



## The influence of digital competence and employee performance on the quality of electronic services

Elli Marlina<sup>1</sup>, Rima Elya Dasuki<sup>2</sup>, Ucu Nurwati<sup>3</sup>

<sup>1,2,3</sup>Company Management, Faculty of Economics and Business, Master of Management, Ikopin University, Indonesia

### ARTICLE INFO

#### Article history:

Received Nov 23, 2023  
Revised Nov 28, 2023  
Accepted Nov 30, 2023

#### Keywords:

Digital Competence;  
Employee Performance;  
FISIP Unpad Library;  
Quality of Electronic Services.

### ABSTRACT

This research aims to determine the influence of digital competence and employee performance on the quality of electronic services at the Unpad FISIP Library by students as service users. This research uses a quantitative approach and descriptive analysis methods. The population in this research is all FISIP Unpad students who use the electronic services of the FISIP Unpad Library in 2022-2023 with a population of 1,355 people and a sample of 100 people. The sample size sampling technique in this study used a nonprobability sampling technique with quota sampling rules. The data collection technique in this research uses a questionnaire with a Likert scale measurement. The analysis in this research uses classical assumption tests, multiple regression analysis, coefficient of determination analysis, and partial or simultaneous hypothesis testing. The results of the research show that the digital competence and performance of the Unpad FISIP Library librarian employees are rated as very high or very qualified, while the quality of the Unpad FISIP Library's electronic services is rated as high/qualified. The results of partial hypothesis testing show that digital competence and employee performance have a positive and significant effect on the quality of electronic services. The results of simultaneous hypothesis testing show that digital competence and employee performance have a positive and significant effect on the quality of electronic services.

*This is an open access article under the [CC BY-NC](https://creativecommons.org/licenses/by-nc/4.0/) license.*



#### Corresponding Author:

Elli Marlina,  
Company Management, Faculty of Economics and Business, Master of Management,  
Ikopin University  
Jatinangor Higher Education Area, Jln. Raya Jatinangor No. KM. 20, Sumedang Regency, West  
Java 45363 Indonesia.  
Email: [ellimaarlinaa@gmail.com](mailto:ellimaarlinaa@gmail.com)

### 1. INTRODUCTION

The Covid-19 pandemic with its various conditions and policies has changed people's behavior and activities. Changes in people's behavior and activities during the pandemic are marked by the centrality of digital technology in electronic commerce and online business, thereby changing people's activities in general and especially in the educational environment. The pandemic has created a new era in the educational environment, where

learning activities are carried out online, including in universities. With online learning, the use of digital technology in higher education is also growing rapidly.

Higher education is a stratum in the national education system which plays a central role in educational services in developing, improving and producing quality human resources. Azan et al., (2017) stated that universities must have the capacity and be able to be responsive in responding to various changes in the educational environment. This is based on the development of public understanding and knowledge which continues to increase and is increasingly critical, competition is increasingly fierce, and work environment pressure is also increasing, and cannot be separated from the role of digital technology.

The launch of a hybrid university determined by Unpad is a bold and strategic step in responding to the challenges in the era of digital transformation in the educational environment. In order to support the implementation of hybrid learning, Unpad needs to consider various factors that determine the success of its launch and implementation. Looking at the regulations in the legislation in the Implementation of Education in Higher Education No. 12 article 6 of 2012, explains that higher education has the principle of empowering all elements in its environment by dividing implementation functions and monitoring the quality of services provided. In line with the Law on the Implementation of Education in Higher Education, ideally a university as an institution is obliged to provide the best service for the needs of its students (Marthalina, 2018). This means that Unpad as an education provider institution, apart from adapting to the dynamics of the era of digital transformation in higher education, must always empower all its staff to carry out services and also monitor the quality of the services provided.

Considering that the hybrid university at Unpad implements face-to-face and online learning, academic and student services are also being adjusted. In the face-to-face learning system, academic and student services are accessed directly from the relevant service room. Meanwhile, in online learning, academic and student services are accessed using electronic media, which are then called electronic services. It is believed that the electronic services provided by Unpad can speed up the service process and streamline transportation costs for service providers and students as service users.

