LIBRARY AND INFORMATION SERVICES RESEARCH PUBLICATION

From the 32nd Library and Information Services Month
National Library of the Philippines
November 2022

CATEGORY A

SEVILLA • ALIVIADO • BROQUEZA • SIAS • MARIANO

National Library of the Philippines
Manila 2023

LIBRARY AND INFORMATION SERVICES

RESEARCH PUBLICATION

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FOREWORD

Research is what propels humanity forward.

As what this statement suggests, research is relevant in the development and improvement of people's lives. It is a valuable tool in addressing the needs of the society, provides reliable data in finding solutions and uncover effective policies or systems.

This is similar to the essential role of library and information services in the production of research and studies relevant to the enhancement and development of existing knowledge and processes. As a wellspring of sources and information, it is crucial that libraries must also give attention to its services, programs, projects, advocacies and initiatives in performing its role in research development.

Hence, the Library and Information Services Month (LISM) 2022 Research Conference expanded the opportunity for Library and Information Science students and professionals to showcase their research and contribute to the improvement of library management system and services. It is likewise expected to produce studies on the roles of libraries in the preservation of Filipino culture and heritage based on the LISM theme: ***"Mga Aklatan Bilang Kanlungan ng Karunungan: Tagapangalaga ng Kultura at Pamanang Lokal."***

A compilation of the top three winning researches, this book could provide significant data on the specific areas of libraries and will benefit all types of libraries that have similar concerns in their services, policies, etc.

This research publication is a must read reference material for library professionals and administrators who seek new ideas; consider proposals with bigger potentials; and, apply effective solutions to a certain problem in this field. We highly encourage everyone to get an inspiration from these researches and contribute in the different aspects of library services.

The celebration of the 32nd Library and Information Services Month (LISM) is one of the grand event in the field of librarianship. During this annual celebration, library professionals, students, library organizations, lead agencies and the community joined together to continuously promote the importance and the role of library and information services in the community.

The Search for 2022 LISM Best Research Award and the LISM Research Conference were initiated with a goal of increasing the number of researches about library services and its role in preserving culture and heritage. There are two categories-- (a) the undergraduate students of Bachelor of Library and Information Science (BLIS); (b) the researches from several professional librarians and graduate students of BLIS.

A group of panelists from the members of the Philippine Librarians Association, Inc. (PLAI), who are specializing in library and research provided their services to assist the NLP LISM Committee in identifying the research outputs based on the set rules and criteria.

In this research journal, a selection of studies about the following topics were submitted: Culture and Creativity, Guaranteeing Access to Knowledge, Information and Culture, Intellectual Repository, Libraries and Culture, Libraries as Agencies of Culture, Role of the Library in Contemporary Culture and, Library, Heritage, and Society. However, only three from each category are included in this publication. The top three winner from Category A and B were published with the following titles:

Category A:
1. REFERENCE SELECTION AND UTILIZATION AND OF CAMARINES SUR POLYTECHNIC COLLEGES FACULTY IN SYLLABUS-MAKING

2. GREEN LIBRARY PRACTICES AMONG SELECTED ACADEMIC LIBRARIES IN CAMARINES SUR: BASIS FOR LRDS ENVIRONMENTAL SUSTAINABLE PLAN

3. MANAGING BARRIERS: CHALLENGES AND SOLUTION IN ACCESSING DIGITAL LIBRARIES – A SYNTHESIS STUDY

Category B:
1. COLLECTION ASSESSMENT OF INDIGENOUS KNOWLEDGE AND LIBRARIANSHIP: COURSE PREPAREDNESS AND REPRESENTATION STUDY IN CALABARZON

2. ORAL TRADITION AND EXPRESSIONS RESOURCES AND CONSERVATION PRACTICES OF SELECTED PANGASINAN LIBRARIES

3. THE VALUE OF PUBLIC LIBRARY ACCESS: A BI-INTERVAL HISTORICAL RETROSPECTIVE ANALYSIS OF PRE-PANDEMIC QUEZON CITY PUBLIC LIBRARY – MAIN

The LIS Research Publication will be available to the public as a primary reference of the future programs which could be implemented by different libraries, library science educators and library administrators.

ACKNOWLEDGEMENT

The NLP Library and Information Services Month Committee acknowledges the importance of using research in building interactive bridges between public libraries and their communities amid a rapidly changing society. Hence, the Committee wishes to express its profoundest gratitude to:

TABLE OF CONTENTS

ABOUT THE LIBRARY AND INFORMATION SERVICES MONTH

The National Library of the Philippines (NLP) and the National Committee on Library and Information Services (NCLIS) of the National Commission for Culture and the Arts (NCCA) spearheaded the celebration of the Library and Information Services (LIS) Month in accordance with Proclamation No. 837 series of 1991, which declared the entire month of November as LIS Month. The celebration is being conducted every year to promote awareness on the invaluable service rendered by libraries and information centers, such as providing data and materials for lifelong knowledge and learning, for research and leisure.

In 2022 LIS Month was celebrated with the theme, *"Mga Aklatan Bilang Kanlungan ng Karunungan: Tagapangalaga ng Kultura at Pamanang Lokal,"* which highlighted the significant roles of libraries in providing services and information in the promotion and preservation of Filipino culture and heritage. As many libraries become a repository of materials and information of the local heritage and history of the community, this ensure that these materials were being preserve for the future use of the community.

This year, in partnership with library associations and public libraries, LISM Committee and NCCA-NCLIS prepared activities that will support and contribute to the improvement of library services, and develop programs that will increase the role of libraries in nation building.

OBJECTIVES

The main objective of the project is to raise awareness about the libraries' services, as well as the role of the libraries in the development, promotion and preservation of Filipino culture and heritage that is significant in the sociocultural aspect of the community. Specifically, it aimed to:

1. Raise awareness in the library community through events, social media,   websites, and hybrid activities (online and onsite activities).

2. Create uniform schedule of events for the many types of libraries by inviting various library groups in the country to participate in the month-long celebration;

3. Recognize the services, programs, projects, advocacies, initiatives, and activities of libraries and information centers in identifying distinct cultural resources of their respective communities and promoting interest in understanding local heritage and culture.

SEARCH FOR 2022 LISM BEST RESEARCH AWARD AND LISM RESEARCH CONFERENCE

The 32nd Library and Information Services Month (LISM) Committee, in partnership with the National Commission for Culture and the Arts (NCCA) through the National Committee on Libraries and Information Services (NCLIS), facilitated the announcement of Call for Papers in connection with the LISM celebration on November 2022.

Submitted research papers underwent the peer-review process and those deemed publishable were made eligible for the 2022 LISM Best Research Award. Library and Information Science students and professionals have been invited to share the fruits of their research through publication and oral presentation in the LISM Research Conference.

OBJECTIVES

1. To examine the role of libraries and information centers in protecting, conserving, and preserving local heritage and culture.
2. To determine the importance of building local heritage collections and the roles librarians play in promoting and caring for the local heritage within their community.
3. To recognize services, programs, projects, advocacies, initiatives, and activities of libraries and information centers in identifying distinct cultural resources of their respective communities and promoting interest in understanding local heritage and culture.

REFERENCE SELECTION AND UTILIZATION OF CAMARINES SUR POLYTECHNIC COLLEGES FACULTY IN SYLLABUS-MAKING

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Abstract

Education encompasses a vast selection of academic disciplines; arts and sciences. It serves as an effective tool for self-innovation; people who want to explore and are prepared to face the challenges that will arise on their journey. It favors potential and improves the utilization of individual or group resources in the teaching-learning process. This study has been conducted to determine reference selection and utilization of Camarines Sur Polytechnic Colleges' faculty in syllabus-making. The researchers used a survey questionnaire through Google Forms to collect the data needed. This descriptive-correlational study's initial goal was to determine, interpret, and evaluate the practices of faculty when it comes to the selection and utilization of references for syllabus-making. The respondents of this study are 81 faculty members of the Camarines Sur Polytechnic Colleges. This study was carried out so that the researchers would know how the references are selected and what strategies the faculty does to effectively render the knowledge intended for their students. As results were analyzed, it showed that faculty-respondents chose references that are relevant to students' academic demands and utilizes those references during discussions to give reliable and clear explanations of the course. Moreover, the respondents' selection and utilization of references in syllabus-making does not vary in terms of gender, age, years in service, and the college where they teach. The research also proved that library resources and materials through effective collection development, serve as a tool for expanding students' knowledge of the subject or course, which also results in an effective teaching and learning process.

Keywords: Syllabus-making, Reference selection, Reference utilization

3

INTRODUCTION

Education encompasses a vast selection of academic disciplines; arts and sciences. The world needs various competent professionals for the continuous improvement of human necessities. It is a tool for change and for developing people's potential, flexibility, vision, initiative, and confidence; people who want to explore and are prepared to face the challenges that will arise on their journey, whether in school or in life. It serves as an effective tool for self-innovation. The process of education favors potential and achieving a better use of individual and group resources within the teaching-learning process. Such individuals are certainly the product of well-constructed and efficient institutions from all over the world. It does not need famous names; it only needs an effective implementation of its services and programs.

Higher education institutions offer different programs to hone expertise for a particular field. It shall undergo a comprehensive feasibility study to determine its advantages and disadvantages, in accordance with specific guidelines in a memorandum, prior to the realization of offering it as one of the academic programs for an academe. The agency makes use of a learner-centered or outcome-based approach to determine the appropriate curriculum delivery method for the students.

For additional information on their outlines, faculty would seek other resources or references needed for a course. A single reference would not contain all of the necessary details on a subject, some needed cross-referencing. There could be difficulty identifying the syllabus content as there is no single clear response to what is needed. Resources must be present to ensure that topics and information are not only valid and reliable but also effective and sustainable. Decreasing resources could lead to students becoming underprepared for the tracks and may experience heavy criticism, thus providing efficient and sufficient resources helps attain desired learning outcomes. Furthermore, this study would like to determine the profile of the faculty and how the Camarines Sur Polytechnic Colleges full-time faculty makes syllabus engaging by analyzing their selecting and utilization practices of references in it and knowing its effectiveness in the teaching and learning process.

BACKGROUND

According to a study by Seker (2016), designing a syllabus is mainly concerned with the selection and the rate of the subject matter, not with the activities and tasks to be accomplished. It has stressed that syllabi are prepared to achieve a specific result of the learner's competence for the course. Casiano and Andrada (2019) added that faculty of the 21st century was advised to level-up their teaching to student-centered approach considering the demands of globalization. Challenges emerged in the implementation and observance of outcome-based syllabus. Workshops and seminars are not enough as it only focused more on the layout and structure, not on the execution of lessons in the classrooms.

Reference sources are very important to individuals who seek for additional information for various topics. Faculty uses it to disseminate factual information. They provide links and further knowledge of courses. They are essential learning materials

needed in gathering factual information. The increasing importance of choosing references, faculty limits the use of textbooks. Instead, they have chosen articles to upgrade critical reading and thinking skills of students. Faculty also involve themselves in-search of deeper knowledge to further their expertise on the course. By doing so, both student and faculty are involved in evaluative reading and artistic reasoning. The research of Chung and Kim [2016] that instructors aim in creating a syllabus is to introduce the course of learning and to render essential information and learning tools. It serves as a guide to students in knowing the purpose of the course, a syllabus should be redesigned for it to be aligned to the target learning outcomes.

