

Marketing Strategy of Library Digital Services

Syifaun Nafisah^{1*}, Nazilatul Laili Sa'adah², and Nazrul Effendy³

¹Study Program of Library Science, Faculty of Adab and Cultural Sciences, Sunan Kalijaga State Islamic University, Yogyakarta - 55281, Indonesia

²Study Program of Islamic Library and Information Science, Faculty of Tarbiyah and Teacher Training, Antasari State Islamic University, Banjarmasin - 70235, Indonesia

³Department of Nuclear Engineering and Engineering Physics, Faculty of Engineering, Universitas Gadjah Mada, Yogyakarta - 55281, Indonesia

*E-mail: 197812262008012017@uin-suka.ac.id

ABSTRACT

This research aims to determine the marketing mix strategy for library services by comparing marketing strategy theories based on empirical experience. This research uses a review approach. This research collects data by reviewing scientific journals on relevant topics and systematically compiling research results through abstracts, keywords, footnotes, references, research results, and quotations. This research found that libraries can use the 7Ps, Customer Relationship Management, and the Kotler and Armstrong model as marketing strategies. The 7P Model recommends that libraries develop web-based innovations to adapt to the characteristics of their users. In exploring the creativity of new service innovations, libraries can apply the Kotler and Armstrong strategy. The development of this innovation will increase user loyalty to library services. To maintain user loyalty, libraries can use Customer Relationship Management Strategies. The results of this research conclude that implementing a marketing mix strategy using these models can improve the quality of library services.

Keywords: Library; Marketing strategy; Customer relationship management

1. INTRODUCTION

The library has a strategy as a service technique to satisfy users' expectations¹⁻². One of these strategies is a marketing strategy. Marketing strategies are an effort to improve information services and introduce libraries to the public. Libraries can increase customer value and relationships through the right marketing strategy³⁻⁴.

Marketing strategy has two perspectives: content and process strategy. Content strategy focuses on preparing content for a product or service and distributing it to potential users. Meanwhile, the process strategy is an organisational approach to converting resources into goods and services (Morgan, *et al.*, 2019). Organisations can apply these perspectives to minimise the risks of business processes, increase the value of products and services, and measure user needs⁵⁻⁷. The combination of methods in marketing is called the mixed marketing strategy. Mixed marketing consists of variables influencing loyalty to use the company's products and services⁸⁻¹³.

Libraries have made many innovations through web development for learning and research information services for users to access information more quickly¹⁴⁻¹⁵. Libraries need a marketing strategy to promote and introduce this

innovation to the public. As an organisation, libraries can also implement marketing mix strategies to promote their services, develop new products and service innovations, control information, and create service branding to increase people's interest in visiting¹⁶⁻¹⁷. An indicator of library satisfaction in implementing this strategy is an increase in the value of information and interest in visiting the library¹⁸. Various studies have proven that implementing a marketing mix strategy can increase the utilisation of information services in libraries. However, the application of this strategy is only practical for certain activities in the library. For this reason, libraries need to study to find the right marketing mix strategy for various activities in the library.

Many researchers have studied library marketing strategies by applying various marketing theories to promote their products and services, with a research interest rating of 41 %¹⁹. From 41 % of the research, researchers used 29 marketing theories as promotional strategies. Researchers pay great attention to this strategy because it is essential in ensuring business existence and managing organisational strategic policies²⁰⁻²³. Researchers' interest in this study became fundamental for this research to explore marketing strategies in libraries.

Libraries, as institutions of information provider, also need a strategy for promoting their services²⁴.

Many libraries have also implemented mixed marketing strategies to promote their services. Empirical studies show that mixed strategy research is essential for library service marketing²⁵. The previous research shows that libraries apply three theories to promote their services: 7P, Customer Relationship Management (CRM), and Kotler and Armstrong²⁶⁻³⁰.

Based on these, this research explores integrating these theories as a marketing strategy in libraries. The research results contribute to producing guidelines for implementing library promotional activities. This guideline allows libraries to apply appropriate methods to each service activity unit.

2. METHODOLOGY

This research uses a systematic review approach by examining several relevant articles from practical research on marketing mix strategies for library services. This research review will produce a marketing mix strategy theory suitable for library applications.