The launch of a hybrid university at Unpad is of course the responsibility of all parties, including the Librarians of the FISIP Unpad Library who must participate in implementing, reviewing and evaluating various deficiencies during hybrid learning. As for the role of the Unpad FISIP Library as a provider of access to books and research services for final year students, it is necessary to obtain an assessment of the quality of the electronic services that have been provided to students. The quality of electronic services provided by the FISIP Unpad Library in this research is considered to be a factor that is related to the implementation of Unpad's goal of producing graduates who are globally competitive.

Librarians at the FISIP Unpad Library are human resources who act as the main actors providing services in the field of electronic services to students. Where the librarian, as an electronic service provider, has provided electronic services that can be accessed by students via WhatsApp or email. The FISIP Unpad Library's electronic services provide free library certificate services, book loan extension services, article softfile receipt services, scientific work upload verification services, article similarity plagiarism checking services, thesis plagiarism similarity checking services, and information search services.

The number of final year Diploma IV and Bachelor degree students who have accessed FISIP Unpad Library services needs to be reviewed and observed. Where final year students who are completing their final assignments are very closely related to the aim of declaring a hybrid university. In providing electronic services, the FISIP Unpad Library provides service access via e-mail and WhatsApp. Electronic services in this

research were studied based on thesis plagiarism similarity services and scientific work upload verification services.

A competency is defined as a capability or ability. It is a set of related but different sets of behavior organized around an underlying construct, which we call the "intent". The behaviors are alternate manifestations of the intent, as appropriate in various situations or times. (Boyatzis, 1982). Competence, on the other hand; results from a set of resources coordinated in a way that provides a particular level of performance in a firm (Fernandes et al., 2005). However, according to Wood & Payne (1998), competence is the minimum standard of performance. Employees are also said to be competent when these competencies are transformed into behaviors as needed by the organizations (Malek Shah & Liew Swee, 2002). Hence, we can conclude that competencies are the abilities needed by the organizations to carry out job tasks where as competencies are the ability to use the competencies to behave and carry out job tasks as needed by the organizations.

Rahmadanita, (2022) dengan penelitian berjudul Kompetensi Digital Pustakawan dalam Penyelenggaraan Fungsi Layanan Perpustakaan pada Masa New Normal menyatakan bahwa terdapat keterbatasan keterampilan teknis pustakawan terutama dalam penelusuran sumber informasi koleksi buku elektronik dan jurnal elektronik. Arwendria, (2019 p. 24) with research entitled Identification of Librarian Digital Competencies based on Analysis of Librarian Jobs from 2016-2018 in Indonesia, stated that libraries in Indonesia have not moved quickly towards digital libraries, so that librarian digital competencies are less needed and do not receive more attention . From the research presentation regarding competency, the competency needed by a librarian to support the implementation of a hybrid university at Unpad in this research is digital competency.

Posselt (2018), a person's competence depends on what he learns from a person or organization. This underlies the differences and varied competencies of each individual. In responding to challenges and changing times in organizations, one of the competencies that is really needed is the increasing need for competencies to meet dynamic challenges. In the current era of massive acceleration of information and digital technology, one of the competencies that employees need to survive is digital competency.

In the process, in responding to the challenges of digital transformation, the International Telecommunications Union or ITU (Tzafilkou et al., 2022), classifies competencies in the digital era into three, namely: Basic Digital Skills, basic digital skills are categorized as skills needed by every individual which include the use of digital applications such as hardware, software and offline application operations in carrying out communication activities and searching for things on the internet.

Intermediate Digital Skills, intermediate digital skills are categorized into basic digital abilities with the addition of required workplace capabilities. Generally, intermediate digital skills are related to understanding the use of various applications or through developing more useful uses of digital technology. With intermediate digital skills, an employee can evaluate technology critically or can also create information in the form of content.

