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Assessment and Adoption of Cloud Computing among Academic Libraries in Philippines

Objective. Because cloud computing offers adaptable, scalable, and affordable technological solutions, it has profoundly changed academic librarianship. However, despite its growing use worldwide, its adoption in Philippine academic libraries remains underreported. Many institutions continue to struggle with economic, technical, and administrative barriers that affect implementation. This study explores how cloud computing is currently being used in higher education libraries in the Philippines, looking closely at how extensively it is adopted, how stakeholders perceive it, and what challenges arise throughout the process. **Methods.** Information was collected using both printed and online survey forms, following strict ethical guidelines that ensured informed consent and protected participant confidentiality. Descriptive statistical techniques, including frequency counts, percentages, weighted averages, and standard deviations, were then used to analyze the data. A total of 101 librarians and library employees from various higher education institutions participated in the study, which employed a descriptive-quantitative design. A validated survey instrument was employed to assess how these libraries adopt, integrate, and maintain cloud-based technologies. **Results.** The study revealed that cloud technology is already well-integrated into many academic libraries, with 73% of respondents reporting more than four years of cloud service use. Content Delivery Networks and Database-as-a-Service tools were the most commonly used, reflecting a strong focus on improving access to and delivery of digital resources. Cost savings and the ability to easily scale systems were the main reasons libraries chose to adopt cloud services. On the other hand, limited funding, worries about data security, and a lack of technical expertise were identified as the most significant challenges. **Conclusions.** It is concluded that cloud computing is a practical and sustainable way to improve library services in Philippine higher education institutions. However, its long-term success will depend on greater financial investment, enhanced training and capacity-building for staff, and the implementation of more robust security measures.

Keywords: cloud computing; academic libraries; Philippine higher education institutions; library technology adoption; digital library services; library automation; content delivery networks (CDNs); database-as-a-service (DBaaS); ICT integration in libraries; digital transformation

Introduction

Technological innovations are advancing faster than ever, and people everywhere are trying to keep up with this rapid shift that now shapes almost every part of daily life. In today's world driven by ICT (information and communication technologies), new digital tools are no longer optional—they have become essential for helping organizations work smarter and more efficiently (Omol, 2023). Yet, many libraries still struggle with limited awareness and understanding of cloud computing, preventing them from fully benefiting from what cloud services can offer. Rohani and Hussin (2015) point out that organizations willing to embrace new technologies gain an important advantage: they become more productive and competitive. With workplaces and institutions constantly evolving, adopting modern tools—cloud computing included—has become a necessity rather than a choice.

Cloud computing simply means accessing computing services through the internet. It provides shared digital resources that allow individuals and institutions to use applications such as email, social networks, file-sharing platforms, and online storage without needing their own hardware infrastructure. Large companies like Amazon, Google, Microsoft, and Oracle make these services available on demand. These advancements in ICT have greatly changed the way academic work and research are done (Golightly, Chang, Xu, Gao, Liu, 2022). At its core, cloud computing

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is built on the idea of reusing and maximizing IT resources, offering capabilities that go beyond what older technologies like grid or distributed computing could support (Villegas et al., 2010).

Because of these developments, the way libraries operate has changed significantly. Digital innovations now allow academic institutions to deliver information and learning resources in virtual spaces. Around the world, universities are investing in digital platforms to meet educational goals and foster cultural growth (Haleem, Javaid, Qadri, & Suman, 2022). This shift places academic libraries at the forefront, expecting them to provide high-quality, timely, and accessible information that aligns with the changing needs of their users.

To keep up, many libraries have automated their systems and are increasingly shifting toward virtual and cloud-based operations. Cloud computing has become one of the leading trends in library and information centers because it offers economical solutions for daily library functions (Rivai & Wang, 2020). As cloud services mature and become more reliable, libraries now have access to a wider range of tools that were once out of reach due to technical or financial limitations.

Cloud-based platforms give librarians—regardless of their technical background—the ability to use advanced technologies that they might not have been able to manage or afford on their own. As cloud computing continues to become a standard part of library operations, librarians are exploring creative ways to integrate third-party tools into their daily workflows. Chudasma, Bhatt, and Trivedi (2019) showed that many libraries are already offering enhanced services through cloud technologies and are prepared to tackle the challenges that come with adoption.

