

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