He (2020) asserts that to improve learner's ability in information literacy and digital communication, it is highly encouraged for a syllabus to be parallel with the 21st century skills in terms of structure and instruction. Skorton and Bear (2018) also added that community colleges are aligning their syllabi to state universities as a preparation for their student's success and acquire the best possible quality of learning they can adhere on their chosen programs as competition to various fields' increase. Fiel (2020) also suggested that the current setting of online and blended learning needs also to strengthen the level of expertise on courses and cultivate learning process to realize outcomes foreseen even in digital setting and make sure that appropriate potentials are develop through time.

METHODOLOGY

This included the theoretical, conceptual and operational frameworks that are related to the study to further the knowledge of researchers on the topic. Research method, respondents, data gathering procedure, and statistical treatment of data are utilized to support the frameworks used and formulated.

Research Method

The descriptive-correlational research method was used by the researchers to further investigate the gathered data on the reference selection and utilization of Camarines Sur Polytechnic Colleges faculty in Syllabus Making. It is a study in which the researcher is primarily concerned with explaining relationships between variables rather than attempting to determine the connection. The correlative study design examines the interaction of two (or more) variables without the researcher intervening with or modifying any of them. It is a quantitative research approach that is not even reliant on experimentation.

Rational Choice Theory

Selection is the process of choosing something or someone which best fit to the established criteria. Ganti (2020) explained that *Rational Choice Theory* frequently debated and correlated with the notions of rational actors, the presumption of identity, wisdom, and the invisible hand. *Rational choice theory* is built on the principle of intervention from rational agents, who are dependably individuals making rational judgments in an economy based on practical calculations and knowledge that

is rationally available. Reasonable actors constitute the backbone of rational choice theory and are the factors that make *rational choice theory* productive. As part of broader researches aimed at gaining a better understanding of a certain habit of society as a whole the rationality assumption can also be used by economists. The central elements of all theories of rational choice are the preferences, beliefs, and constraints of an individual. Preferences denote the positive or negative assessments that people attach to the possible results of their deeds.

Progressive Utilization Theory

On a report by Dinis and Mahaprajinananda's [2020] "Update on T*ools to Change the World",* a book by Mahehvarananda and Price, inspired by P.R. Sarkar's *Progressive Utilization Theory (PROUT),* is a study guide that presents a vision statement of a much more adequate, sustainable, and fair society in which people and communities are empowered. As further expounded in a journal article by Mahehvarananda and Branch (2010) *"The Progressive Utilization Theory" (PROUT)*, offers the chance to champion and explore what we are for. *PROUT* believes in economic self-sufficiency, cooperatives, environmental balance, and moral foundations. Economic independence, or the release of humans from worldly problems, is a key feature of *PROUT* in a way that all intellectual and spiritual transformation would have growing possibilities. The solution to economic inequality by *PROUT* is based on the apparent reality that the physical resources of the planet are limited. When some people accumulate just so many, there is not enough for everyone else. *PROUT* allows a person to realize their full potential and realize their goals and aspirations. Intense utilization and fair distribution of natural and human resources, according to *PROUT*, could emphasize the importance of both individual and collective well-being.

Operational Framework

As shown in Figure 1, the respondents' profile is an independent variable with the selection practices of references of faculty and utilization practices of references as the dependent variables. However, reference utilization practices are considered dependent variable to the selection practices since once a faculty obtains a reference that will cater all the information they need, that reference has the highest chance of being utilized efficiently in providing all the possible knowledge to their students. When we use our resources wisely, we will enjoy high quality of life and learning.
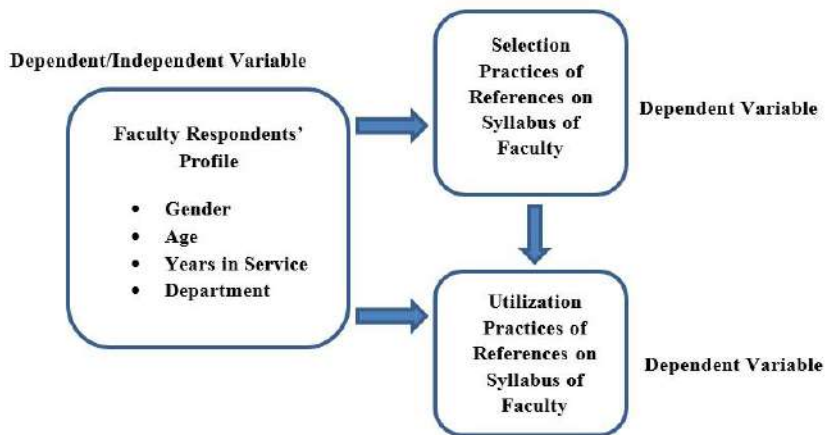
Figure 1. The Operational Model of the Study

Respondents

The respondents of this study are the full-time faculty of the Camarines Sur Polytechnic Colleges because they are knowledgeable on selecting and utilizing references on syllabus. They were selected through random sampling method, from the total population of 131 faculty members. The following number of respondents for each college has been collected in compliance to the CSPC Memorandum 20-19 (b) which states that "the minimum required number of respondents for quantitative studies is 50":

Respondents	Frequency	Percentage
CBM Faculty	13	16.05%
CCS Faculty	15	18.52%
CEAS Faculty	13	16.05%
CHS Faculty	14	17.28%
COE Faculty	26	32.10%
Total	81	100%

Table 1: Respondents

Data Gathering Tools and Procedures

Questionnaires are given to the respondents to gather needed data to support the development of the study. Since it is a challenge sending hardcopies to the respondents, an online survey took place. Google Forms were sent to respective Colleges' Dean Office's email addresses and has been distributed to the faculty. The survey questionnaire is divided into three parts: Part 1 Profile of the Respondents, Part II Reference Selection on Syllabus Making of Faculty Respondents, and Part III Reference Utilization on Syllabus Making of Faculty Respondents. Before conducting the actual survey, a dry-run with ten BLIS 4A students was conducted to ensure the validity of the questionnaire as well as its results.

To finally conduct the actual survey, we wrote a letter asking permission from the SUC President for us to be allowed to distribute the questionnaires. The researchers sent the Google Forms to the respective College's Deans Office's email addresses and they are the one who have distributed it to the faculty to ensure that

majority of the desired respondents will comply and accomplish our questionnaire. After all of our computed sample sizes for each college responded, we have forwarded to our assigned statistician all the data gathered for computation and analysis.

Statistical Treatment of Data

The statistical tools used by the researchers are the percentage technique to quantify the tabulated responses. Kendall's Coefficient of Concordance to determine the relationship among variables. Kruskall Wallis H Test to determine the significant differences of respondents' reference selection and utilization when grouped according to their profile variables.

RESULTS AND DISCUSSION

This chapter shows explanations on how the data gathered from respondents for this study was analyzed and interpreted.

Respondent's Profile

According to the data gathered, the majority of faculty respondents are between the ages of 26 and 30. The majorities of instructors in this age group have recently completed their Master's degrees and are eligible to teach at higher education institutions as prescribed by the Commission on Higher Education. That is also the reason why a large number of them have only been teaching for less than five years. When it comes to faculty recruitment, no such gender dominates since the college adapts gender equality. A large percentage of them teach in the College of Engineering since it is the college with the most number of enrolled students.

Profile		Frequency	Percentage
Age	25 and below	7	8.64
	26-30	26	32.10
	31-35	7	8.64
	36-40	9	11.11
	41-45	10	12.35
	46-50	10	12.35
	51-55	9	11.11
	56-60	2	2.47
	61 and above	1	1.23
Gender	Female	40	49.38
	Male	40	49.38
	Prefer not to Say	1	1.23
College	College of Business and Management	13	16.05
	College of Computer Studies	15	18.52
	College of Education, Arts, and Sciences	13	16.05
	College of Health Sciences	14	17.28
	College of Engineering	26	32.10
Length of Service	5 years and below	52	64.20
	6-10	10	12.35
	11-15	6	7.41
	16-20	3	3.70
	21-25	5	6.17
	26-30	4	4.94
	31-35	0	0
	36 years and above	1	1.23
Total Number of Respondents = 81			

Table 1. Respondent's Profile

Practices of Faculty Respondents in Reference Selection

Indicators	Always		Often		Sometimes		Never		Weighted Mean	Verbal Interpretation
	f	%	f	%	f	%	f	%		
a. Relevance to Needs	67	82.72	14	17.28	0	0.00	0	0.00	3.83	Always
b. Authoritativeness	38	47	36	44.44	6	7.41	1	1.23	3.37	Often
c. Scope and Content	63	77.77	17	21	1	1.23	0	0.00	3.77	Always
d. Quality of Materials	34	41.98	40	49.38	6	7.41	1	1.23	3.32	Often
e. Favorable Reviews	36	44.44	39	48.15	5	6.17	1	1.23	3.34	Often
f. Recency	54	66.67	25	30.86	2	2.47	0	0.00	3.65	Always
g. Language	57	70.37	23	28.40	1	1.23	0	0.00	3.69	Always
Average	50	60.5	27	33.33	3	3.70	1	1.23	3.57	Always
Total Respondents = 81										

Table 2. Reference Selection

As reflected in Table 2, with an average weighted mean of 3.57 the faculty-respondents' 'always' select references to use for their syllabus-making. It proves that they construct lessons with firm bases from books, journal articles, and other resources. Anyone who learns from carefully selected references guarantees

9

productive learning outcome. A study by Arnolds (2019) and his colleagues imply relevance as an agent in the improvement of the student's engagement on the subject topics. Discussions adjusted to meet students' needs for knowledge motivates career goals and success, thus preparing them to make tougher life decisions, tenacity and commitment.

Reference Utilization Practices in Syllabus-Making

As seen in Table 3, the faculty-respondents always utilize the references they have selected, with an average weighted mean of 3.66. This further explains that whatever references they have selected in syllabus-making are used to further support the knowledge they want their students to adhere.

Indicators	Always		Often		Sometimes		Never		Weighted Mean	Verbal Interpretation
	ƒ	%	ƒ	%	ƒ	%	ƒ	%		
a. List of References	55	67.9	24	29.63	2	2.47	0	0.00	3.65	Always
b. In Discussions	62	39.5	18	22.22	1	1.23	0	0.00	3.77	Always
c. In Activities	54	66.67	25	30.86	2	2.47	0	0.00	3.66	Always
d. In Assignments	49	60.5	29	35.80	3	3.70	0	0.00	3.56	Always
e. In Tests	52	64.2	27	33.33	2	2.47	0	0.00	3.62	Always
f. Overall Understanding	52	64.2	29	35.80	0	0.00	0	0.00	3.64	Always
g. Syllabus-Making	57	70.37	22	27.16	1	1.23	1	1.23	3.69	Always
Average	54	66.67	24	29.63	2	2.47	1	1.23	3.66	Always
Total Respondents = 81										

Table 3. Reference Utilization

The findings are related to the study of Afdal (2018) which indicate that students develop vocabulary and understanding throughout discussions that they can utilize in class and practice. Collective experiences attained by the faculty are also incorporated to show mastery on the subject. Students gain a deeper and more detailed understanding of their discipline as a result of the activities they engaged in.

