**COLLEGE OF SCIENCES ELIBRARIUM: AN ONLINE**

**LIBRARY ACCESS FOR THE PALAWAN STATE**

**UNIVERSITY, QUEZON CAMPUS.**

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**CHAPTER II**

**Foreign Literature**

As mentioned in the study of Thangiah et al., (April 2024). Digital Transformation of Academic Libraries. Academic libraries are essential for providing information services to the user community. Historical initiatives have been implemented to establish these libraries based on recommendations from commissions on education. The chapter discusses the digital transformation of academic libraries, focusing on automation, digital library services, digital reference services, INFLIBNET services, digital initiatives in India for higher education, artificial intelligence in libraries, and resource digitization.

As mentioned in the study of mandrekar et al., (September 2020). IMPACT OF ACADEMIC LIBRARY SERVICES ON STUDENTS’ SUCCESS AND PERFORMANCE. Libraries play an important role as a reliable and beneficial information provider in the students’ academic success and performance. The aim of this study is to investigate the student’s satisfaction with library resources and services provided by the academic library. Random surveying was conducted to find out the problem and difficulties faced by the students in accessing the library resources and its impact on their academic success and performance. The finding in the study showed that there is a significant and remarkable relationship between the library usage and the students’ academic performance and success. the major finding of the study is to conduct the information literacy programmed for the students to promote awareness about the resources, services and facilities available in the library so that the students can take maximum advantage of the benefits provided by the library. One way to overcome this problem is to encourage the students to embrace using the library in their academic studies and explain its benefits.

Igwe ukoha (October 2020). Libraries Without Walls and Open and Distance Learning in Africa: The Nigerian Experience. Open and Distance Learning (ODL) is gradually gaining ground in Africa. Even though ODL in Africa is still saddled with teething problems, workers, politicians, school leavers and the general public are trooping into ODL institutions to acquire education. Nigeria is a new comer in Open and Distance Learning. The experiences of several open and Libraries are indispensable in every facet of higher education. Effective library support to distance learners is mandatory for qualitative delivery of instruction and learning. Information and Communications Technology (ICT) has transformed all aspects of society particularly information dissemination. The development of libraries without walls has definite benefits to distance learners. Developed and developing countries are creating Virtual learning environments and libraries without walls to reach multitudes of learners at various locations. This paper examines the general experiences of Open and Distance Learning in Africa, the evolution of ODL in Nigeria and the structure of library services provided to distant learners particularly in Nigeria. It examines the challenges in creating and providing library without walls for distance education and the prospects of library without walls in a developing country like Nigeria. The paper will also present a discussion on how NOUN is developing creative solutions to the challenges.

**Local Literature**

Panhilason (2024). Users’ Awareness, Utilization, and Satisfaction with Online Library Information Resources and Services. Libraries are the support system for the academic success of students and teachers. These have been proven when libraries were greatly affected during the COVID-19 pandemic. There was a shift from on-site to online library services, and various library innovations were implemented to support the academic community despite the COVID-19 pandemic challenges. This study examined the online library information resources and services at Carlos Hilado Memorial State University in terms of users' awareness, utilization, and satisfaction. A researcher-made questionnaire was used, validated by five (5) experts in research and library and information science, and 374 students participated. The instrument's reliability was strong, with a Cronbach's alpha coefficient of 0.910. Descriptive and inferential statistics were employed in data analysis. Mean, standard deviation, t-test, ANOVA, and Pearson's r were the statistical tools used. The results showed a high level of awareness of online library information resources and services, and the users often utilized these resources and services. Users were very satisfied with the resources and services, indicating that their needs were effectively met. Furthermore, there is a significant difference in the users' level of awareness and satisfaction when grouped according to age, year level, campus, and frequency of library usage, and no significant difference when grouped according to their sex. However, there is no significant difference in the users' extent of utilization when grouped according to age, sex, year level, campus, and frequency of library usage. As to the correlation, there is a significant relationship between users' level of awareness and their extent of utilization of online library information resources and services.