2.1 Research Materials and Analysis Techniques

The type of research used is a literature study. The literature study method is a series of activities related to collecting library data, reading and taking notes, and managing research materials.

2.1.1 Research Materials

The data collection technique in this research is by reviewing scientific articles and research reports from various sources using keywords, Titles, and subjects. This research uses scientific articles from the last five years.

This research develops a map by reading these texts using symbolic and semantic stages. This research determines the article's relevance to the research objectives at a symbolic level by reading the abstract and conclusion as a synopsis. The next step is to read the article in more detail to capture the essence of the data at a semantic level. In this technique, this research prioritises primary data and verifies it with secondary data.

2.1.2 Analysis Techniques

Research data validation using credibility, transferability, dependability, and confirmability testing. Credibility, reliability, and confirmability tests by examining data findings using triangulation and transferability tests using audit techniques. This audit uses a book log of data records and expert judgment as an external reviewer. This research also checks between articles to maintain data accuracy and prevent misinformation. This research uses a content analysis method with the Miles and Huberman model to find the right service marketing mix strategy for libraries.

3. RESULTS/OUTCOMES

This research reviews three marketing mix strategy theories to promote library services: 7P, CRM, and Kotler

and Armstrong. The results of the exploration of these theories are as follows.

3.1 7P Model

The 7P Model has seven aspects for designing marketing strategies: Product, Price, Promotion, Place, People, Process, and Physical Evidence to identify and develop the product, increasing user satisfaction and loyalty to a product or service³¹⁻³⁶. Many libraries have implemented the 7P Model. Research on 11 libraries reported that using the website is one of the library's strategies for promoting their services. These libraries use websites as promotional tools and as library service centres. The research results show that the 7P model strategy can help libraries provide their services according to the guidelines outlined by the Inter-Parliamentary Union (IPU) and the International Federation of Library Associations (IFLA)²⁷.

The 7P Model also supports distance learning through MOOCs (Massive Open Online Courses). Digital service transformation provides users easy access to information through an open-access system. Librarians can play an essential role in organising MOOCs by opening access to information for the public³⁷. An explanation of applying the 7P Model Marketing Mix Strategy to Library digital services is as follows.

3.1.1 Product

Products are what the library offers. However, libraries can build brands for their services. For example, the Library and Archives Service of Special Region Yogyakarta in Indonesia has a brand and a drive-thru system service called 'SAPA RATU'. This library uses its websites to promote service and reach a wider community.

3.1.2 Price

Price in the library context refers to how the library understands the public's information needs. Increasing user visits is an indicator of 'price' for libraries. The 7P recommends all libraries develop digital libraries because they provide infographics on user visits. This infographic can increase the value of libraries for the community³⁸.

3.1.3 Place

Places are sites where users can experience products and services. Metaphorically, this site is a medium of interaction between service providers and users. In 7P models, this definition refers to digital libraries because users can access services anytime and anywhere through the digital library web³⁹. The library website is a concrete manifestation of the 'Place' element in the 7P Model.

3.1.4 Promotions

In promoting its services, Libraries face the challenge of selecting media to increase public interest in visiting and reading library books. The 7P Model emphasises digital media use as the strategy because digital media is an effective medium in promotional activities⁴⁰.

3.1.5 People

Libraries have obstacles in implementing the 7P Model in human resource development. They have a significant influence on the quality of library services. To improve service quality, the 7P Model requires competency in digital technology as a competency for human resources in the library⁴¹.

3.1.6 Process

The process is a procedure, schedule, or mechanism in service activities. The challenge for libraries is how services reach users appropriately. Digital transformation in libraries based on 7P is an effort to improve their functions to meet user needs⁴².

3.1.7 Physical Evidence

Physical evidence refers to user experience in assessing the quality of library services. Customer service has a vital role in a service provider. The 7P Model recommends that library websites provide customer service features by providing information about email or contact persons⁴³.

3.2 Customer Relationship Management (CRM)

The strategy for building library user loyalty is the CRM. This strategy can increase library user loyalty by up to 74 % -86 %⁴⁵. This Model uses the 4S technique: Scope, Site, Synergy, and System (4S).

3.2.1 Scope

Scope refers to the library’s activities to serve users’ information needs. This aspect requires libraries to develop various innovative services supporting their users in reaching the community using digital media.