Advanced Digital Skills, skills that include the use of technology for more complex work such as networks and services or computer information technology development. Vuorikari et al., (2016), in the fields of labor, education and training, and lifelong learning activities always require and require various competencies, including digital competencies. Gibson, (1996, p. 48) defines that employee performance is the main measurement tool for the success and responsible attitude of an organization.

Armstrong (2004), performance is criticized based on aspects of the characteristics of competence. Furthermore, these aspects consist of: aspects of knowledge (knowledge), skills (skills), experience (experience). Based on the factors expressed above, this means that competence has a relationship with performance, because performance is based on competence itself. With the competencies possessed by

an employee, the organization can consider and predict performance based on the competencies possessed by the employee. So it can be understood that competence is one of the key factors in whether a person's performance is good or not.

Employee performance plays an important role in the success of an organization or institution, with good employee performance it will make the organization or institution more effective and efficient in achieving its goals. From the presentation of research regarding employee performance, measuring the performance of librarian employees is needed to support the implementation of hybrid universities at Universitas Padjadjaran.

Sasser, W.E, Olsen, P.R, Wyckoff, (1978), stated that service quality is the level of excellence that is expected and can be measured by service users. Madu and Madu develop a 15 dimensions scale of e-service quality based on better understanding of customer perspective and providing services to meet the needs and expectations of customers (Madu & Madu, 2002). Santos (2003) suggests that both active dimensions and incubative dimensions are important in e-service quality and need to be taken into account.

The E-S-QUAL scale comprises 11 dimensions in e-service quality, and later Parasuraman et al. (2005) developed the E-S-QUAL into to a seven dimensions scale. The seven dimensions are split into two separated scales - the core dimensions and the recovery dimensions. E-S-QUAL is the name of the scale for the core dimensions: efficiency, system availability, fulfillment, and privacy. The second scale is titled E-RecS-QUAL: responsiveness, compensation, and contact (Parasuraman et al., 2005). It offers the surface dimensions of e-service quality based on customers experience and evaluation perspective, which are viewed also as the antecedents to the adoption of e-service (Rowley, 2006). (Keller, 2001) define quality as the overall characteristics of goods (products or services) or services which are based on the capacity to fulfill the satisfaction of needs. Meanwhile, according to (Tjiptono, 2014, p. 17), service means service as a service, where service means reflecting an invisible product, and one of them is education. Then service as a service means the activity of providing services to other parties.

This research is expected to make a contribution in providing understanding and expanding theories regarding digital competence, employee performance and electronic service quality as material for study or similar research. Especially for policy makers, it can be used as a review to evaluate digital competence, employee performance and the quality of electronic services at the hybrid university that Unpad is planning.

This research has several important implications, both for readers as information or reference for similar research, for managerial parties as an effort to improve the quality of electronic services to students. To improve the quality of electronic services based on the lowest indicator "creating content and knowledge" from the digital competency variable, the managerial team provides technical skills training to librarians to improve their digital competency so they can apply their digital competency in providing services. Based on the lowest indicator "quantity" of the employee performance variable, the managerial party can provide a division of work by recognizing the characteristics and understanding the abilities of the librarian, dividing tasks evenly and fairly, making agreements or consequences, making time schedules and standard operational procedures for the services provided so that it can be known by service users. Based on the lowest indicator of "system capability" from the electronic service quality variable, the managerial party provides a guarantee that the service system accessed via the application by the librarian can function well, so that it does not hinder the provision of services.

## 2. RESEARCH METHOD

The research method refers to a quantitative approach and descriptive analysis methods, and multiple linear regression analysis techniques. Measurements of digital competence, employee performance and electronic service quality are reviewed based on service user perceptions. The sample determination method used a non-probability sampling method with quota samples, while data collection was carried out by distributing questionnaires to final year FISIP Unpad students. The results of the data obtained will then be made into interval data and processed using SPSS 25 and validity and reliability tests will be carried out.