Significance in the Selection of References in Syllabus

Profile	Computed Value	Tabular Value (at 0.05 Level of Significance)	Degree of Freedom	Decision on Ho	Inference
1. Age	1.21	5.99	2	Accept Ho	Not Significant
2. Gender	1.02	5.99	2	Accept Ho	Not Significant
3. College	0.88	5.99	2	Accept Ho	Not Significant
4. Length of Service	4.07	5.99	2	Accept Ho	Not Significant

Table 4. Relevance to Needs

As shown in Table 4, there was no significant difference in the selection of references in syllabus-making when grouped according to profile variables when it comes to relevance to needs. In support to this Arnolds (2019) explained that whenever professors are reinforced with concepts and practices related to subjects, it gives students insights about their future professions as long as the instructors are inclined to construct the course and course assignments depending on the needs of

the students.

Profile	Computed Value	Tabular Value (at 0.05 Level of Significance)	Degree of Freedom	Decision on Ho	Inference
1. Age	0.65	5.99	2	Accept Ho	Not Significant
2. Gender	1.30	5.99	2	Accept Ho	Not Significant
3. College	1.17	5.99	2	Accept Ho	Not Significant
4. Length of Service	2.09	5.99	2	Accept Ho	Not Significant

Table 5. Authoritativeness

In Table 5, there was no significant difference in the selection of references in syllabus-making when grouped according to profile variables when it comes to authoritativeness. Findings are related to what Arsyad and Adila (2017) stated that a sloppy writing style almost always has serious impacts. The importance of writing with discipline while authoring dissertations/theses and manuscripts for consideration for publication in journals must always be highlighted because the main goal of academic writing is to improve readers' understanding of a particular topic.

Profile	Computed Value	Tabular Value (at 0.05 Level of Significance)	Degree of Freedom	Decision on Ho	Inference
1. Age	1.32	5.99	2	Accept Ho	Not Significant
2. Gender	1.20	5.99	2	Accept Ho	Not Significant
3. College	0.26	5.99	2	Accept Ho	Not Significant
4. Length of Service	0.16	5.99	2	Accept Ho	Not Significant

Table 6. Language

The table shows the results of non-significance of language in reference selection in syllabus-making when grouped according to profile variables. According to Onwuegbuzie (2017), the readability of printed and electronic documents is a key determinant of their quality. Structural errors are distinct from other types of writing errors such as misspellings, typographical mistakes, factual and logical errors, and faulty grammar. It has the potential to obstruct effective communication. Multiple grammatical errors make a scholarly paper less cohesive, making it even harder for readers, and especially journal reviewers, to comprehend the writer's logic of arguments. That is why authors (beginning, emergent, and experienced) should focus their efforts on improving their grammar. To date, however, no actual study has looked at the grammatical errors that authors make.

Significance in the Utilization of References in Syllabus

Profile	Computed Value	Tabular Value (at 0.05 Level of Significance)	Degree of Freedom	Decision on Ho	Inference
1. Age	1.14	5.99	2	Accept Ho	Not Significant
2. Gender	0.38	5.99	2	Accept Ho	Not Significant
3. College	1.28	5.99	2	Accept Ho	Not Significant
4. Length of Service	1.02	5.99	2	Accept Ho	Not Significant

Table 7. List of References

Table 7 shows the results of non-significance of a list of references to utilize on syllabus-making when grouped according to profile variables. The CHED Memorandum Order No. 04, series of 2020 or the Guidelines on the Implementation of Flexible Learning stated on its general guidelines number seven (7) that on learner

11

management, Students must be informed and orientated about the learning system that will be employed by HEIs – It might come in the form of students' course modules and be available both offline and online. Syllabi study aids, exercises for understanding, a variety of instructional resources is accessible, lecture and consultation timetable, assessments, academic performance is being monitored, schedule and mechanics of requirement submission, grading system, pointer portals, and student support systems, and other materials may be included in course packages – all of which are meant to enable students in successfully managing their study time and maximizing their learning ability.

Profile	Computed Value	Tabular Value (at 0.05 Level of Significance)	Degree of Freedom	Decision on Ho	Inference
1. Age	3.37	5.99	2	Accept Ho	Not Significant
2. Gender	2.09	5.99	2	Accept Ho	Not Significant
3. College	1.02	5.99	2	Accept Ho	Not Significant
4. Length of Service	1.36	5.99	2	Accept Ho	Not Significant

Table 8. In Discussions

As shown in Table 8, the non-significant difference in terms of class discussions on the utilization of references in syllabus-making when grouped according to profile variables. On their book, Duchesne and McMaugh (2016) discussed that Vygotskian and sociocultural theorists claim that the co-construction of learning during social interactions provides cognitive benefits. Students establish a shared understanding that is larger than what they could have produced individually by expanding on and providing feedback for one another's ideas.

Profile	Computed Value	Tabular Value (at 0.05 Level of Significance)	Degree of Freedom	Decision on Ho	Inference
1. Age	2.94	7.82	3	Accept Ho	Not Significant
2. Gender	1.72	7.82	3	Accept Ho	Not Significant
3. College	1.02	7.82	3	Accept Ho	Not Significant
4. Length of Service	2.98	7.82	3	Accept Ho	Not Significant

Table 9. In Syllabus Making

Table 9 shows the results of the non-significance of syllabus-making in reference utilization when grouped according to profile variables. Duchesne and McMaugh (2016) again reiterated in their book that teachers are primarily responsible of organizing classroom activities and providing a variety of exercises to help students develop their creativity and critical thinking skills. They should try to recognize students' ideas, culture, and language, as well as their emerging sense of self-esteem and identity.

CONCLUSIONS

This section discusses and presents the conclusions and recommendations of the study based on the findings obtained by the researchers.
1. The majority of faculty in Camarines Sur Polytechnic Colleges are between the age bracket of 26 and 30 years old, with tenure ranging from 5 years and below,

fair number of male and female, and most are from the College of Engineering.

2. Faculty respondents select references for their syllabi that are relevant to students' academic demands. Therefore, it is guaranteed that all the necessary information the students need to know are carefully selected and incorporated by the faculty in syllabus-making to achieve the holistic development of students.

3. Faculty respondents utilize the references indicated in their syllabi during discussions to give reliable information and clearly explain the course. Thus, transforming it into a forum for constructive discussion and coming up with ideas, allowing students to strengthen their cognitive abilities.

4. The faculty respondents' selection and utilization of references in syllabus-making does not vary in terms of age, gender, college, and length of service in the academe. This also implies that faculty respondents select and get relevant references for the subject matter they teach, and then use them to assist students with their information needs. Hereby producing graduates ready to take on the professional world. The researchers' proposed reference guidelines will ensure the utmost effectivity of references in syllabus-making.

Recommendations

Based on the findings and conclusions, the following recommendations are offered:

1. As mandated by CHED through its various memoranda in implementing programs, the recommendation of maintaining a selection of up-to-date and acceptable volumes and materials for every curriculum's key courses. To maximize the attainment of each program's desired outcomes, library resources should be used in conjunction with curriculum delivery.

2. Continual integration of library resources into syllabus-making in order to promote the library's services thereby fulfilling its mission of providing the information needs to the entire studentry as well as to faculty.

3. Provision of materials aligned to new programs and curricula offered in the college, as well as acquisition of locally authored books for various disciplines to become familiar with the locally-practiced technology and innovation. Thereby making students adept to contemporary practices which they can use once they landed on the workforce.

4. In response to the new normal predicament, enhancing online resources to fully integrate references to promote blended-learning for both students and teachers, anytime and anywhere, would have a significant impact on learning, particularly in lectures and research.

5. To propose a faculty reference guidelines for syllabus-making. This will be of great help as it will include indicators the faculty should follow in selecting the references essential in discussing their topic to students.

6. Further studies on reference selection and utilization of Camarines Sur Polytechnic Colleges' faculty in syllabus-making for future use and learning.

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GREEN LIBRARY PRACTICES AMONG SELECTED ACADEMIC LIBRARIES IN CAMARINES SUR: BASIS FOR LRDS ENVIRONMENTAL SUSTAINABLE PLAN

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Abstract

Green libraries and practices have limited studies conducted but continue to grow worldwide, nationally or even in local settings. Libraries are also being challenged to offer sustainable services to reduce their environmental footprint and provide ecological friendly customer solutions. This quantitative study focused on formulating a basis for LRDS Environmental Sustainable Plan that can be adopted by the Academic Libraries inside and outside of Camarines Sur. Green libraries are also known as sustainable libraries, as they were constructed with environmental considerations in mind and are part of the wider green movement. The researchers found that 10 out of 30 33.33% of the academic libraries respondents from Camarines sur most of them are 1 to 5 years in service. Majority of the libraries are from the public institution or 53.33% of the total respondents. It also revealed that Camarines sur academic libraries often apply the four green practices such as energy, paper, noise and air and the waste consumption management practices. Among the four green practices, the years of services are significant except for the waste management. In terms of the type of academic institution either its private or public, all green library practices are not significant. This study concluded that, despite the difficulties with global warming, libraries can help by implementing green practices in their operations. Furthermore, Academic libraries in Camarines Sur need to improve their green practices by continually following consumption management that is needed, together with a little bit of motivation and improvement to have a greener library sooner. Nowadays when everything is possible through technology, we humans forget the sake of our environment. With that, further studies of green library practices in academic library institutions was recommended.

Keywords: Green Library Practices; Learning Resources Development Services (LRDS); Environmental Sustainable Plan; Consumption Management.

INTRODUCTION

Libraries in the Philippines are taking small but significant steps to become more ecologically friendly. Even though most libraries are in the green zone, there are still opportunities to increase sustainability. Sustainable maintenance programs/plans should be designed to achieve precise and aggressive sustainability targets. Hence, there is a need to address the issues throughout this study in order to develop the basis for LRDS's sustainable environmental plan; starting from the profile of the library, Green Library practices among the selected academic library in Camarines Sur, significant relationship between profile variables and their green library practices among the selected academic libraries in Camarines Sur, and possible green practices from other academic libraries that can be adopted. Camarines Sur academic libraries can sustain green practices through this research and can provide a sustainable environmental plan that helps not only the libraries themselves, but rather to be a key to the greener community.

The aim of this study was to identify the basic green library practices among the selected academic libraries in Camarines sur, which could serve as the basis for the development of a sustainable environmental plan for LRDS. The respondent of this study is limited to the academic libraries of State Universities and Colleges in Camarines Sur. These libraries have a big contribution for the success of this research study because their libraries adopt several green practices since most of the libraries in the province of Camarines are environmentally friendly. In order to promote sustainability initiatives, the study hoped to stimulate the interest of library administrators and raise awareness about the current state of libraries in the region as far as greening is concerned.