3.2.2 Site

The site is an activity that provides the channels needed by users. In the library, the site refers to the

rooms in the library building and a digital library. CRM recommends building digital libraries to allow users to access information without limits.

3.2.3 Synergy

Synergy is an effort to gain the loyalty of library users using the 5i method.

3.2.3.1 Identification

The identification aspect of CRM advises libraries to recognise their users’ targets to determine the proper strategy. The library’s target users are Gen Z and Alpha. Libraries can implement digital media-based marketing strategies to adapt the characteristics of this generation⁴⁶.

3.2.3.1 Individualisation

The millennial generation and Zoomers (Gen Z and Alpha) have the characteristics of social media users and Internet of Things (IoT) users. They are library users, with around 29.17 million people (10.88 %) ⁴⁷. This generation’s digital literacy level is very high⁴⁸⁻⁴⁹. CRM suggests that libraries develop service innovation to support the individualisation of services and create digital libraries. A cross-perspective review also explains that creating digital libraries in the current era is necessary⁵⁰.

3.2.3.2 Interactions

Interaction is an effort to establish and maintain two-way communication with customers. CRM recommends that libraries apply 2.0 technology to support two-way communication and increase their reputation⁵¹.

3.2.3.3 Integration

The information needs of library users are diverse and continue to grow. The library’s ability to provide information with institutional collections is limited. CRM recommends utilising 3.0 technology with cloud computing to build repository integration and collaboration between libraries ².

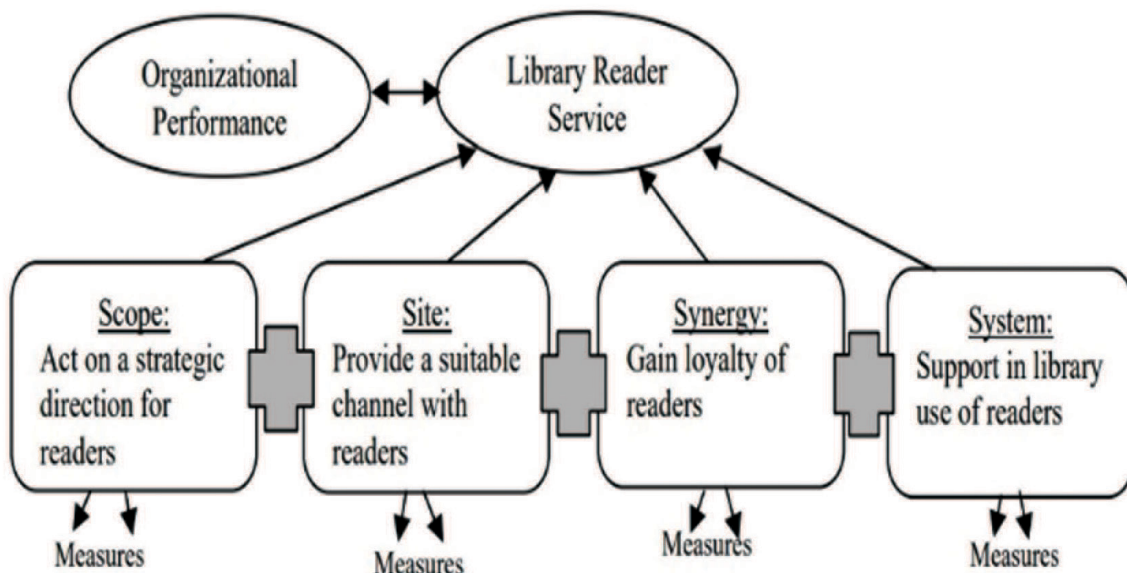


Figure 1. CRM Conceptual framework design⁴⁴.

3.2.3.4 Integrity

CRM advises libraries to realise digital information integrity by providing electronic collection certificates to prevent illegal duplication of collections. Artificial intelligence-based applications can realise library information integrity with biometric technology⁵³.

3.2.3.5 System

In the library context, the system is concerned with how it supports the provision of the information needs of its users. CRM recommends libraries create internal and external communication patterns. Libraries also need evaluations to assess performance and develop a cooperative framework for collaboration between libraries⁵⁴.

3.3 Kotler and Armstrong

The marketing concept emphasises communication to increase consumer loyalty to products and services. A Kotler and Armstrong strategy requires the following aspects⁵⁵.