Research methods are a scientific way of obtaining data that has a specific purpose or use. More fully in a scientific way, research refers to things that are rational, empirical and systematic. Based on this explanation, the research method is a scientific method used to obtain data rationally, empirically and systematically Sugiyono, (2019). A quantitative approach by distributing questionnaires or structured questionnaires is carried out to obtain actual data using an approach to distributing questionnaires or questionnaires and structured interviews (Sugiyono, 2019).

The population in the research is Diploma IV and Bachelor level students at FISIP Unpad who use the electronic services of the FISIP Unpad library, in the form of thesis plagiarism check services and scientific work upload services during the period 13 June 2022 – 14 July 2023. The total population of FISIP Unpad students as users of the FISIP Unpad library's electronic services is 1,335 people from 13 study programs.

Based on the Slovin formula above, in this research the total population of FISIP Unpad students who used the electronic services of the FISIP Unpad Library during the period 13 June 2022 – 14 July 2023 amounted to 1,335 people with the provision of sampling error at the level of 0.1 or 10%, So the sample in this study is calculated as follows:

$$n = 1.335 / (1 + 1.335 \cdot (0.1)^2) = 1.335 / (1 + 1.335 \cdot (0.1)^2) = 1.335 / 14.35 \\ = 93.03 \text{ or rounded up to } 100 \text{ people.}$$

Data obtained on Digital Competence (X1), Employee Performance (X2), and Quality of Electronic Services (Y) in this research were obtained from questionnaires prepared and distributed to students (users) as users of electronic services at the Unpad FISIP Library which were based on research instruments. previous. The questionnaire contains statements using a Likert scale.

The instruments in this research were adapted from previous studies, where the digital competency variable indicators were adapted from Ferrari's digital competency theory (Canina & Orero Blat, 2021) and Spencer (1994) competency theory, while the employee performance variable indicators were adapted from the theory Gomez, (1988), and service quality variable indicators adapted from the E-SERVQUAL theory of Parasuraman et al.,(1985).

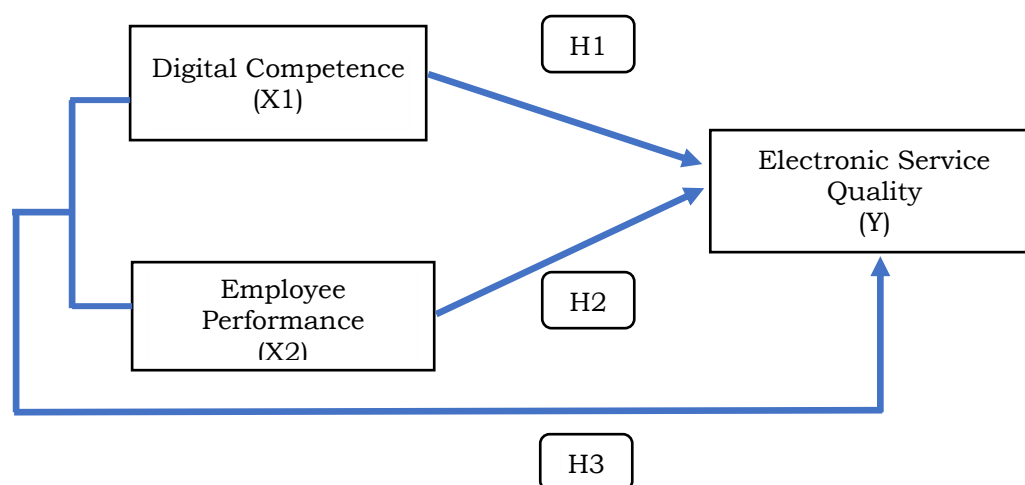


Figure 1. Research Rationale Framework

Source: adapted from Sugiyono's research variable relationship concept (2017)

#### Information :

X1: Digital competency variable as an independent variable

X2: Employee performance variable as an independent variable

Y: Electronic service quality variable as the dependent variable

### 3. RESULTS AND DISCUSSIONS

The majority of respondents in the study were women, totaling 69 people (69%) and the remainder were men, totaling 31 people or (31%). Then, based on the level of study, it shows that the majority of respondents in the research had a Bachelor's level of study, totaling 69 people (69%) and the remainder had a Diploma IV level of study, totaling 31 people (31%). Furthermore, based on class, the majority of respondents were students from the class of 2018, totaling 48 people (48%), followed by students from the class of 2019, totaling 30 people (30%), students from the class of 2017, totaling 16 people (16%), and the rest There are 6 students from the class of 2016 (6%).