Background

This part shows the related literature and studies with the research gap of the study. Humans are gradually destroying our beautiful ecosystem, resulting in problems like global warming and climate change. When thinking of global warming and climate change, libraries are forgotten. Prasanth M and Vasudevan T M. (2019) stated that they encourage participation from staff and patrons in developing a green initiative. This can raise awareness of "going green" issues and initiatives. Thus, librarians can act as a role model for sustainability and lead by example and make the environment a better place to live in. Green culture is being promoted, and librarians and the library community are becoming more committed to environmental and sustainable development. Fresnido and Esposo (2018) said that although there is a high level of sustainability knowledge, promotion needs to be improved in order to project a powerful green image and encourage other libraries to join the "green" bandwagon. It is a good start to provide simple solutions towards achieving a green library.

The study of Sornasundari and Sara (2016) stated that the green library is a long-standing institution which is also a result of our health and environment. In the future, librarians should focus on proactive initiatives in the establishment of sustainable libraries, rather than on environmental sustainability as shown by various

greening library activities. According to the findings of Rochelle Silverio (2017) that the inclusion of proper material disposal as a sub-topic in library science disciplines like records management, collection development, and library management would help to introduce the concept of sustainability to aspiring librarians early in their careers. Wong, W. (2016) said that in order for the pleasant environmental library to be embraced by the community, the library itself must be the starter and role model for the community by practicing all green practices. In their study Fresnido and Betan (2018) provides that to achieve specific and aggressive sustainability objectives, it is recommended to develop sustainable maintenance programs/plans. According to Aliza Racelis (2018) to achieve a more inclusive librarianship, all barriers to library and information services should be removed, as well as the creation, publishing, acquisition, and easy accessibility to print and nonprint resources to aid poverty reduction and environmental occurrence. The goal of this research was to determine compliance with sustainable practices in the Green Library. This research is done to assess the level of awareness and performance of providing a green library in our society on how to provide a good service for them to recognize the Green Library's significance, function and sense. 1.There was limited knowledge and studies of green libraries and green practices but continues to grow. 2.Limited studies conducted about the green libraries worldwide, national here in the Philippines and in Bicol.

Through its collections, eco-friendly structures, and public library programs, green libraries educate the public about environmental issues. It's also known as a sustainable library, as it was constructed with environmental considerations in mind and is part of the wider green construction movement.

METHODOLOGY

The researchers used the descriptive-correlational method design in the development of this study to further study and gather data used to determine the basic green library practices among selected Academic libraries in Camarines Sur that would be a basis for LRDS environmental sustainable plan.

Conceptual/Theoretical Framework

Theory of Participatory Planning by Florencio Arica Jr as cited in Beraña et al. (2016) implies that the distribution of decision-making power is carried out in such a way as to involve those affected by the decisions in its formulation. It is an area in which factual arguments, problems of power, and judgments of subject value are inextricably united. The theory states that librarians' participatory planning and collaborative efforts should be shared. The participation of these individuals maximizes the contribution of planning expertise and allows them to participate in the development of the activities being carried out.

Concept of integrative management cited by Dengke Y. and Zhou, R. (2017) offers a holistic vision of social development, economic prosperity, and environmental conservation for long-term development. It is much needed for the process of making the sustainable process for this output. Knowledge and character are equally vital in

knowledge organizations. It is believed that poverty and environmental degradation are linked worldwide issues, and that we must find methods to integrate the two to create "sustainable development."

It is best to evaluate human behaviour when participating in the task of a program for completion is concerned. The used theories and concepts are suitable to predict and evaluate an intent in understanding participating and carrying out unto action to complete and attain the desired goal in connection with the environmental sustainable plan for LRDS.

Operational Framework

Sustainable development is a new library paradigm that focuses on the environmental area, especially environmental education. Based on this Theory that first comes from Florencio Arica Jr, which states his first theory was the "Theory of Participatory Planning" that indicates the decisions making and its formulation. Stated that the participation and planning have a collaborative effort of the librarian that should be shared.

Figure 1. The Operational Model of the Study
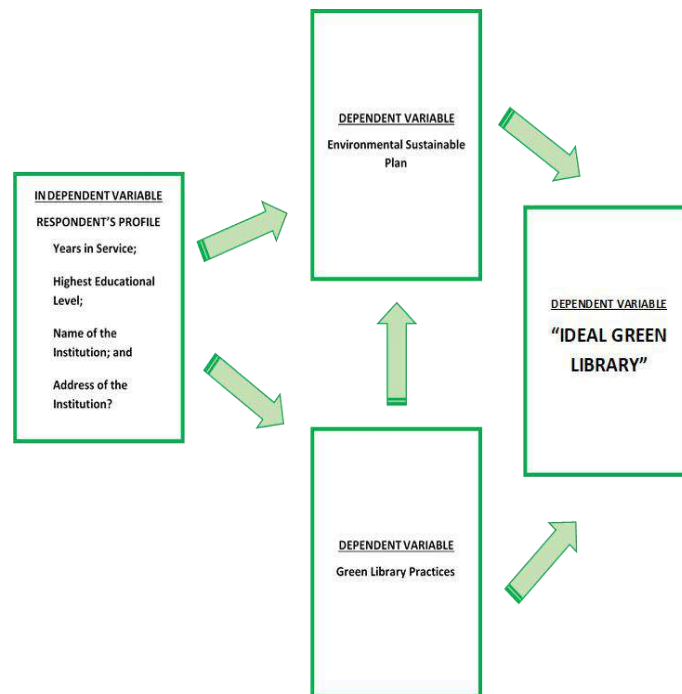
Respondents

The respondents of the study were the 30 academic librarians coming from 30 state universities and colleges in Camarines Sur. The researchers identified 30 respondents using the probability sampling design by Turner 2020 which states that 30 respondents was acceptable as minimum size in correlation study.

Data Gathering Tool and Procedure

The questionnaire checklist was used as the main tool in gathering the data to assess the green library practices among selected academic libraries in Camarines Sur. The formulated checklist questionnaire was presented and evaluated by the adviser, research instructor, and statistician and the panel committee for the approval prior to distribution. A dry-run was done after the questionnaire was checked which was answered by the 5 academic librarians who were not part of the sample size to examine the validity, reliability and success of the formed questionnaire. Afterwards, the approved questionnaire was then prepared for distribution.

Permission to conduct the study was requested and approved by the various authorities and institutional head librarians before the questionnaire was distributed through a formal electronic mail. Due to community quarantines that were declared by the government, where physical meeting is prohibited, Questionnaires were distributed by the researcher to the respondents via google forms and other social media outlets. The data gathered were thoroughly checked, tabulated and categorized for analysis and interpreted. Likewise, treated with confidentiality.

Statistical Treatment of Data

The responses on the survey were tallied, tabulated, analyzed and treated statistically. The following statistical tools were used to provide a basis for interpretation and further analyze the data gathered; percentage, weighted mean and scale interpretation. To test the relationship between the respondents' profile and preferred delivery setting, Kendall's coefficient of concordance was used.

RESULTS AND DISCUSSION

Respondents Profile

Table 1. Profile of The Respondents

PROFILE		FREQUENCY	PERCENTAGE
YEARS IN SERVICE	1-5 years	10	33.33
	6-10 years	7	23.33
	11-15 years	2	6.67
	16-20 years	7	23.33
	21-25 years	3	10
	26-30 years	1	3.33
TYPE OF ACADEMIC INSTITUTION	PRIVATE	14	46.67
	PUBLIC	16	53.33
TOTAL no. of respondents = 30 academic libraries			

As shown in Table 1, out of the 30 academic libraries respondents comes from Camarines Sur 10 or 33.33 percent were 1 to 5 years in service, 7 or 23.33 percent were 6-10 years in service, 2 or 6.67 percent were 11 to 15 years, 7 or 23.33 percent were 16-20 years in service, 3 or 10 percent where 21-25 years in service and 1 or 3.33 percent of the total of respondents are 26 t0 30 years in the service. As to the type of academic institution most of the respondents (16 or 53.33%) are from the public institution, while 14 or 46.67 percent are private institutions. With that it shows that most of the respondents are in 1-5 years in service and coming from the public type of academic institution located at the Camarines Sur.

Green library Practices in Energy, Paper, Waste and Noise and Air Consumption Managements
Table 2. Green Library Practices among the Selected Academic Libraries in Camarines Sur along Energy Consumption Management

Indicators	Weighted mean	Verbal interpretation
Library administrators and stakeholders of the institution encouraged to conserve energy in line with the green practices.	3.53	Always
Use natural lighting	3.23	Often
Use natural ventilation/windows when possible	3.20	Often
Enable the power management settings on library computers/monitors/all-in one machines inside the library	3.07	Often
Tracking of library energy use and cost	2.90	Often
Use solar, geothermal, or other forms of renewable energy installed on your library building?	1.63	Sometimes
AVERAGE	**2.97**	**OFTEN**

As presented in Table 2, the Green Library Practices among the selected Academic Libraries in Camarines Sur along Energy Consumption Management is "Often" with an average weighted mean of 2.97. This means that the academic libraries use convenient resources that help improve the natural way in providing energy sources in the library like using the natural lights and ventilation. The findings related to the study of Eakpoom Boonthum (2018) stated that most libraries implemented a green library policy. However, it lacked sufficient instruments and equipment to assess the building's energy consumption rate. Sample equipment is solar, geothermal, or other forms of renewable energy installed in the library building.

Table 3. Green Library Practices among the Selected Academic Libraries in Camarines Sur along Paper Consumption Management

Indicators	Weighted mean	Verbal interpretation
Adopt paper recycling for office transaction documents ex. Scratch papers.	3.60	Always
Use computers for reviewing documents and note-making for collections.	3.43	Often
Use bulletin boards than to print posters for announcements, activities and programs, etc.	3.23	Often
Use electronic communication for receiving and outgoing documents as well as giving information resources guide.	3.20	Often
Choose to use digital format than printed documents.	2.93	Often
Use software or application for library monitoring such as logbooks, forms & etc.	2.80	Often
AVERAGE	3.20	OFTEN

As reflected in Table 3, the academic libraries-respondents 'often' practice the paper consumption management with an average weighted mean of 3.20. This means that most of the academic libraries are already using computers and productivity software which results in a decrease of office consumption of papers. In particular, they 'always' adopt paper recycling for office transaction documents" with a weighted mean of 3.60 (Rank1).

Furthermore, the following paper consumption management are 'often' practiced with having a weighted mean between 2.80 to 3.43 starting with the "use computers for reviewing documents and note-making for collections" (Rank 2); "use bulletin boards than to print posters for announcements, activities and programs, etc." (Rank 3); 'use electronic communication for receiving and outgoing documents as well as giving information resources guide" (Rank 4); "Choose to use digital format rather than printed documents." (Rank 5); and lastly, "Use software or application for library monitoring such as logbooks, forms & etc." with a weighted mean 2.80 (Rank 6). This means that most of the academic libraries produced paper documents through a technology-based support and scratch paper recycling is the easiest and simplest way in sustainable practices.