3.3.1 Understand Marketplace and Customer Needs

In digital humanities, libraries need digital platforms to connect libraries with their users and to create digital inclusion⁵⁶⁻⁵⁷. This need gives libraries a new role as digital information providers through various digital platforms. Kotler & Armstrong recommend libraries to develop applications in different digital platforms²¹.

3.3.2 Offers, Products, Services and Experiences

Marketplace offerings combine products, services, information, or experiences to meet user needs. This strategy suggests that libraries use the latest technology trends to focus on collaborative, creative, and participatory concepts⁵⁸. 3D technology is also an innovation in library services, as recommended by its strategy⁵⁹.

3.3.3 Customer Value and Satisfaction

Library and information services include tangible and intangible assets. The combination of these two assets impacts the overall value and performance of the library. Library intangible assets consist of services and relationships; Tangible assets include information in various formats and human resources. Kotler and Armstrong suggest the library assesses their assets to increase user satisfaction⁶⁰.

3.3.4 Exchange and Relations

Kotler and Armstrong recommend that libraries engage in exchange and collaboration. Digital library innovation represents this aspect because it provides a portal for sharing information sources between libraries through the Inter-library network to increase the accessibility of information via the Internet⁶¹⁻⁶². This aspect also suggests that libraries should implement IoT technological trends, which affect the accessibility of information in libraries. The emergence of Interlibrary networks supports the creation of libraries as information centers⁶³.

3.3.5 Marketplace

The market concept in libraries is a strategy to advance library services. Equity, diversity, and inclusion are the basis for building the library marketplace based on this theory⁶⁴. Kotler and Armstrong suggest that libraries make persuasive efforts through two-way communication that allows the public to share information. This recommendation directs libraries to create public spaces representing the library's marketplace⁶⁵⁻⁶⁶.

4. DISCUSSION

Various libraries have implemented different types of marketing strategies to promote their services. Based on practical experience, libraries can use a marketing mix strategy with the 7P model to promote digital media-based services²⁸. Implementing the 7P model benefits libraries; libraries can always develop innovations using the latest technological trends to adapt to their users' characteristics continuously. However, this model also provides challenges for libraries in application maintenance systems. Another challenge is how libraries can take advantage of technological trends as opportunities to develop innovation. This challenge is an obstacle for libraries that do not have sufficient assets, both in terms of funding and human resources, to implement this strategy⁶⁷.

Adapting libraries to the latest technological trends, which are recommendations from the 7P model, will influence the quality of digital media-based library services. User satisfaction with the quality of this media-based service depends on the organisation's understanding of its users' needs⁶⁸⁻⁷¹. Libraries can implement CRM strategies to build community loyalty. This strategy can identify factors influencing user satisfaction in utilising library services⁷². Libraries should build user loyalty through work plans and continue adapting to technological innovation changes. This change is a challenge for libraries when implementing CRM. It is not easy for libraries to capture the opportunities of these technological trends to develop service innovation in libraries. The obstacles are financial and human resources, even though consumer needs are the principle of sustainability of a system⁷³. Libraries need a marketplace to identify the needs of their users and maintain their existence as institutions providing information services to the public. The application of the Kotler and Armstrong strategy is the library's effort to create a marketplace concept in library⁷⁴. However, implementing this strategy faces obstacles because the idea of a library marketplace is debatable. The American Library Association (ALA) does not accommodate the marketplace concept in libraries. Libraries need a consortium to implement this strategy in their marketing activities. The agreement through this consortium will take a long time.

Looking at the advantages and disadvantages of each strategy, libraries can begin to implement aspects of each strategy gradually according to conditions. Libraries can apply this strategy using a mixed technique

by implementing the existing elements of each plan to optimise the marketing process. Based on empirical experience from libraries that have implemented this strategy separately, the Application of mixed techniques will be able to improve the quality of library service marketing.

5. CONCLUSIONS

Libraries are institutions that provide information services to the public. Like other institutions, libraries also have competitors for users. Libraries need a strategy for their services. One of the library's strategies is to develop digital-based service innovation. To sell digital services, libraries can apply the 7P marketing model.