Alam (2020) notes that cloud computing has quickly become indispensable in modern IT because it can solve a wide range of technological problems while remaining cost-effective and offering virtually unlimited storage. Wada (2018) adds that moving to the cloud helps libraries reduce system maintenance costs, save energy, and access a greater variety of information resources. Successful cloud deployment, however, still requires essential components such as strong internet connectivity, digital resources, thin-client systems, wireless access points, and well-trained digital librarians. In the same way, Sahu (2015) emphasizes that cloud computing can transform service delivery, giving libraries the ability to expand their reach and improve operations while reducing the costs associated with hosting and storage.

In the Philippines, however, cloud computing is still not fully understood by many librarians. Although some academic libraries have already incorporated cloud-based tools—sometimes without formally recognizing them as cloud services—concerns about data security, protecting institutional intellectual property, and limited technical skills continue to slow down adoption. Asim, Arif, and Rafiq (2024) observed that cloud usage in Philippine academic libraries remains limited, despite its potential benefits for research data management. These challenges underscore the need to examine how deeply cloud computing has been adopted, how stakeholders perceive it, and what obstacles librarians encounter as they attempt to integrate cloud services into their operations.

Methods

Research Design

A descriptive-quantitative approach was utilized to assess how extensively cloud technologies are being adopted, as well as to gather stakeholder insights and identify existing obstacles. This methodological choice allowed for a structured evaluation of usage trends and user perceptions.

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Data Gathering Procedure

The survey involved 101 library professionals from different Philippine higher education institutions. Purposive sampling was applied to ensure that participants were individuals actively engaged in library functions and involved in making operational decisions. Experts in library and information science verified a structured questionnaire. It was divided into three sections: usage factors, the extent and types of cloud computing usage, and the demographic profile (position, years of experience). A Likert scale with a score of four is used to gauge challenges and satisfaction levels. It also used Cronbach's alpha to verify the reliability. Data were gathered through both paper-based and online survey instruments. All ethical standards were followed, including securing informed consent and ensuring participant confidentiality.

Instrument and Analysis

Data were gathered through both paper-based and online survey instruments. All ethical standards were followed, including securing informed consent and ensuring participant confidentiality. The results were analyzed using descriptive statistical tools such as frequency counts, percentages, weighted means, and standard deviations.

Results and Discussion

Table 1

Demographic Profile of the Respondents

Profiles	**Groups**	**Frequency (*n*)**	**Percentage (%)**
Position/Role	Library Director	23	22.8
	Chief Librarian	23	22.8
	Librarian	21	20.8
	Assistant Librarian	11	10.9
	Library Staff	15	14.9
	Officer-in-Charge-Library	8	7.9
	Total	101	100.0
Years of Experience	Less than 1 year	9	8.9
	1-5 years	31	30.7
	6-10 years	31	30.7
	More than 10 years	30	29.7
	Total	**101**	**100.0**

Most participants represented a diverse range of professional roles within Philippine academic libraries. Library directors attained the highest number of participants with a total of 22.8% and followed by the chief librarians with a total of 10.8%. This spread indicates that the study captured viewpoints from both administrative leaders and frontline personnel, offering a comprehensive understanding of cloud adoption from strategic and operational standpoints.

It was determined that 1-5 years and 6-10 years of experience attained the highest number with a total of 30.7% each. This was followed by more than 10 years of years of experience with a total of 29.7% and last was those professional librarians who has less than 1 year of experience.

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These figures imply that most participants had meaningful exposure to library functions and technological developments, enabling them to provide well-grounded evaluations.

Table 2

Extent of Adoption and Types of Cloud Computing Services Currently Utilized in HEI Libraries

Indicators	**Groups**	**Frequency (*n*)**	**Percentage (%)**
Length of cloud computing usage	less than a year	9	8.9
	One – three years	29	28.7
	Four – six years	25	24.8
	Seven – ten years	27	26.7
	More than ten years	11	10.9
Types of cloud computing	**Total**	**101**	**100.0**
	Cloud storage	5	5.0
	Cloud based integrated library system	11	10.9
	Software as a Service (SaaS)	11	10.9
	Content Delivery Networks (CDNs)	20	19.8
	Database as a Service (DBaaS)	18	17.8
	Infrastructure as a Service (IaaS)	15	14.9
	Identity and Access Management (IAM)	6	5.9
	Learning Management System	15	14.9
Factors Influencing the Adoption of Cloud Computing Services	**Total**	**101**	**100.0**
	Cost savings	28	27.7
	Scalability and flexibility	22	21.8
	Data backup and recovery	17	16.8
	Accessibility and remote access	13	12.9
	Collaboration and sharing	10	9.9
	Security and compliance	11	10.9
	Total	**101**	**100.0**