Isip et al., (2023). Challenges to Digital Services in Philippine Academic Libraries. This paper seeks to characterize the maturity of digital initiatives in Philippine academic libraries, focusing on the sustainability of digitization activities. For its literature review, this paper presents local digitization initiatives, guidelines, standards, and good practices on digitization as presented in research, and prevailing digital library services during the COVID-19 pandemic. It employed a descriptive-comparative research design to obtain information on digitization programs implemented in higher education and research-producing institutions. Five of the 12 verified institutions with digitization programs were engaged for further interviews. The respondents cited the lack of staff, dedicated physical space, and inadequate equipment and funding as barriers to implementing a digitization program. Most of the respondents’ digitization initiatives began in response to external triggers rather than as a part of a comprehensive strategy to provide digital library services. The project-based approach to these activities affects the sustainability of digitization programs. The study recommends organizing more consultancy programs in digitization, teaching digitization ICT applications in LIS schools, information companies offering digitization services, digitization communities of practice, and consortia for sharing facilities and expertise. With the requirements of a more robust digital framework to provide flexible access, Philippine academic libraries must review their short- and long-term goals and figure out where digitization can be integrated within said goals.

Agustian et al., (May 2021). E-book limitation with library portable document format java script for accessing digital library. The function of the Adisutjipto-Aerospace Institute of Technology (ITDA) library is to provide borrowing and reimbursement services for books insured by members of the library. The books which increase in number each year occupy a lot of space in the library, it is therefore necessary to study it so that the form of this book is no longer physical but digital or paperless to be able to be stored on a server computer. This form of library is known as a digital library or e-library. The electronic library is a modern library as a place which provides a source of educational information with more convenience and security. The flow in the application is not very different from the flow in the manual library. Security becomes an important part of an application, by limiting network access, accessing PDF documents and implementing PDF Viewer using the PDF.js library by rendering PDF documents on a canvas capable of blocking illegal downloads. Based on the test results, the electronic library application can work properly. The speed of opening a PDF document is influenced by the speed of the server, the content contained in the PDF and the size of the PDF file.

**Foreign Studies**

Khan (November 2021). Importance of Digital Library in Education. During the past recent years, there has been tremendous development reaming the concept of digital libraries, the biggest online platform of knowledge that can be stored and retrieved through online networks. Digital libraries are considered as the most complex form of data systems that associate with the digital document preservation, distributed database management, hypertext, filtering, information retrieval, and selective dissemination of information. This has really overcome geographical barrier offering a wide range of academic, research, and cultural resources with multimedia effects which can be accessed around the world over the distributed networks. The study also highlighted the information on the digital library projects undertaken in countries. This article provides information to the audience on the subject matter in terms of what has been already discovered and explored on the importance of Digital Library and what all can be further explored. The literature pertaining to the studies relating to how digital libraries emerged discussed in this article. The idea is to brief the readers about the concept of library resources shifted into digital libraries with the help of technology and its growth sourced from already existing literature. The contemporary trends reflecting the current state of the library and how it has progressed over time also discussed.

As mentioned in the study of Ogata et al., (December 2023 15(12)). Decentralized Storage with Access Control and Data Persistence for e-Book Stores. The e-book services we use today have a serious drawback in that we will no longer be able to read the books we have purchased when the service is terminated. One way to solve this problem is to build a decentralized system that does not depend on a specific company or organization by combining smart contracts running on the Ethereum blockchain and distributed storage such as an IPFS. However, a simple combination of existing technologies does not make the stored e-book data persistent, so the risk of purchased e-books becoming unreadable remains. In this paper, we propose a decentralized distributed storage called d-book-repository, which has both access management function and data durability for purchased e-books. This system uses NFTs as access rights to realize strict access control by preventing clients who do not have NFTs from downloading e-book data. In addition, e-book data stored on storage nodes in the distributed storage is divided into shards using Reed–Solomon codes, and each storage node stores only a single shard, thereby preventing the creation of nodes that can restore the entire content from locally stored data. The storage of each shard is not handled by a single node but by a group of nodes, and the shard is propagated to all nodes in the group using the gossip protocol, where erasure codes are utilized to increase the resilience against node departure. Furthermore, an incentive mechanism to encourage participation as a storage node is implemented using smart contracts. We built a prototype of the proposed system on AWS and evaluated its performance. The results showed that both downloading and uploading 100 MB of e-book data (equivalent to one comic book) were completed within 10 s using an instance type of m5. large. This value is only 1.3 s longer for downloading and 2.2 s longer for uploading than the time required for a simple download/upload without access control, confirming that the overhead associated with the proposed method is sufficiently small.