Loyalty is a determinant factor that influences the use of services in libraries. Libraries need to build relationships with their users through various communication channels. A strategy for building library-user relationships is the CMR model. Libraries can also create a 'marketplace' concept to facilitate users to express their information needs freely and openly. The Kotler and Armstrong model is an approach to creating a library marketplace concept.

Implementing marketing strategies in libraries cannot stand alone. Combining these three strategies will optimise library information services for the community. For this reason, in future research, libraries need empirical studies to evaluate using a combination of mixed marketing strategies.

ACKNOWLEDGEMENT

We would like to thank our institutions-Sunan Kalijaga Yogyakarta State Islamic University, Antasari Banjarmasin State Islamic University, and Gadjah Mada University, for providing a place to conduct this research.

REFERENCES

- Chisita, C.T. & Fombad, M. Spatial configuring for wider access to public library services at the harare city library: Towards a new strategy for inclusivity. *Public Library Quarterly*. 2021, **40**(3), 221–43.
- Cox, A.M.; Kennan, M.A.; Lyon, L. & Pinfield, S. Developments in research data management in academic libraries: Towards an understanding of research data service maturity. *J. Assoc. Infor. Sci. Technol.*, 2017, **68**(9), 2182–200.
- Ibrahim, U.A. How customer relationship and management lead to increase in high rate of turnover. 2019, **19**.
- Prinka, Bansal S. & Surya, P. Effects of marketing strategies on organizational performance. *Int. J. Eng. Res.*, 2019, **7**(12).
- Morgan, N.A.; Whitler, K.A.; Feng, H. & Chari, S. Research in marketing strategy. *J. Acad Mark Sci.* 2019, **47**(1), 4–29.
- Katsikeas, C.; Leonidou, L. & Zeriti, A. Revisiting international marketing strategy in a digital era: Opportunities, challenges, and research directions. *Inter. Marketing Rev.*, 2019, **37**(3), 405–24.
- Täuscher, K & Laudien, S.M. Understanding platform business models: A mixed methods study of marketplaces. *European Manage. J.*, 2018, **36**(3), 319–29.
- Tong, S.; Luo, X. & Xu, B. Personalized mobile marketing strategies. *J. Acad. Mark Sci.*, 2020, **48**(1), 64–78.
- Awan, U.; Sroufe, R. & Shahbaz, M. Industry 4.0 and the circular economy: A literature review and recommendations for future research. *Business Strategy Environ.*, 2021, **30**(4), 2038–60.
- Darmawan, D. & Grenier, E. Competitive advantage and service marketing mix. *J. Social Sci. Studies (JOS3)*, 2021, **1**, 75–80.
- Grewal, D.; Hulland, J.; Kopalle, P.K. & Karahanna, E. The future of technology and marketing: A multidisciplinary perspective. *J Acad. Mark Sci.*, 2020, **48**(1), 1–8.
- Khalayleh, M. & Al-Hawary, S. The impact of digital content of marketing mix on marketing performance: An experimental study at five-star hotels in Jordan. *Int. J. Data Network Sci.*, 2022, **6**(4), 1023–32.
- Othman, B.A.; Harun, A.; De Almeida, N.M. & Sadq, Z.M. The effects on customer satisfaction and customer loyalty by integrating marketing communication and after sale service into the traditional marketing mix model of Umrah travel services in Malaysia. *J. Islamic Marketing*, 2020, **12**(2), 363–88.
- Shao, S.; Hu, Z.; Cao, J. & Yang, L. Guan, D. Environmental regulation and enterprise innovation: A review. *Business Strategy Environ.*, 2020, **29**(3), 1465–78.
- Lata, N. & Sonkar, S.K. Use of information communication technology (ICT) in library and information science education and research. *DESIDOC J. Libr. Infor. Technol.*, 2022, **42**(6), 397–403.
- Verma, N.K.; Deori, M. & Verma, M.K. Library services during COVID 19. *DESIDOC J. Libr. Infor. Technol.*, 2022, **42**(6), 341–53.
- Cheng, W.W.H.; Lam, E.T.H. & Chiu, D.K.W. Social media as a platform in academic library marketing: A comparative study. *J. Academic Librarianship*, 2020, **46**(5), 102188.
- Cristobal, A. Expectations on library services, library quality (LibQual) dimension and library customer satisfaction: Relationship to customer loyalty. *Libr. Philosophy and Practice*, 2018, 2018.
- Ellitan, L. The role of marketing mix in building customer satisfaction and loyalty: A theoretical study. *Int. J. Res.*, 2021, **8**, 118–29.
- Evans, S.; Vladimirova, D.; Holgado, M.; Van Fossen, K.; Yang, M.; Silva, E.A., *et al.* Business model innovation for sustainability: Towards a unified perspective for creation of sustainable business models. *Business Strategy Environ.*, 2017, **26**(5), 597–608.
- Khan, S.A. & Bhatti, R. Digital competencies for developing and managing digital libraries: An investigation from university librarians in Pakistan.