The number of years respondents have been using cloud computing shows that many academic libraries in the Philippines have already established a solid foundation in cloud-based practices. Around 28.7% of participants reported using cloud services for 1–3 years, while 24.8% had 4–6 years of experience. Another 26.7% indicated 7–10 years of cloud use, and 10.9% had been integrating cloud technologies for more than a decade. Only 8.9% were new adopters with less than a year of exposure. These figures reveal that cloud adoption in Philippine academic libraries is no longer experimental—many institutions have been steadily incorporating cloud tools into their systems for roughly ten years. This mirrors Kayode and Oguntayo (2025), who observed a global shift among libraries from initial testing to sustained reliance on cloud infrastructures.

Content Delivery Networks (CDNs), which provide the effective distribution of digital resources across several campuses, topped the list of most popular cloud services with 19.8%. Database-as-a-Service (DBaaS), which provides flexible access to academic databases, came in

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second at 17.8%. 14.9% of respondents used both learning management systems and infrastructure as a service, underscoring their significance in sustaining online learning environments. Cloud-based Integrated Library Systems (10.9%), Software as a Service (10.9%), Identity and Access Management (5.9%), and Cloud Storage (5.0%) are additional often utilized services.

Interestingly, cloud storage—which is typically the entry-level cloud service in many Western institutions (Golightly, Chang, Xu, Gao, Liu, 2022)—ranked lowest among Philippine libraries. This suggests that local institutions are prioritizing cloud applications that directly support teaching, learning, and access to academic content rather than storage alone. This pattern aligns with Lagas and Isip (2023), who note that Philippine academic institutions place strong emphasis on digital resource delivery and online learning support.

In terms of what drives cloud adoption, cost savings emerged as the strongest motivator (27.7%), which is not surprising given the financial pressures faced by many higher education institutions. This supports the observations of Nayar and Kumar (2018), who identify affordability as a key advantage of cloud adoption in educational settings. Scalability and flexibility (21.8%) ranked second, showing that institutions value systems that can grow alongside increasing enrollment and expanding resource needs.

Data backup and disaster recovery (16.8%), which ensures that library operations may continue during system failures, and remote accessibility (12.9%), which has become essential in the era of hybrid and online learning, were other significant reasons. Another factor that demonstrated the cloud's ability to facilitate resource interchange between institutions was collaboration and sharing (9.9%). Interestingly, security and compliance (10.9%) were cited both as motivations for adoption and, paradoxically, as challenges—reflecting a dual perception that cloud systems can enhance or complicate institutional data governance. This mirrors Odeh, Garcia-Perez, and Warwick (2017), who argue that cloud platforms can both reduce and introduce new risks related to information management.

Table 3

Major Challenges Encountered by the Respondents in the Adoption of Cloud Computing Services

Indicators	***WM***	***SD***	**Interpretation**
1. Limited budget/resources	3.66	0.621	Highly Encountered
2. Lack of staff expertise	3.11	0.662	Encountered
3. Concerns about data security and privacy	3.37	0.561	Highly Encountered
4. Resistance to change among staff	3.13	0.770	Encountered
5. Technical issues or downtime	3.24	0.635	Encountered
6. Lack of understanding about cloud computing	3.25	0.684	Encountered
General WM	**3.29**	**0.682**	**Highly Encountered**

Table 3 lists the primary obstacles that respondents faced when implementing cloud computing services in their libraries. Lack of adequate funding and resources (WM = 3.66), which was regarded as Highly Encountered, was the biggest obstacle. This result illustrates the persistent financial difficulties that many educational institutions encounter when trying to implement new technologies.

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Another major concern involved data security and privacy (WM = 3.37), also classified as *Highly Encountered*. This shows that institutions remain cautious about risks such as data breaches, unauthorized system access, and meeting compliance requirements. Limited understanding of cloud computing (WM = 3.25) was likewise rated as *Highly Encountered*, indicating that although staff may be aware of cloud technologies, many still lack the deeper technical knowledge needed for confident and effective use.

Other issues fell under the *Encountered* category, including technical difficulties or downtime (WM = 3.24), resistance to technological changes among staff (WM = 3.13), and insufficient staff expertise (WM = 3.11). While these concerns are less critical than financial and security-related problems, they still pose notable obstacles to fully embracing cloud-based systems.