The result of the findings is similar to the study of Shah et al., (2018) which states that paper recycling and technology can decrease negative environmental effects and costs. The use of paper in the workplace has risen due to a variety of causes such as the use of forms, the production of multiple copies of documents and logbooks. As a result, it is important to assess the factors that influence paper usage.

Table 4. Green Library Practices Among the Selected Academic Libraries In Camarines Sur Along Waste Consumption Management

Indicators	Weighted mean	Verbal interpretation
Use a trash bin in the library for biodegradable waste disposal.	3.73	Always
Encourage patrons to lessen the use of plastic containers such as using tumbler than mineral bottle.	3.23	Often
Hazardous chemicals are sealed in the library before they are disposed.	3.20	Often
The library introduces strategies and initiatives to reduce the quality of waste generated.	3.20	Often
Biodegradable waste of library throw into compost.	3.17	Often
The library is implementing plans and initiatives to minimize the quality of hazardous substances and waste produced.	3.10	Often
AVERAGE	3.27	Often

As shown in Table 4, the waste consumption management in Camarines Sur academic libraries applies 'often' with an average weighted mean 3.27. This means that most academic libraries do not usually produce harmful and biodegradable chemicals and do not contribute to the waste products subject for disposal. Sustainable waste management is what the findings of this table presented, according to Jessica McAllister (2015), entails not only efficient waste collection and disposal services, but also waste minimization (or reduction). Waste segregation is a normal practice and a big help to provide excellent waste management practices.

Table 5. Green Library Practices Among the Selected Academic Libraries in Camarines Sur Along Noise and Air Consumption Management

Indicators	Weighted mean	Verbal interpretation
Maintaining of good ventilation	3.80	Always
Practice Housekeeping practices to minimize dust and allergens	3.73	Always
Reducing the amount of noise entering into building by simply closing the windows.	3.20	Often
Provides specific places for different activities and noise levels (meeting, reading, storytelling, physical exercise, fun areas, etc.)?	3.13	Often
Replace air filters	2.60	Often
Use of high efficiency filter vacuums prevents dust and dirt form the reentering the indoor atmosphere	2.40	Sometimes
AVERAGE	3.14	Often

As shown in Table 5, academic libraries 'often' utilize the noise and air consumption management with an average of weighted mean 3.14. This means that most of the libraries are not interested in noise and air pollution control devices. The

findings are related to the study of Kossay Alahmady, Al-Annaz and Al- Tammer (2018) noise, like air and water pollution, has a short decay time and so does not persist in the environment for long periods of time. Many studies have been conducted for better understanding of the impact of noise on humans and to develop appropriate criteria for linking negative effects to specific sound field measures.

.Table 6. Composite Table for The Green Library Practices Among the Selected Academic Libraries in Camarines Sur

Indicators	Weighted Mean	Verbal Interpretation	Rank
1. Energy Consumption Management	2.97	Often	4
2. Paper Consumption Management	3.20	Often	2
3. Waste Consumption Management	3.27	Often	1
4. Noise & Air Management	3.14	Often	3
Average Weighted Mean	**3.15**	**Often**	

Camarines Sur Academic libraries adopt the several practices 'often' with an average weighted mean of 3.15. This implies that green practices are a part of the operation of the academic libraries in the process for the sustainable environment in the institutions. The overall findings are the same and related with the research by Lisa Beutelspacher and Christine Meschede (2020) stated that all practices for the sustainability and development of an academic libraries in fact "green libraries" should refer to those libraries that are actively working to promote sustainability by using the measures of energy, paper, waste, noise and air consumption management.

Significant Relationship between Profile variables and Green Library Practices,

Table 7. Significant Relationship Between the Profile Variables and Green Library Practices Among the Selected Academic Libraries in Camarines Sur Along Energy, Paper, Waste, Noise and Air Consumption Management

Profile	Computed Value	Tabular Value (at 0.05 Level of Significance)	Degree of Freedom	Decision on Ho	Inference
ENERGY CONSUMPTION MANAGEMENT					
1. Type of Academic Institution	6.79	11.07	5	Accept Ho	Not Significant
2. Years in Service	19.31	11.07	5	Reject Ho	Significant
PAPER CONSUMPTION MANAGEMENT					
1. Type of Academic Institution	9.71	11.07	5	Accept Ho	Not Significant
2. Years in Service	14.23	11.07	5	Reject Ho	Significant
WASTE CONSUMPTION MANAGEMENT					
1. Type of Academic Institution	7.60	11.07	5	Accept Ho	Not Significant
2. Years in Service	8.38	11.07	5	Accept Ho	Not Significant
NOISE AND AIR MANAGEMENT					
1. Type of Academic Institution	10.64	11.07	5	Accept Ho	Not Significant
2. Years in Service	25.00	11.07	5	Reject Ho	Significant

As shown in Table 7, the significant relationship between the profile variables in terms of type of academic institution and Years in Service towards the Green Library Practices among the selected Academic Libraries in Camarines Sur along Energy, Paper, Waste, Noise and Air Consumption Management. It can be gleaned from the table that 11.07 is the tabular Value (at 0.05 Level of Significance) with a 5 Degree Freedom. This implies on how the profile variables have a significance or impact to the different green practices.

This implied that all over the four green practice consumption management, the type of academic institution does not affect in practicing the green practices even if it is public or a private institution. However, the years in service has only one green practice stating that years in services is not significant to waste consumption management.

Findings of Payel (2019) state that the primary goal of establishing a green library is to save environmentally friendly, energy-efficient materials. The means on how it will adopt for several years until it becomes a part of the institution's practices and they will meet objectives. Singh and Mishra(2019) states that through their green library programs in an institution library can lead to eco-friendliness practices such as material reuse and recycling, trash reduction, and so on. Ferronato and Toretta (2019) claims that the library may examine its operations and the quantity of trash it creates by conducting a solid waste audit, which can then be utilized to build a waste management program.

CONCLUSIONS

This section discusses and presents the conclusions and recommendations of the study based on the findings obtained by the researchers.

1. Academic libraries in Camarines Sur often adopt the several green practices that are 1-5 years in service and coming from the public academic institution.
2. The respondents utilize the energy consumption management, paper consumption management, waste management, noise and air management 'often' in various situations and time which depends on the availability of the materials needed or the way of adopting the said action.
3. The following consumption management; Energy, Paper, Waste, noise and air in terms of institution only the waste consumption management finds that type of academic institution was all accepted in the null hypothesis which means even if the institution is private or public it has not significant green practices. In terms of years in service energy consumption management, paper consumption management, noise and air management has a significant relationship except the waste consumption management which is not significant relationship the years of service in the said green practice.
4. CSPC-LRDS already has several green practices that they adopt based on the findings of this research like in the energy consumption. CSPC practices conserving energy every lunch break by turning off the air conditioning units and lights to use natural lighting and paper consumption management.

CSPC-LRDS already uses scratch papers or paper recycling, they are also known for their high technology because they use technologies in transactions. In waste consumption, trash bins for different types of waste disposal to lessen the use of plastic containers. In connection with the noise and air consumption management their library maintains a good ventilation and practice housekeeping in minimizing dust and allergens. Library also needs a closed area to reduce the amount of noise.

5. Replace incandescent light bulbs with compact fluorescent lamps; Reduce or replace inefficient, outdated or excessive lighting within your campus/building/office; Educate and encourage employees to be energy-conscious and to offer ideas about how energy can be saved, include plants/ trees that produces or emits oxygen and turns carbon dioxide to breathable air these are just some of those ideal green practices coming from the library academic institution that they practice.

RECOMMENDATIONS

Based on the findings and conclusion, the following recommendations are offered.

1. Philippine Green Building Code aims to make building quality more efficient by implementing methods that promote resource management efficiency and site sustainability, which may be used as a guide in creating a green library building utilizing a performance standard. Environmental issues such as energy depletion or pollution. They must adopt at first some simple steps in utilizing green practices in their own institution starting this generation for a greener library future.

2. Academic libraries in Camarines Sur need to improve their green practices by continually following those energy consumption management, paper consumption management, waste management, noise and air management that is needed together with a little bit of motivation and improvement to have a greener library sooner. A green Library Practices Sustainable Development Plan may be developed to help them in improving their energy consumption management practices

3. Green practices must need further studies that support why the profile variables of the academic libraries are significant or not significant to study.

4. Encouraging administrators and stakeholders in conserving energy like use of natural lighting together with the noise and air consumption using natural ventilation like providing more windows which is enough to provide sunlight and also fresh air in the library would be a great help in library energy consumption management. Nowadays when everything is possible through technology it is a big help in paper consumption management because we can make announcements through the internet less in printing announcements yet somehow, we can also use bulletin boards. In reviewing documents and note-making for collections we can use computers and other software or applications for the library monitoring or transactions. The easiest paper reduction management would be the paper recycling or using scratch paper. The waste management library does not consume chemical

waste except the papers, however, the library must use a trash bin for biodegradable waste disposal.

5. Further studies in the green library practices in academic library institution.

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APPENDIX

<p align="center">**Proposed Output**</p>

ELECTRICITY CONSERVATION

1 Choose Right Lights

Choose energy-saving lighting. Choose LED bulbs. LEDs create the highest lumen outputs for a bright clean light while also operating lower wattages which consume less energy. It has overall quality of the illumination produced. Which is comfortable to the lights of the readers.

Use Solar Energy 2

The economic advantage of solar energy deployment as alternative power source is greater than installation cost hence, the deployment of solar energy equipment is cost effective to the libraries.It has proven to be reliable, clean and safe, and therefore, its use for power production, and heating and cooling is increasing.

3 Maximize Windows

Strategically placed windows will provide natural light and may help with heating or cooling costs.

Purchase Energy Star Rated 4

It is a federal guarantee that the appliance will consume less energy during use and when on standby than standard models. Since they use less energy, these products save you money on your electricity bill and help protect the environment by causing fewer harmful emissions from power plants.

5 Turn Off Lights and AC

Practice Unplug and turning off lights and air-condition during breaktime or if posible. Conserve energy of library and helps to lessen greenhouse gases that trap heat and lead to depletion of the ozone layer

LRDS ENVIRONMENTAL SUSTAINABLE PLAN

PAPER CONSERVATION

1. Adopt CLOUD storage

Electronic storage can be very reliable if it is set up with backups and lessen use of papers.. ex. Google Drive, Iclouds, dropbox and etc

2. E- Transactions

Receiving and outgoing transactions electronically ex. Emails, social medias (telegrams, viber and etc) helps a paper less transaction in a more convenient way. It helps generates transaction more secure and easier and saves time

3. Proofread before Printing

Spot formatting errors and avoiding this can lessen papers consumption due to reprinted documents.

4. Online Resources

Electronic textbook and online resources must be adopt. because through this patrons can access information's anytime and anywhere it also lessen the paper reproduction which is after several years will be decomposed.

5. Media Platforms

Media Platforms can be used for announcements and dessimination of information into the widest range and greatly reduced the use of paper in the workplace

LRDS ENVIRONMENTAL SUSTAINABLE PLAN

NOISE & POLLUTION REDUCTION

1 **Maintaining of Good ventilation**

Ventilation is the most effective way to reduce and regulate indoor air pollution in libraries.