- Electronic Libr.*, 2017, **35**(3), 573–97.
22. Lokuwaduge, C.S.D.S. & Heenetigala, K. Integrating environmental, social and governance (ESG) disclosure for a sustainable development: An Australian study. *Business Strategy Environ.*, 2017, **26**(4), 438–50.
 23. Makadok, R.; Burton, R. & Barney, J. A practical guide for making theory contributions in strategic management. *Strategic Manage. J.*, 2018, **39**(6), 1530–45.
 24. Thabit, T. & Raewf, M. The evaluation of marketing mix elements: A case study. Rochester, NY; 2018.
 25. Rafiq, M.; Batool, S.H.; Ali, A.F. & Ullah, M. University libraries response to COVID-19 pandemic: A developing country perspective. *J. Academic Librarianship*, 2021, **47**(1), 102280.
 26. Bhatt, R.K. & Gupta, D. Essentials of marketing management in LIS. *Libr. Philosophy Practice*, 2018, 8–2018.
 27. Fraser-Arnott, M. The marketing mix in parliamentary library websites. *J. Libr. Administration*, 2020, **60**(8), 875–88.
 28. Jha, M.K. & Pandey, S. Marketing spreads its wings in library services a study of role and strategies of marketing information products and services. *Libr. Philosophy Practice*, 2021, 1–17.
 29. Otuu, F.O. & Unegbu, V.E. Marketing strategies and use of library information services in academic libraries in Lagos State, Nigeria. *Infor. Impact: J. Infor. Knowledge Manage.*, 2022, **13**(1), 10–24.
 30. Soroya, S.H. & Ameen, K. Exploring the application of extended 3Ps of service marketing mix in academic libraries. *Pakistan Libr. & Infor. Sci. J. EBSCOhost*. **52**. 2021. p.5.
 31. Anjani, H.D.; Irham, I. & Waluyati, L.R. Relationship of 7P marketing mix and consumers' loyalty in traditional markets. *Agro Ekonomi*, 2019, **29**(2), 261–73.
 32. Artanti, J.; Agustini, P.M.; Saptono, A.; Hanum, G.K. & D.o R. Analysis of virtual product marketing strategies to increase customer satisfaction (Case study on bukalapak partners). *IAIC Transactions on Sustainable Digital Innovation (ITSDI)*, 2022, **3**(2), 86–109.
 33. Do, Q.H. & Vu, T.H.A. Understanding consumer satisfaction with railway transportation service: An application of 7Ps marketing mix. 105267/j.msl. 2020, 1341–50.
 34. Ho, C.I.; Liu, Y. & Chen, M.C. Factors Influencing watching and purchase intentions on live streaming platforms: From a 7Ps marketing mix perspective. *Infor.*, 2022, **13**(5), 239.
 35. Komari, A.; Indrasari, L.D.; Tripariyanto, A.Y.; Rahayuningsih, S. Analysis of SWOT marketing strategies and 7P influence on purchasing decision. *J. Phys: Conf Ser.*, 2020, **1569**(3), 032002.
 36. Siripipatthanakul, S. & Chana, P. Service marketing mix (7Ps) and patient satisfaction in clinics: A review article of the creative commons attribution license (CC BY 4.0), 2021, 5, 842–50.
 37. Kaushik, A. 7P's of marketing mix in MOOCs environment. *Inter. J. Infor. Dissemination Technol.*, 2018, **8**(2), 57–61.
 38. Rafique, H.; Almagrabi, A.O.; Shamim, A.; Anwar, F.; & Bashir, A.K. Investigating the acceptance of mobile library applications with an extended technology acceptance model (TAM). *Computers & Educ.*, 2020, **145**, 103732.
 39. Nafisah, S. Building a social space through a digital library. *Librarianship in Muslim societies*, 2023, **2**, 1–16.
 40. Kendall-Taylor, A.; Frantz, E. & Wright, J. The digital dictators: How technology strengthens autocracy. *Foreign Aff.*, 2020, **99**, 103.
 41. Parikh, A. & Trivedi, D.A. Digital transformation of services marketing through leading edge technology. *Turkish Online J. Qualitative Inquiry*, 2021, **12**(9), 5192–207.
 42. Lanzolla, G.; Pesce, D. & Tucci, C.L. The digital transformation of search and recombination in the innovation function: Tensions and an integrative framework. *J. Product Innovation Manage.*, 2021, **38**(1), 90–113.
 43. Lee, S.M. & Lee, D. "Untact": A new customer service strategy in the digital age. *Serv. Bus.*, 2020, **14**(1), 1–22.
 44. Khan, M.M. Customer relationship management (CRM) in academic libraries: Perception and reality. 2015.
 45. Bahader, M.; Idrees, H. & Naveed, M.A. Customer relationship management practices in university libraries of Pakistan. 2021.
 46. Pfefferová, M.S.; Hruška, M.; Raganová, J. & Holec, S. Is there a difference in the education of generations across time? *J. Phys: Conf. Ser.* 2024, **2715**(1). 012024.
 47. Syarif, Z. & Hannan, A. Islamic disruption: How digital platform changes religious pattern of muslim society in contemporary Indonesia. *Al-Tahrir: J. Pemikiran Islam*. 2022, **22**, 141–70.
 48. Boffone, T. Do you want to make a tiktok? is it time to bereal?: *Gen Z, Social Media, and Digital Literacies*, 2022, **18**(2).
 49. Ho, M.T.; Mantello, P.; Ghotbi, N.; Nguyen, M.H.; Nguyen, H.K.T. & Vuong, Q.H. Rethinking technological acceptance in the age of emotional AI: Surveying Gen Z (Zoomer) attitudes toward non-conscious data collection. *Technol. Society*, 2022, **70**, 102011.
 50. Nafisah, S. Urgency of digitizing school libraries in Indonesia's post-truth era: A cross-perspective review. *Jurnal Kajian Informasi & Perpustakaan*. 2022, **10**(2), 157–72.
 51. Shah, S.A.; Shoukat, M.H.; Ahmad, M.S. & Khan, B. Role of social media technologies and customer relationship management capabilities 2.0 in creating customer loyalty and university reputation. *J. Marketing Higher Educ.*, 2021, **0**(0), 1–24.
 52. Khorraminia, M.; Lesani, Z.; Ghasvari, M.; Rajabion,