The challenges are classified as Highly Encountered based on the total weighted mean of 3.29. These findings imply that a mix of financial constraints, technical challenges, and human issues are responsible for the barriers to cloud adoption. This tendency is in line with the findings of Awuor, Rabah, and Maake (2013), who discovered that a significant barrier to ICT advancement in libraries throughout developing countries is a lack of funds. Similarly, Al-Sharafi et al. (2023) emphasize that successful cloud implementation depends not only on technological capacity but also on organizational culture and staff readiness—issues that clearly emerge in the present study.

Table 4

Level of Satisfaction Regarding the Different Aspects of Cloud Computing Services

Indicators	***WM***	***SD***	**Interpretation**
1. Functional Stability	3.63	0.543	Very Satisfied
2. Efficiency	3.43	0.536	Very Satisfied
3. Compatibility	3.46	0.539	Very Satisfied
4. Usability	3.50	0.577	Very Satisfied
5. Reliability	3.43	0.536	Very Satisfied
6. Security	3.31	0.524	Very Satisfied
7. Maintainability	3.24	0.619	Satisfied
8. Portability	3.39	0.616	Very Satisfied
General WM	**3.42**	**0.571**	**Very Satisfied**

Table 4 summarizes how respondents rated their satisfaction with different aspects of cloud computing services. Among all indicators, functional stability received the highest score (WM = 3.63, SD = 0.543), meaning users were *Very Satisfied*. This suggests that librarians see cloud-based systems as reliable and consistently performing well during day-to-day operations. Usability followed closely (WM = 3.50, SD = 0.577, *Very Satisfied*), indicating that many find cloud platforms easy to use, intuitive, and supportive of efficient work processes—factors that tend to encourage broader institutional adoption.

Compatibility was next (WM = 3.46, SD = 0.539, *Very Satisfied*), showing that cloud applications generally integrate smoothly with existing library tools and infrastructure. This high level of interoperability helps libraries transition more easily from traditional systems to cloud-based environments. Respondents also gave strong satisfaction ratings for efficiency (WM = 3.43, SD = 0.536) and reliability (WM = 3.43, SD = 0.536), suggesting that cloud technologies help improve workflows, reduce service delays, and provide consistent performance.

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Although slightly lower, portability still earned a *Very Satisfied* score (WM = 3.39, SD = 0.616), reflecting the advantage of being able to access cloud services from different devices and locations. Security, however, received one of the lower ratings among the "Very Satisfied" items (WM = 3.31, SD = 0.524). While users generally trust cloud security features, the score hints at lingering concerns about data protection, privacy, and compliance—issues also reflected in the challenges identified in Table 3. The lowest score in the table was maintainability (WM = 3.24, SD = 0.619), categorized as *Satisfied*. This suggests that although cloud systems work well overall, aspects such as system updates, troubleshooting, and long-term management still pose challenges.

Overall, the mean score of 3.42 (Very Satisfied) demonstrates that Philippine academic libraries hold a positive view of cloud computing services. Despite some concerns related to security and system maintenance, cloud technologies are widely regarded as dependable, efficient, and beneficial to library operations and service delivery.

These results echo findings from earlier studies. Wada (2018) noted that cloud-based solutions enhance efficiency and support reliable service delivery, particularly in environments with limited resources. Similarly, Karthika and Dominic (2025) found that librarians appreciate how cloud systems simplify tasks and improve accessibility—consistent with the high satisfaction scores for usability and stability in this study. Furthermore, Shin, Yoo, and Song (2024) recognized system integration and compatibility as key success factors in cloud adoption, aligning with respondents' strong satisfaction in these areas.

Conclusions

This study looked into how widely cloud computing is being used in academic libraries across the Philippines, how stakeholders perceive it, and what challenges continue to slow down full adoption. The findings show that cloud integration is already well-established, with many libraries using cloud services for more than four years. The most frequently utilized tools—such as Content Delivery Networks, Database-as-a-Service, Learning Management Systems, and Infrastructure-as-a-Service—illustrate a strong institutional focus on improving access to academic content and supporting digital learning systems. The main reasons driving adoption included cost savings, scalability, and reliable data backup. Respondents also expressed high satisfaction with cloud services, particularly in terms of stability, usability, and compatibility with existing systems. Still, libraries face several challenges, including budget constraints, ongoing security and privacy concerns, limited staff skills, and occasional technical issues. Together, these factors point to persistent financial, technical, and organizational hurdles that affect broader cloud adoption.