John D'Ambra a, et al., (October 2022). Digital transformation of higher education in Australia: Understanding affordance dynamics in E-Textbook engagement and use. This paper addresses digital transformation in higher education by exploring the engagement and use of e-textbooks through an affordance theory lens. Drawing on the insights from in-depth interviews (n = 18), focus group discussions (n = 15), a pilot survey (n = 83) and the main survey (n = 344) in Australia, we developed and validated an affordance actualization model for the engagement and use of e-textbooks. The partial least squares (PLS) technique was used to validate the dimensions of affordance actualization and its relationship with e-textbooks engagement and affordance effect. The findings indicate the efficacy of the two affordance constructs, as well as the significant mediating effect of engagement. An important lesson for the e-textbook industry is that firms need to consider affordance actualization dimensions (i.e., portability, accessibility, searchability, highlighting, copying, browsing, hedonic and utilitarian value) when enhancing digital engagement and use of e-textbooks.

**Local Studies**

As mentioned in the study of Abrigo et al., (2023). Teaching Information Literacy During the Pandemic: Current Practice and Challenges. Academic and school libraries in the Philippines now offer online library instruction to assist students and faculty members with their learning and research needs. The study documents the current practices of librarians in conducting online library instruction in response to the challenges brought about by the COVID-19 pandemic. It examines the challenges associated with online library instruction as they transition back to face-to-face instruction. An online questionnaire was distributed to collect data from academic and school librarians who had experience with online library instruction during the pandemic. During the transition to online instruction, the major challenges were: (1) librarians’ and students’ access to technologies, (2) stable internet connection, and (3) keeping students engaged. This study provides valuable information to library managers and institutional administrators to better understand the experiences and viewpoints of librarians in facilitating the adoption, acceptance, and use of online instruction.

Calilung (March 2024). LIBRARIANS IN TRANSITION: EMPOWERING KNOWLEDGE SEEKERS IN THE DIGITAL AGE. Libraries have historically served as essential hubs for information access and education. Traditionally viewed as repositories of books, libraries are now undergoing a metamorphosis. This qualitative research explores the evolving roles of librarians in the "new normal," particularly their function as scaffolds and knowledge acquisition guides. The study analyzes ten academic publications (1975-2021) on the changing roles of libraries. Employing a thematic analysis approach, the research reveals librarians transitioning into new roles: knowledge developers, collaborators, content curators, trainers, and information managers. These findings highlight how librarians are adapting to empower knowledge seekers in the digital age.

Josiah Ramuel Narca. COVID 19 Pandemic and the Library Online Services. The purpose of this study is to describe the experiences of St. Scholastica's College Manila High School librarians in implementing library online services during the COVID-19 Pandemic. The researcher used a descriptive research design and employed Document Analysis and Thematic Analysis vis-a-vis the respondents' answers on the electronic questionnaires. It was revealed, through this study, that the roles and responsibilities of the SSC Manila HS librarians were technologists, online learning support professionals, instructional partners, and game-based learning developers. On the other hand, they experienced challenges such as having limited transactions and time constraints in delivering library online services and the opportunities of having proactive team culture and providing appropriate and innovative services to their clientele. With these findings, the following are recommended for better library online services of the school libraries and librarians. First, librarians and staff's technical competencies and skills must continuously be honed. Second, the library's online services must also be evaluated annually by the students and faculty members. Third, the librarians and staff must explore more technological applications or apps and learning management systems. Lastly, further research studies are recommended in relation also to delivering library online services that can be in the contexts of other types of libraries, most especially their experiences so that there will be a deeper and bigger understanding of the roles and responsibilities, and the challenges and opportunities of librarians during the COVID-19 Pandemic.

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