- L.; Darbandi, M. & Hassani, A. A model for assessing the impact of cloud computing on the success of customer relationship management systems (case study: agricultural companies). *Digital Policy, Regulation and Governance*, 2019, **21**(5), 461–75.
53. Nafisah, S. & Effendy, N. Voice biometric system: The identification of the severity of cerebral palsy using mel-frequencies stochastics approach. *Int. J. Integrated Engg.*, 2019, **11**(3).
 54. Ayyagari, M.R. A framework for analytical crm assessments challenges and recommendations. *International J. Infor., Business and Manage.*, 2021, **13**(2), 108–21.
 55. Kotler, P. & Armstrong, G. Principles of Marketing sixteenth edition. Pearson; 2016.
 56. Bell, R. & Goulding, A. Mobile libraries and digital inclusion: A study from Aotearoa New Zealand. *Public Libr. Quarterly*, 2023, **42**(1), 1–20.
 57. Powell, S. & Kong, N.N. Beyond the one-shot: Intensive workshops as a platform for engaging the library in digital humanities. *College & Undergraduate Libr.*, 2017, **24**(2–4), 516–31.
 58. Nicholson, K. Collaborative, creative, participative: Trends in public library innovation. *Public Libr. Quar.*, 2019, **38**(3), 331–47.
 59. Letnikova, G. & Xu, N. Academic library innovation through 3D printing services. *Libr. Manage.*, 2017, **38**(4/5), 208–18.
 60. Wojciechowska, M. Intangible organizational resources: Analysis of resource-based theory and the measurement of library effectiveness. Springer; 2016. 384 p.
 61. Gupta, V.; Rubalcaba, L.; Gupta, C. & Pereira, L.F. Library social networking sites for fostering startup business globalization through strategic partnerships. *J. Academic Librarianship*, 2022, **48**(6), 102504.
 62. Umeozor, S.N. Information networking and its application in the digital era with illustration from the University of Port Harcourt library. *Inter. J. Knowledge Content Development & Technol.*, 2019, **30**, 9(2).
 63. Prabhakar, S.V.R. & Rani, S.V.M. Influence of social networking sites on library and information centers. *Inter. J. Libr. & Infor. Sci. (IJLIS)*, 2017, **6**(1).
 64. Machovec, G. Equity, diversity, and inclusion taking center stage in the library marketplace. *Charleston adv.* 2021, **23**(1), 3–3.
 65. Li, G.; Tian, L & Zheng, H. Information sharing in an online marketplace with co-opetitive sellers. *Production and Operations Manage.*, 2021, **30**(10), 3713–34.
 66. Tanner, N. & Andersen, G. Contextualizing the marketplace of ideas in libraries. *J. Radical Librarianship*, 2018, **4**, 53–73.
 67. Bölen, M.C.; Calisir, H. & Özen, Ü. Flow theory in the information systems life cycle: The state of the art and future research agenda. *International Journal of Consumer Studies*, 2021, **45**(4), 546–80.
 68. Naim, A. Role of information systems in customer relationship management. *Inter. J. Intelligent Communication, Computing, and Networks*, 2021, 02.
 69. Purohit, A. & Thakar, U. Role of information and communication technology in improving loyalty program effectiveness: A comprehensive approach and future research agenda. *Inf. Technol. Tourism*, 2019, **21**(2), 259–80.
 70. Ihsan, A.; Li, S. & Alexis, N. The importance of information, system and service quality of e-commerce website on customer satisfaction and loyalty in Bangladesh. *EJBM*, 2020 **12**(14).
 71. Xu, F. & Du, J.T. Factors influencing users' satisfaction and loyalty to digital libraries in Chinese universities. *Computers in Human Behavior*, 2018, **83**, 64–72.
 72. Daulay, R. Analysis of the effectiveness of information communication technology and the service marketing mix to customer loyalty indihome. *J. Inter. Conference Proceedings (JICP)*, 2021, **4**(2), 510–7.
 73. Spais, G.; Beheshti, H. & Rana, S. Special issue on customer needs and demand management in the global marketplace: *Emerging Manage. Marketing Practices*, 2019.
 74. Rachbini, W.; Hatta, I.H. & Evi, T. Determinants of trust and customer loyalty on c2c e-marketplace in indonesia. *IJM*, 2019, **10**(3).