Overall, the study supports the idea that cloud computing is a viable and sustainable approach for improving the operational efficiency and service delivery of academic libraries. However, realizing its full benefits will require addressing funding gaps, expanding training opportunities for staff, and establishing stronger data protection measures. Administrators are encouraged to invest in appropriate resources and build strategic collaborations with cloud service providers, while librarians need continued professional development to build confidence and reduce resistance to technological change. Future studies could include regional comparisons, long-term assessments of adoption trends, qualitative research on librarians' experiences, and explorations of how cloud services can integrate with emerging technologies such as artificial intelligence and big data. These efforts will help academic libraries remain innovative, adaptable, and resilient in an increasingly digital landscape.

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REFERENCES

Alam, T. (2020). Cloud computing and its role in the information technology. *IAIC Transactions on Sustainable Digital Innovation (ITSDI), 1*(2), 108-115. doi: https://doi.org/10.2139/ssrn.3639063 (in English)

Al-Sharafi, M. A., Iranmanesh, M., Al-Emran, M., Alzahrani, A. I., Herzallah, F., & Jamil, N. (2023). Determinants of cloud computing integration and its impact on sustainable performance in SMEs: An empirical investigation using the SEM-ANN approach. *Heliyon, 9*(5), Art. e16299. doi: https://doi.org/10.1016/j.heliyon.2023.e16299 (in English)

Asim, M., Arif, M., & Rafiq, M. (2024). Adoption and uses of cloud computing in academic libraries: A systematic literature review. *Journal of Information Science.* doi: https://doi.org/10.1177/01655515241263272 (in English)

Awuor, F. M., Rabah, K., & Maake, B. M. (2013). Hindrance of ICT adoption to library services in higher institution of learning in developing countries. *Computer Science and Information Technology, 1*(4), 252-256. doi: https://doi.org/10.13189/csit.2013.010403 (in English)

Chudasma, P., Bhatt, A., & Trivedi, D. (2019). Application of cloud computing in university libraries: Case study of selected university libraries in Gujarat. Library Philosophy and Practice. Retrieved from https://digitalcommons.unl.edu/libphilprac/2744 (in English)

Golightly, L., Chang, V., Xu, Q. A., Gao, X., & Liu, B. SC. (2022). Adoption of cloud computing as innovation in the organization. *International Journal of Engineering Business Management, 14*. Retrieved from https://doi.org/10.1177/18479790221093992 (in English)

Haleem, A., Javaid, M., Qadri, M. A., & Suman, R. (2022). Understanding the role of digital technologies in education: A review. *Sustainable Operations and Computers, 3*, 275-285. doi: https://doi.org/10.1016/j.susoc.2022.05.004 (in English)

Karthika, S., & Dominic, J. (2025). Adoption and impact of cloud computing in libraries: Benefits, challenges, and future directions. *International Journal of Library and Information Science (IJLIS), 14*(1), 34-45. doi: https://doi.org/10.34218/IJLIS_14_01_003 (in English)

Kayode, A. I., & Oguntayo, S. A. (2025). Perceived flexibility and benefits as determinants of cloud computing adoption by academic libraries in South-West, Nigeria. *Library Philosophy and Practice*. Retrieved from https://digitalcommons.unl.edu/libphilprac/8213/ (in English)

Lagas, S., & Isip, J. D. (2023). Challenges to digital services in Philippine academic libraries. *Philippine Journal of Librarianship and Information Studies (PhJLIS), 43*(1), 27-38. Retrieved from https://phjlis.org/index.php/phjlis/article/view/133 (in English)

https://doi.org/10.15802/unilib/2025_348120

Nayar, K. B., & Kumar, V. (2018). Cost benefit analysis of cloud computing in education. *International Journal of Business Information Systems, 27*(2), 205-221. doi: https://doi.org/10.1504/IJBIS.2018.089112 (in English)

Odeh, M., Garcia-Perez, A., & Warwick, K. (2017). Cloud computing adoption at higher education institutions in developing countries: a qualitative investigation of main enablers and barriers. *International Journal of Information and Education Technology 7*(12), 921-927. doi: https://doi.org/10.18178/ijiet.2017.7.12.996 (in English)

Omol, E. J. (2023). Organizational digital transformation: From evolution to future trends. *Digital Transformation and Society, 3*(3), 240-256. doi: https://doi.org/10.1108/DTS-08-2023-0061 (in English)