Greener Library by putting indoor plants **2**

Properly placing green plants in the library of not only can properly improve the indoor air quality, but also allows readers to feast for the eyes, feeling the breath of spring.

3 **Keep in silence and Go to Vibrate Mode**

It lessen the impaired cognitive functioning, and other effects of chronic stress for the library patrons

Provides specific places for activities **4**

Reduce noise pollution inside the libraries and destructions to other clients.

5 **Replacing air filter**

Improve Library Air Quality. The cleanliness of your HVAC air filter directly impacts the quality of the air and improve energy efficiency

LRDS ENVIRONMENTAL SUSTAINABLE PLAN

3 GOOD HEALTH AND WELL-BEING

ENSURE HEALTHY LIVES AND PROMOTE WELL-BEING FOR ALL AT ALL AGES
Libraries support this goal by providing
- Public access to health and wellness information in libraries that helps individuals and families stay healthy

6 CLEAN WATER AND SANITATION

7 AFFORDABLE AND CLEAN ENERGY

ENSURE AVAILABILITY AND SUSTAINABLE MANAGEMENT OF WATER AND SANITATION FOR ALL ENSURE ACCESS TO AFFORDABLE, RELIABLE, SUSTAINABLE AND MODERN ENERGY FOR ALL

Libraries support these goals by providing.
- Access to quality information and good practices that support local water management and sanitation projects
- Free and reliable access to electricity and light to read, study, and work

Source:https://librariesforpeace.org/l4pday/sustainabledevelopment/

LRDS ENVIRONMENTAL SUSTAINABLE PLAN

MANAGING BARRIERS: CHALLENGES AND SOLUTION IN ACCESSING DIGITAL LIBRARIES – A SYNTHESIS STUDY

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Abstract

This research paper aims to know the barriers on digital libraries through the opportunities and deficiencies experienced by the digital library, and to offer solutions by managing/recognizing them. As a synthesis study, the primary methodologies used are narrative expression summary, synthesis matrix, tables, and an extensive integrative review in total. Digital libraries are discovered to have benefits for library patrons as well as problems. There are other benefits stated, such as round-the-clock availability (24/7), broader accessibility, space savings, and numerous access on material. On the other side, the drawbacks include a copyright issue, a security issue with the internet, and a lack of screening or validation. The recommendations and barriers are listed in the conclusion part. The users and audience themselves would be informed on the causes of the highlights and challenges faced by the digital libraries by knowing how to manage the barriers/obstacles, which may allow them to combat the issues and provide alternate remedies on these circumstances.

Keyword: digital library, information, technology, barriers, solution

INTRODUCTION

The development and collection of a vast amount of information has resulted from man's pursuit of knowledge. This never-ending pursuit of knowledge has no boundaries or constraints[1]. The idea that knowledge is still the most valuable resource in modern society is now widely accepted, and one of the main responsibilities of librarians is to provide leadership and knowledge in the design, development, and ethical management of knowledge-based information systems in order to satisfy the information needs and obligations of the patron or institution.[2] From the beginning of civilization until the present day, it has persisted. Man has been able to share this information with others through writing books since the invention of paper. More libraries are being built as a result of the demand for knowledge preservation and information distribution. Abdusalami et al. 2013). [3] This is what make the digital libraries important.

Sun (2012) claims that the digital library is more than just a collection of digitally preserved books and journals with information management features. It specifically refers to a group of activities that facilitate the creation, communication, application, and display of data, information, and knowledge across their whole life cycle. [4]Additionally, Higgins, (2013) determined in a larger study that digital libraries have a number of advantages over physical ones, including no physical boundaries, 24/7 access to information, multiple access points, network connectivity, and expanded search tools. [5]Digital libraries are designed to meet people's information needs in the same way as physical ones

In relation with this, an existing scholarly article by Mishra (2016) concluded that, as information and communication technology develop, the rate of information explosion increases rapidly. Library digitization is the process of digitally preserving a library's physical resources, such as its printed books, magazines, articles, etc (0 and 1 bit). Bits are the fundamental informational units in a computer system. The adaptability of digital information is one of its key benefits. Libraries must therefore constantly contend with problems including a shortage of space, rising book and journal prices, budget cuts, the inability to provide multiple copies, and—most importantly—user information retrieval efficiency, which puts them at danger.[6]

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[1] L. T. Abdulsalami, Q. I. Okezie, and A. D. Agbo, "The role of the library in the promotion of knowledge societies in Nigeria," Pelagia Research Library Vol. 4 Issue No. 1 (2013), pp. 58-70

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[3] L. T. Abdulsalami, Q. I. Okezie, and A. D. Agbo, "The role of the library in the promotion of knowledge societies in Nigeria," Pelagia Research Library Vol. 4 Issue No. 1 (2013), pp. 58-70

[4] Jie Sun and Bao-Zhang Yuan. "Development and Characteristic of Digital Library as a Library Branch" IERI Procedia (2012) Vol. 2. 12-17

[5] Silke Higgins. "Access to Digital Libraries for Disadvantaged Users" Library Philosophy and Practice (2013). 1-14

[6] Rakesh Kumar Mishra (2016). Digital libraries: definitions, issues, and challenges. Innovare Journal of Education, Volume 4, Issue No. 3, 1-3. Retrieved from: https://innovareacademics.in/journals/index.php/ijoe/article/view/12997/5665

Why are digital libraries being so essential? The data in the digital library is located on a computer server that may be placed in a remote location and is accessible by users from a distance using a computer network, unlike the normal library, which is a collection of physical books and the like. As knowledge repositories or reading resource centers, digital libraries are anticipated to improve readers' interests and behaviors. As learning institutions gauge their success in the field of education, they should manage digital libraries. Questions such as, "Why do we need a digital library when we already have Google and WWW" arises, but there is a distinct answer in the importance of a digital library, which will be further explored in the paper.

Looking closely, a digital library is a type of library where all of the resources are maintained in electronic form, according to Majidah (2108). The digitally converted materials consist of books, magazines, newspapers, and other library resources. The user doesn't need to go to the actual place because they can access the goods through the library's website or their mobile device. A few of the factors that have influenced the development of digital libraries include the quick development of technology, the rise in internet usage, the number of users who access library materials, the availability of materials in digital format, and the length of time it takes for users to find materials. [7]In order to identify the "barriers" on the predominance of difficulties that the virtual libraries are facing, we investigated into the benefits and drawbacks of digital libraries. It was proposed that in order to remain relevant in a society that is increasingly reliant on technology, the community of digital libraries must keep working to establish as many access points as it can for individuals who require extra help to keep them from starting out on the wrong foot.

REVIEW OF RELATED LITERATURE

This section of the article discusses the existing literature related to digital libraries. Definition itself of a digital library, characteristics of a digital library, together with existing challenges experiencing by the libraries would be discussed, as well.

1. **Definition of Digital Library**

According to Trivedi (2010), a digital library is a library that only has collections that can be accessed by computers and are kept in digital formats rather than print, microform, or other media. The material can be accessed locally or from a distance. Possibly in a 1988 report to the Corporation for National Research Initiatives, the phrase was first used in print. The NSF/DARPA/NASA Digital Libraries Initiative introduced the phrase for the first time in 1994. [8]

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[7] Noor R. Majidah. "Issues and challenges pertaining digital libraries." Academia.edu. (2019, May 1) https://www.academia.edu/38998509/ISSUES_AND_CHALLENGES_PERTAINING_DIGITAL_LIBRA RIES Retrieved on: November 11, 2022

[8] Mayank Trivedi "Digital Libraries: Functionality, Usability, and Accessibility" Library Philosophy and Practice (e-journal) (2010). 1-6

Meaning of Abbreviations Used
NSF = National Science Foundation
DARPA = United States Defense Advanced Research Projects Agency
NASA = National Aeronautics and Space Agency
In regards to this, the Associations of Research Libraries (ARL) (1955), has identified five elements common to all definitions of digital library as under.
1 The digital library is not a single entity;
2 The digital library by requires technology to link resources of many;
3 These links are transparent to end-users;
4 Universal access to the digital libraries and information services in the goals; and
5 Digital library collections are not limited to document surrogates, but they also include digital artifacts that cannot be represented or distributed in printed formats.

There are many definitions of a "digital library." Terms such as "electronic library" and "virtual library" are often used synonymously. (Jadhav, 2011). A digital library is a "Collection of digital objects (text, video, and audio) along with the method for access and retrieval, and also for selection, organization, and maintenance.[9] Digging deeper into this definition, the library is an organized body that holds collections - digital objects that have been grouped into categories, presumably for access purposes.

Meanwhile, in contrast to terminology like "database" or "information retrieval system," "digital library" gives a feeling of greater content and wider capabilities. It also serves as a convenient and familiar shorthand to refer to electronic collections. However, such uses of the term convey a much more constrained idea of a library than one of a full-service organization with ongoing obligations. (Borgman, 1999).[10]

2. Importance of Digital Library
The gathering, arranging, and sharing of information resources are the core duties of all traditional libraries. A library is traditionally thought of as a location where books, manuscripts, musical scores, and other works of literature and art are maintained for use only—not for sale. In essence, it is a place where individuals can use the resources and is focused on collecting and custody. A digital library, on the other hand, is a collection of digital computing, storage, and communication devices together with the content and software required to duplicate, mimic, and extend the services offered by traditional libraries.(Sun, 2012).[11]

There is no such privilege as having access to a wealth of knowledge and pertinent information regarding particular issues. A digital library saves time and effort compared to going to a physical library and searching for the proper book. Finding what you need among millions of resources becomes simple with choices like built-in content search that only requires a few keywords or titles. (Pearson, 2021). [12]To put it

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[9] Kavita Ajay Jadhav, "Digital library: today's need- a review" International Multidisciplinary Research Journal (2011). Volume 1, Issue No. 11. pp. 17-19

[10] C.L. Borgman (1999), "What are digital libraries? Competing visions", Information Processing and Management, Vol. 35, pp. 227-243.

[11] Jie Sun and Yuan, Bao-Zhang, "Development and Characteristic of Digital Library as a Library Branch"   IERI Procedia (2012) Vol. 2. pp. 12-17

[12] 5 Main Benefits of Digital Libraries for Higher Education - Pearson India Blog. (2021, September 29). https://in.pearson.com/blogs/2021/09/5-main-benefits-of-digital-libraries-for-higher-education.html

simply, while traditional libraries may not always have the most recent editions of books, journals, and other content resources, digital libraries enable you to access updated resources using the most recent technology. However, digital libraries in higher education institutions or organizations are frequently updated. Nowadays, a lot of publishers allow digital libraries to make the most recent issues of books and magazines available to readers on a pay-per-read basis. Since readers may access the most recent articles through digital libraries, this helps readers become more interested in the knowledge that is being reinforced. Traditional libraries must make significant investments in the upkeep and preservation of their collection. Instead of focusing on the preservation of physical items, digital libraries digitize their content and make it regularly available to a wide number of readers. (Pearson, 2021).