CONTRIBUTORS

Dr Syifaun Nafisah is a Lecturer in the Department of Library Science, Faculty of Adab and Cultural Sciences at Sunan Kalijaga Islamic State University of Yogyakarta, Indonesia. She is a Doctor of Informatics specialising in assistive technology for libraries. She received her PhD in Informatics from Universitas Gadjah Mada, Indonesia. Her research interests include: Library information systems, information retrieval, data mining, text mining, and engineering education. She determined the main topic of this research, methodology, data analysis, and evaluation models for this study.

Ms Nazilatul Laili Sa'adah is a Master of Library Science student in the Islamic Discipline Study Program at the Postgraduate Program of Sunan Kalijaga Islamic State University of Yogyakarta, Indonesia. She is a Lecturer at the Study Program of Islamic Library and Information Science, Faculty of Tarbiyah and Teacher Training, Antasari State Islamic University, Banjarmasin. Her research interest is library services. Her contribution to this research is to collect the data and literature needed.

Dr Nazrul Effendy received a BEng Degree in Instrumentation Technology of Nuclear Engineering and an MEng Degree in Electrical Engineering from Universitas Gadjah Mada in 1998 and 2001. He received a PhD Degree in Electrical Engineering from Chulalongkorn University in 2009. He is an Associate Professor and the Coordinator of the Intelligent and Embedded System Research Group in the Department of Nuclear Engineering and Engineering Physics, Faculty of Engineering, Universitas Gadjah Mada. He contributed to data analysis and finalisation of the paper.