Rivai, M. A., & Wang, G. (2020). Cloud computing platform services in the university libraries for digital repository. *International Journal of Advanced Trends in Computer Science and Engineering, 9*(1), 285-294. doi: https://doi.org/10.30534/ijatcse/2020/43912020 (in English)

Rohani, M. B., & Hussin, A. R. C. (2015). An integrated theoretical framework for cloud computing adoption by universities Technology-Transfer-Offices (TTOs). *Journal of Theoretical and Applied Information Technology, 79*(3), 415-430. Retrieved from https://www.jatit.org/volumes/seventynine3.php (in English)

Sahu, R. (2015). Cloud computing: An innovative tool for library services. *SSRN Electronic Journal*. doi: https://doi.org/10.2139/ssrn.3620868 (in English)

Shin, G., Yoo, Y., & Song, C.-U. (2024). An analysis of the importance of success factors for cloud computing system adoption in vessel traffic service systems. Journal of Marine Science and Engineering, 12(9), Art. 1504. doi: https://doi.org/10.3390/jmse12091504 (in English)

Villegas, D., Rodero, I., Fong, L., Bobroff, N., Liu, Y., Parashar, M., & Sadjadi, S. M. (2010). The role of grid computing technologies in cloud computing. In B. Furht, & A. Escalante (Eds.), *Handbook of Cloud Computing* (pp. 183-218). Boston, MA: Springer. doi: https://doi.org/10.1007/978-1-4419-6524-0_8 (in English)

Wada, I. (2018). Cloud computing implementation in libraries: A synergy for library services optimization. *International Journal of Library and Information Science, 10*(2), 17-27. doi: https://doi.org/10.5897/ijlis2016.0748 (in English)

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Оцінка та впровадження хмарних обчислень в академічних бібліотеках Філіппін

Мета. Оскільки хмарні обчислення пропонують адаптивні, масштабовані та доступні технологічні рішення, вони кардинально змінили академічну бібліотечну справу. Однак, незважаючи на те що їх усе більш широко використовують у всьому світі, їхнє впровадження в академічних бібліотеках Філіппін залишається недостатньо висвітленим. Багато установ продовжують боротися з економічними, технічними та адміністративними бар'єрами, що впливають на впровадження. Це дослідження вивчає, як хмарні обчислення зараз використовуються в бібліотеках вищих навчальних закладів на Філіппінах, детально аналізуючи, наскільки широко вони впроваджуються, як їх сприймають зацікавлені сторони та які виклики виникають у процесі. **Методика.** Інформація збиралася за допомогою друкованих та онлайн-анкет, з дотриманням суворих етичних принципів, що забезпечували інформовану згоду та захист конфіденційності учасників. Для аналізу даних були використані описові статистичні методи, зокрема підрахунок частоти, відсотки, зважені середні та стандартні відхилення. У дослідженні, яке проводилося за описово-кількісним методом, взяли участь 101

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бібліотекар та працівник бібліотеки з різних закладів вищої освіти. Для оцінки того, як ці бібліотеки впроваджують, інтегрують та підтримують хмарні технології, було використано валідований опитувальний інструмент. **Результати.** Дослідження показало, що хмарні технології вже добре інтегровані в багато академічних бібліотек, причому 73 % респондентів повідомили, що використовують хмарні сервіси більше чотирьох років. Найбільш часто використовувалися мережі доставки контенту та інструменти «база даних як послуга», що свідчить про значну увагу до поліпшення доступу до цифрових ресурсів та їх доставки. Економія коштів та можливість легко масштабувати системи були основними причинами, через які бібліотеки вирішили перейти на хмарні сервіси. З іншого боку, обмежене фінансування, занепокоєння щодо безпеки даних та брак технічних знань були визначені як найважливіші виклики. **Висновки.** Зроблено висновок, що хмарні обчислення є практичним і стійким способом поліпшення бібліотечних послуг у закладах вищої освіти Філіппін. Однак їхній довгостроковий успіх залежатиме від більших фінансових інвестицій, покращення навчання та нарощування потенціалу персоналу, а також впровадження більш надійних заходів безпеки.

Ключові слова: хмарні обчислення; академічні бібліотеки; філіппінські заклади вищої освіти; впровадження бібліотечних технологій; послуги цифрових бібліотек; автоматизація бібліотек; мережі доставки контенту (CDN); база даних як послуга (DBaaS); інтеграція ІКТ у бібліотеках; цифрова трансформація

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