A digital library's main function is to effectively organize and offer access to the generally vast amounts of digital information. Additionally, digital libraries come in a range of formats and contain a variety of information, including multimedia. They aim to enable rapid access to digitized information. (Trivedi, 2010). [13]Additionally, digital technologies constitute the foundation of digital libraries. It might be incorrect to assume that digital libraries will simply have digital resources, but we can still access information widely and easier. Digital information may now be published and stored thanks to data storage compression. Digital resources can now be stored, retrieved, used, and traded thanks to telecommunications. (Trivedi, 2010)

3. Existing Challenges/Drawbacks of Digital Libraries

The library services are more frequently being used by students, research scholars and faculty members. The digital library services have been providing great opportunities to serve the users who represent the growth and development of any academic institution. Libraries are an integral part of any education system and libraries known as repositories of knowledge (Mandrekar and Rodrigues, 2020).[14]Libraries today are not solely for repository for collections; instead, they now focus more on providing digital services than analog ones. The library collection can now be easily accessed through OPAC (open public access catalogue) user likes to automated technologies.

Establishing their roles and redesigning the delivery of information services are difficult tasks for librarians in the digital age. Professionals in libraries are expected to play a crucial role in transforming the community's information demands in the digital age. Professionals have historically frequently categorized and arranged material so that they may locate it on behalf of users. (Bhattacharya 2013). [15]The librarians have to gear up to face the demand and challenges of information users. To meet the demands and problems of information users, librarians must be prepared. Also, according to Khan and Batti (2018), in order to achieve significant gains in crucial

[13] Mayank Trivedi, "Digital Libraries: Functionality, Usability, and Accessibility" Library Philosophy and Practice (e-journal) (2010). 1-6

[14] Bala Mandrekar and Maya Cavalho e Rodrigues. "IMPACT OF ACADEMIC LIBRARY SERVICES ON STUDENTS SUCCESS AND PERFORMANCE" Library Philosophy and Practice (e-journal) (2020)

[15] Bhattacharya, Parta. "Advances in digital library initiatives: a developing country perspective" The International Information & Library Review (2013) Vol. 36, Issue No. 3. pp. 165-175

current indicators of librarian and professional performance, library operations must be fundamentally rethought through and drastically redesigned.[16]

The conclusion of a study conducted by Rafiq (2018) made the following justification: "The explanation may be that these impediments were not addressed on national and institutional levels." This problem arises in emerging nations as professional associations, academia, and professionals act independently and frequently overlook the benefits of a coordinated strategy. To overcome these obstacles and advance the profession and professional practices, they must work together in an organized and coordinated manner to fulfill their individual roles. It is crucial for libraries in developing nations to create their own narrative by identifying areas of concern and the profession's most urgent concerns; to design a clear course of action; and to take appropriate action with the support of all stakeholders.[17]

Significance of the Study

This study is undertaken to find out the advantages, disadvantages, and challenges that the user is experiencing while accessing digital libraries. This study helps the researcher to determine barriers/obstacles in using digital libraries, and how to combat/resolve them. The study will benefit the following:

Students – This research may act as a guide and a point of reference if the student choose to pursue similar studies.

Administrators and Staff – This study will help them organize enrollment procedure and different transactions made in their respective areas.

Professors – This research will aid/help them their discussions regarding related lessons. They will find it simpler to address related questions concerning this research.

Future Researchers – This research will be a excellent resource for researchers who wish to do accurate research that forms the core of the Bachelor of Library and Information Science Program.

METHODOLOGY

The methodology would be used will be in form of integrative review, narrative synthesis, and synthesis matrix.

1. **Factors Responsible for the Emergence of Digital Library**

Table 1: A summary of the Essential Variables Related to Emergence of Digital Library

Authors	Factors/Findings

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[16] Shakeel Ahmad Khan and Rubina Bhatti. "A Review of Problems and Challenges of Library Professionals in Developing Countries including Pakistan" Library Philosophy and Practice (e-journal) (2012).

[17] Muhammad Rafiq, Kanwal Ameen, and Jabeen Munazza, "Barriers to digitization in university libraries
of Pakistan: a developing country's perspective" Emerald Insight (2017). pp. 1-15

Owen (1998)	Interactive multimedia, Co-operation, Knowledge Management, selective filtering of information, storage of library information resources
Calhoun (2013)	sense of urgency to solve the pressing issue of an explosion of scholarly information, improve information storage, improve the retrieval systems, digitization
McMartin et al. (2006)	Easier accessibility, time spent in the search activity, finding more material lectures in visual perspective (images, animations, or simulations), immediacy of the web
Soroya et al. (2021)	Technological advancement
Perdana et al. (2019)	Improve the ability to search for information, learning resources for educational academics, lower costs
Parida (2004)	the human need for information especially that is timely and relevant, accumulation of information, technology-leading developments, information storage and retrieval
Ju et al. (2018)	Retrieval functionality, user interface, basing on user's intentions, collection qualities

Future libraries will be virtual, distributed, and digital. Instead of being "a destination to go to for obtaining information," the library will have evolved into a collaborative service accessible at the user's computer. The authors all share one thing in common with these previously published works: digital libraries are mostly the result of technological development. In addition, digital libraries sought to be more easily accessible through books and are capable of retrieval and digitization when compared to traditional libraries.

Regarding one of the research studies' results, Owen (2015) presented a further query. "Finally, moving from old models to the digital, virtual, dispersed model won't be libraries' main difficulty. How do digital libraries undoubtedly assist users? That will be the true problem. How can we implement this in a way that provides added value to the user? With the aid of its qualities, how does it function for the users and how effective is it?

2. Characteristics of a Digital Library and its Effectiveness

Table 2: Digital Library's Usability

Synthesis matrix was made through the existing literature below. The table indicated is conducted by the researcher.

Author	Aims/Purpose	Type of Research, Method, Population	Limitation	Conclusion
Rahman (2020)	The purpose of this study is to identify the elements influencing the continuous use of digital libraries in a military setting.	Semi-structured interviews and a qualitative paper. Also included was the stratified random sampling technique. Population/Sample: 21 respondents being randomly chosen out of 619 individuals.	Only military education instructors and librarians in the area of four regions in Peninsular Malaysia are the subject of this investigation. Practical implications include an understanding of how the company could continue to employ a digital library in a military situation (DL).	User training has been shown to be one of the most important aspects of the effectiveness of digital libraries for military contexts. User training could be one of the crucial supports offered by the company to guarantee that users are familiar with how to use the system, are aware of its various features, and are able to utilize it efficiently. To make sure that users are aware of the helpful support supplied, it is also advised that the organization step up its promotion of digital libraries, including the training offered.
	This study's goal was to evaluate a digital library in a higher education setting that serves about 75,000 students.	A total of 206 participants were used to gather quantitative and qualitative data (structured interviews, popup questionnaires and transactional log analysis). For both quantitative and qualitative data,	The study's first shortcoming is the study's relatively low participant population (only 206 out of all digital users). The second drawback was brought on by the different viewpoints of the participants in this appraisal. There would be a big disparity because some participants were PhD	This study demonstrated that the institution's digital library has good usability and information retrieval capabilities. However, it was evident from the usage trends that students in their third and fourth years of study, as well as those pursuing postgraduate degrees, accessed the digital library more frequently than those in their first two years.
Sun et al. (2012)	This article provides a summary of recent developments in the study of digital libraries, including their features, benefits, and drawbacks. The effect of information	As their study simply offers an overview of the digital library, the report hasn't included any methodology or population sample.	No limitation has been provided, as well.	The development of a digital library is crucial since library collections are not just comprised of printed books but also grow as users use electronic resources. Regardless of how they had previously thought about digital libraries, they now understand their significance. Digital libraries will facilitate distance learning environments, support scientific research and development, and enable new information knowledge gathering,

		descriptive statistics and theme analysis were used.	students while others were undergraduates.	
Matusiak (2012)	This paper is a summary of a case study investigation that looked at the use of DL (Digital Library) resources in two undergraduate courses and analyzed how staff and students perceived educational DLs.	As a case study, the study used qualitative methods and was divided into two phases: 1) a semester-long field study with surveys and document analysis; and 2) interviews with students and academic staff.	No limitation has been provided.	The examples that were studied for the study did not fully use the capabilities of digital collections. According to the study's findings, there is a possibility of a connection between how university libraries are viewed and where people look for digital images and maps. This study found that user perceptions of usefulness and usability, particularly perceived ease of use, have a significant impact on users' intentions to adopt and use digital collections for academic learning and teaching.

Alongside on determining the factors that lead to the emergence of the libraries, it is also indeed crucial to know the characteristics on a digital library and its effectiveness on it users. In a scholarly article by Alokluk et al. (2021), the findings reflected of a good remark in vote of digital library. The study demonstrated that the instution's digital library has good usability and information retrieval capabilities. To solidify this statement, in a research conducted by Sun et al. (2012), have indicated how the digital libraries helps on supporting scientific research and development, together with the information knowledge gathering, which is also connected with the good usability and how it positively benefits the users.

In regards with this, Alokluk et al. (2021) has raised new issues regarding on the usage of digital libraries. Upon reflecting on the findings, it was said that it was evident from the usage trends that the students in their third and fourth year of study and the other older peers access the digital. This finding/conclusion reflects to the paper conducted by Matusiak (2012), as it was mentioned that the user's perceptions of usefulness and usability have a significant impact on users' intentions to adopt and use digital collections for academic learning and teaching. When concluding in an institution/college set-up, the more we need materials that adopts to our needs as a student, the more that a student will wish to use digital library.

Table 3: Digital Library's Usefulness and Benefits
Synthesis matrix was made through the existing literatures below. The table indicated is conducted by the researcher.

Author	Aims	Type of Research, Method	Limitation	Findings/Conclusion
Nawaz et al. (2022)	The goal of this study was to assess how students at universities in South Punjab perceived and used digital information resources.	The researcher used a questionnaire as a research tool to gather information from respondents and selected a survey research design. Students from the BS, Master's, MS, M. Phil, and PhD programs at the Islamia University in Bahawalpur and the Bahauddin Zakariya University in Multan made up the study's population. Data from respondents were gathered using a convenience sample technique..	No limitations have been provided.	According to the study's findings, the majority of respondents occasionally use the university library and prefer digital information sources to printed ones. The majority of respondents were content with the digital information resources that were provided.
	In the context of the study, digital library effectiveness is defined as the composite correlation of	The study employed the survey research methodology. Number of Participants: 425 students	No limitation has been directly indicated on the paper.	According to the findings, three library characteristics—internal effectiveness, personal IT inventiveness, attitude toward DL, information quality, systems quality, and service quality—are predictors of use of digital libraries. The results
	variables consisting of DL use and individual impact, as well as individual characteristics and digital library characteristics (information quality, system quality, and service quality) (personal sense accomplishment and user satisfaction).			also suggest that user pleasure and a sense of success are influenced by how much a digital library is used.
Samadi et al. (2015)	To this effect, this study is aimed to investigate the usage behavior of users in a DL environment in selected Iranian universities. In addition, it is also aimed at investigating the determinants of	Data were gathered for the study using a questionnaire and the survey research methodology. The suggested hypotheses were tested on a total of 750 valid responses, and the analysis of the data suggests that information quality, systems quality, and service quality are	Two categories of antecedents—technological variables and personal factors—were looked at in this study. Information quality, system quality, and service quality are the three elements that make up the technological factors, which are	Several recommendations are made using the study's findings as a foundation. The following measures should be taken into consideration by the administrators of the participating universities' libraries in order to boost or intensify DL usage among users, especially postgraduate students. The suggestions include I regular assessments of DL performance, (ii) user education, and (iii) marketing campaigns.

	DL usage behavior.	major predictors of DL usage.	truly innovative characteristics.	
Rafi (2018)	Understanding intellectual development, research productivity, planning, and the detection of user information demands are all made feasible by the usage of digital databases. The goal of this study is to help management create a great academic strategy by assessing the efficiency of user database resource consumption and research.	With the help of digital databases, this study develops a quantitative way to evaluate the effectiveness of scholarly research. the secondary information is drawn from 52 university databases that were provided by the Higher Education Commission (HEC) and the literature that was published on the ISI Web of Science. To evaluate the data and determine how the independent variable "digital databases" affected the dependent variable "research productivity," basic linear regression was applied in statistics.	No limitation has been directly indicated on the paper.	In order to increase resource utilization, the administration should adopt policies and strategies for implementing and providing e-library services and infrastructure, including hiring instructors for user education, daily assessment, and maintenance.

To help students better grasp how to use resources on various programs like data analysis and reference materials, technical training on how to use library resources should be organized expertly through seminars and workshops. |

Digital libraries are indeed beneficial and important. To affirm this statement, in a research study conducted by Nawaz et al. (2022), the conclusions revealed that most of their respondents only sometimes accessed the university library and preferred digital information sources to printed ones. A statistical analysis revealed a significant correlation between knowledge of and utilization of digital information resources. The respondents' degree of satisfaction is directly correlated with the availability of information resources at the university library. The study's findings brought to light some obstacles that respondents encountered when using digital information resources, including slow internet, a lack of electricity, constrained working hours, and inadequate ICT skills.

In order to emphasize how awareness and use of digital information resources relate to digital libraries, Rafi (2018) reviewed the literature and concluded that holding seminars and workshops would greatly benefit students' knowledge of how to use resources for different programs, such as data analysis and reference materials.

However, the results of a study by Samadi et al. appear to be in conflict with one another (2015). The administrators of the participating universities' libraries should consider the following actions to increase or intensify DL usage among users, particularly postgraduate students. It conflicts with the research study of Alokluk et al. (2012), which examines the qualities of a digital library and their efficacy.

3. **Purpose of a Digital Library**

Table 4 – Opportunities and challenges for digital libraries

*The table indicated is conducted by the researcher through the help of scholarly articles online.

Advantages	Disadvantages
Preserve the valuable documents, rare and special collections of libraries	Lack of preservation for authentic/original copy
No physical boundary	No physical appearance unlike traditional/conventional libraries
Round the clock availability	Copyright Issue
No tampering and wear and tear	People refer to read print material
Structured approach of storage of articles/papers	Difficulty in knowing and locating everything that is available
Providing wider accessibility	Lack of Screening or Validation
Saving Space	Awareness of the User
Multiple Accesses	Internet Security Problem

A digital library's main function is to conveniently organize and offer access to frequently vast amounts of digital material. According to the table, one of the benefits of a digital library is that it keeps important records from rare and exceptional library collections online. Rare documents, on the other hand, cannot be simply duplicated in paper the way they may be online, where it is so easy to copy documents from one piece of information to another. Also, a digital library requires technological awareness, which not all people are aware to. Some advantages include are: no tampering and wear and tear, saving space and round the clock availability (24/7). On the other hand, other disadvantages of digital library include copyright issues, no physical appearance, and such situations that people prefer print material rather than digital ones.

4. **Challenges Associated with Digital Library by knowing its Barriers, Solutions being offered**

Table 5 – Digital Libraries: Challenges and Solution
Synthesis matrix was made through the existing literature below. The table indicated is conducted by the researcher.

Author	Aims	Type of Research, Method	Limitation	Findings/Conclusion
Khot, 2015	This research paper attempts to describe the term 'Digital Library' in its simplest form, along with the meaning and definitions to convey the core concept of rapidly emerging digital libraries, to make the readers comprehend it and further focuses on the challenges posed for successful implementation of digital libraries in the rapidly changing ICT based changing environment.	No methodology/sample population has been stated.	No limitations have been directly indicated, as well.	The digital libraries are currently fighting the dilemma against the following: information accuracy, hardware/software compatibility, reliability of information, IPR issues, data security, fair use, convenience of usage, needs for expensive technology, storage life/shelf life, omnipresence of digital reading and storage devices, and the need for hardware and software.
Xie (2006)	This article identifies users' criteria and applies them to the evaluation of existing digital libraries.	The development and justification of a set of fundamental standards for the assessment of digital libraries was given to 48 students. Additionally, they were asked to assess current digital libraries using the criteria they were constructing.	The article discusses proposals for enhancing digital library design, identifies issues with current digital library development, and identifies areas that require more research.	It is essential for digital libraries to offer user control and simplicity of use because they often target different levels of user groups. Transparency in design is equally crucial for digital libraries. In addition to offering high-quality collections, digital libraries also need to support users in their efforts to evaluate the collection's quality. Additionally, it is crucial that digital libraries offer both conventional and uncommon services.
Higgins (2013)	This article assesses the efficacy and applicability of the existing digital libraries and examines what might be done to make these resources more accessible to the underprivileged.	No methodology/sample population has been stated.	No limitations have been directly stated on the paper.	Although there have been conversations about usability and accessibility for online databases and digital libraries for more than ten years, it is clear that solutions to problems with accessibility to digital libraries for the underprivileged are still in their infancy. It so seems that the community of digital libraries as a whole has a long way to travel on the road to offering universal access. This is particularly true for minorities, those affected by lower income and education status, as well as for those living in remote places. Digital libraries must be created with their users' talents and capabilities in mind; they

				must be multilingual in design; they must make their information available as both textual and non-textual materials; and they must be able to run on low-end devices.
Ayaji (2016)	This article describes the problems and some empirical research on what prevents users from effectively seeking information in digital libraries and offers solutions to these challenges from this point of view.	No population sample/research method has been mentioned.	It has been discovered that access to information in digital libraries is only available to academics who are linked with institutions that have the resources to do so. It has been discovered to be restricted to people who are literate, information literate, and are fluent in the primary academic and commercial languages (English in particular).	Librarians should be curious about how people use the library and the techniques they employ to find the information they need, especially those who are active in bibliographic instruction. The tactics used to improve library services could be redesigned by librarians, with a focus on information resource knowledge and the development of information skills.
Sonker et al. (2022)	This article's objective is to introduce readers to the fundamental ideas, procedures, and features of digital libraries while also discussing the potential and problems they present.	No population sample/research method has been mentioned.	No limitations have been directly stated on the paper.	It seems unusual to be discussing improving digital libraries at this point given how young the area of digital libraries is. The original digital libraries created by digitization efforts, or even virtual collections, are being improved in this fast-paced environment, nevertheless, as user expectations and technological capabilities allow. In the middle of this hectic activity, it is beneficial to assess user needs and preferences in order to find Knowledge Organization Systems that may be applied to improve the digital library. Digital librarians can exploit the network environment to add value to the digital library's users by extending beyond the initial organizational structure.

Today's world generates, stores, and disseminates enormous volumes of information in digital formats as a result of the widespread use of information and communication technologies (ICTs). The rapid advancement of technology, the rise in internet usage, the number of users accessing library materials, the availability of materials in digital format, the amount of time it takes for users to locate materials in libraries are just a few of the factors that have contributed to the development of digital libraries. For all of these reasons, physical libraries are starting to establish digital collections that will transform their entire physical holdings to digital formats.

In a research article conducted by Khot (2015), it was reflected that digital libraries are currently fighting against the dilemma of information accuracy (which may lead to fake news), the usage of hardware/software, convenience usage problems, and other certain things to follow on. Similarly, other research articles have raised concerns and disadvantages regarding the usage of the digital library. In a research article by Ayaji (2016), librarians should be curious about how people use the library and the techniques they employ to find the information they need. By knowing what are the roots of the problem, we are being able to recognize what are the obstacles/barriers along the way, and we will be able to improve them, along the way.

In relation to this, existing literature by Ayaji (2018) reflected that finding ways of intercepting the barriers to information-seeking is one of the solutions to improving the scholars' information-seeking behavior. On the upside of this list of deficiencies, steps are taken to remedy what is lacking, awareness is spreading, and technology in every sector is advancing in leaps and bounds, helping to create new avenues for accessibility.

CONCLUSION

Libraries are changing in look as a result of the content transferring to digital platforms and internet connection becoming more of a necessity than a privilege, which was pushed by technology. The scientific community benefits from digital libraries since they serve as a repository for crucial research data, information, and conclusions. The tangible records of scientific studies and research had to deal with a serious problem for a very long time: they were lost or destroyed. However, the online versions of studies and research can now be preserved and gathered with the help of digital libraries, creating a virtual history of knowledge for future generations.

In addition to the aforementioned potential, shortcomings or deficiencies can be seen in online libraries. To sum them up, some of the drawbacks of using digital libraries include User authentication (lack of screening/validation, high potential for being copied without permission), copyright issues, lack of physical appearance, digital preservation, interoperability between systems and software, and training and

development (which focuses on user awareness). Reflecting on it, the researcher's observations of hurdles include the possibility that users will encounter numerous obstacles when trying to access a digital library. These obstacles may be brought on by an abundance of information, a badly designed user interface, inaccurate information provided by the digital library, or difficulty using digital resources.

The government should digitize libraries and enhance funding for digital devices by purchasing new computers, enabling high-speed internet connectivity for remote devices, and enabling online access to literature. It is important to address the previously identified obstacles, such as false information. Finding trustworthy information is not always simple, especially in this day and age when a lot of the information on the internet is unsourced and has not yet been subjected to a process of peer review or fact-checking. Libraries ought to intervene.

Hence, libraries are advised to create programs to discuss false information with users, and librarians worked to hone the technological expertise they plan to pass on to their clients. To accomplish efficient digital library learning, it is also strongly advised to use the interface effectively and create user-friendly designs for the libraries.

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About the book

The 32nd Library and Information Services Month (LISM) Committee, in partnership with the National Commission for Culture and the Arts (NCCA) through the National Committee on Libraries and Information Services (NCLIS), and the Philippine Librarians Association, Inc. led the first LISM Research Conference producing a Research Publication.

This publication is composed of the top winning researches from the two categories: (a) the undergraduate students of Bachelor of Library and Information Science (BLIS); (b) the researches from several professional librarians and graduate students of BLIS. Intended to contribute in services, programs, projects, advocacies, initiatives, and activities of libraries and information centers, this aimed to be utilized in identifying distinct library development and cultural resources of the respective communities and promote the interest in understanding local heritage and culture.