Meanwhile, based on the study program, the majority of research respondents were students of the Public Financial Administration, Public Administration and International Relations study programs, with 15 people in each study program (15%), followed by students of the Social Welfare, Government Studies and Business Administration study programs. each study program numbering 8 people (8%), followed by students from the Sociology and Political Science study programs, each numbering 5 people (5%), followed by students from the Anthropology study program totaling 4 people (4%) , and was attended by students from the Logistics Business and Digital Archives study programs, numbering 2 people each (2%), and the rest were students from the PSDKU District Business Administration study program. Pangandaran, numbering 1 person (1%).

Then, based on the years of use of the FISIP Unpad library electronic services during the 2022-2023 period, the majority of respondents were students who used the FISIP Unpad library electronic services in 2023 totaling 54 people (54%), while students who used the FISIP Unpad library electronic services in 2022 totaling 25 people (25%), and the remainder used the electronic services of the FISIP Unpad library in 2022 and 2023 with a total of 21 people. As for the use of FISIP Unpad's electronic services, the majority of respondents used the plagiarism check service and uploaded scientific work with a total of 41 respondents (41%), while respondents who only used the plagiarism

check service were 37 people (37%), and the remaining respondents were Only 22 people (22%) use the scientific work upload service.

a. Respondents' responses regarding Digital Competency Variables

Description of the Digital Competence variable (X1) in this research is measured by (1) indicators of information management and collaboration, (2) communication and sharing skills, (3) creating content and knowledge, (4) digital security, (5) operational techniques and problem solving abilities, (6) motives, (7) traits and self-concept, and (8) skills. The following is a recapitulation of respondents' responses regarding digital competence:

Table 1. Digital Competence of Librarians at FISIP Unpad Library

No.	Variable Indicator	Number of Items	Ideal Sc	Score	% Score per Ideal Score	Assessment criteria
1	Information management and collaboration	5	2.500	2.189	87,56%	Very high
2	Communication and sharing capabilities	3	1.500	1.225	81,67%	High
3	Create content and knowledge	3	1.500	1.134	75,60%	High
4	Digital security	2	1.000	870	87,00%	Very high
5	Operational techniques and problem solving abilities	6	3.000	2.687	89,57%	Very high
6	Motive	3	1.500	1.203	80,20%	High
7	Nature and Self-Concept	5	2.500	2.145	85,80%	Very high
8	Keterampilan	3	1.500	1.251	83,40%	Hgh
Total		30	15.000	12.704	84,69%	Very high

Source: Data Processing with Microsoft Excel

The percentage of the total score of the Digital Competency variable to the ideal score is 84.69%, meaning that of the 8 indicators there are 4 indicators that have a score percentage greater than the percentage of the total variable score, namely the information management and collaboration indicator (87.56%), the digital security indicator (87%), indicators of operational techniques and problem solving abilities (89.57%), as well as indicators of traits and self-concept (85.80%). Meanwhile, the remaining 4 indicators have a score percentage below the total score percentage, namely the communication and sharing ability indicator (87.56%), the content and knowledge creation indicator (81.67%), the motive indicator (80.20%), and the skills (83.40%).

b. Respondents' responses regarding employee performance variables

Then, the description of the Employee Performance variable (X2) in this study is measured by indicators (1) quality, (2) quantity, (3) job knowledge, (4) cooperation, (5) initiative, (6) creativity, (7) ) interdependence, and (8) indicators of self-quality. The following is a recapitulation of respondents' responses regarding employee performance:

Table 2. Performance of Librarian Employees at FISIP Unpad Library

No.	Variable Indicator	Number of Items	Ideal Score	Score	% Score per Ideal Score	Assessment criteria
1	Quality	6	3.000	2.641	88.03%	Very high
2	Quantity	4	2.000	1.467	73.35%	Tinggi
3	Job Knowledge	4	2.000	1.777	88.85%	Very high
4	Cooperation	4	2.000	1.724	86.20%	Very high
5	Initiative	2	1.000	839	83.90%	High
6	Creativity	2	1.000	825	82.50%	High
7	Interdependenc	2	1.000	807	80.70%	High

No.	Variable Indicator	Number of Items	Ideal Score	Score	% Score per Ideal Score	Assessment criteria
8	Personal Quality	6	3.000	2.670	89.00%	Very high
	Total	30	15.000	12.750	85.00%	Very high

Source: Data Processing with Microsoft Excel

The percentage of the total score of the Employee Performance variable to the ideal score is 85.00% which is in the "very high" category, meaning that of the 8 indicators there are 4 indicators that have a score percentage greater than the total variable score percentage, namely the quality indicator (88.03%), job knowledge indicators (88.85%), cooperation indicators (86.20%), and personal quality indicators (89.00%). Meanwhile, the remaining 4 indicators have a score percentage below the total variable score percentage, namely the quantity indicator (73.35%), the initiative indicator (83.90%), the creativity indicator (82.50%), and the interdependence indicator (80.70%).

#### c. Respondents' responses regarding electronic service quality indicators

Then, the description of the Electronic Service Quality (Y) variable in this study is measured by indicators (1) efficiency, (2) system capability, (3) fulfillment of needs, (4) privacy, (5) response, (6) compensation, and (7) contact. The following is a recapitulation of respondents' responses regarding Electronic Service Quality:

Table 3. Quality of Electronic Services for Librarians at FISIP Unpad Library

No.	Variable Indicator	Number of Items	Ideal Score	Score	% Score per Ideal Score	Assessment criteria
1	Efficiency	5	2.500	2.208	88,32%	Very high
2	System Capabilities	4	2.000	1.287	64,35%	Fair
3	Fulfillment	7	3.500	3.107	88,77%	Very high
4	Privacy	3	1.500	1.236	82,40%	High
5	Response or Responsiveness	5	2.500	2.112	84,48%	Very high
6	Compensation	3	1.500	1.152	76,80%	High
7	Contact	3	1.500	1.276	85,07%	Very high
	Total	30	15.000	12.378	82,52%	Hgh

Source: Data Processing with Microsoft Excel

The percentage of the total score of the electronic service quality variable to the ideal score is 82.52%, meaning that of the 7 indicators there are 4 indicators that have a score percentage greater than the total variable score percentage, namely the efficiency indicator (88.32%), the needs fulfillment indicator (88.77%), response or responsiveness indicators (84.48%), and contact indicators (85.07%). Meanwhile, the remaining 3 indicators have a score percentage below the total variable score percentage, namely the system capability indicator (63.45%), privacy indicator (82.40%), and compensation indicator (76.80%).

#### 4. CONCLUSION

Quality of Electronic Services of the FISIP Unpad Library. Based on the results of the analysis regarding respondents' responses regarding the quality of electronic services at the FISIP Unpad Library in 2022-2023, the electronic service quality scores were high/good/qualified. This means that students as users of the FISIP Unpad Library's electronic services assess the quality of the Unpad FISIP Library's electronic services as adequate.

The FISIP Unpad Library's electronic service quality indicators that have a score percentage above the average service quality score percentage include efficiency

indicators, needs fulfillment indicators, response or responsiveness indicators, and contact indicators. Meanwhile, the electronic service quality indicators of the Unpad FISIP Library which have a percentage score below the average percentage score for electronic service quality include system capability indicators, privacy indicators and compensation indicators.

Unpad FISIP Library Efforts to Improve the Quality of Electronic Services by Increasing Digital Competence and Employee Performance. Based on the presentation on digital competence and employee performance, improving the quality of electronic services at the FISIP Unpad Library can be done by improving the following things:

Improving the Quality of Electronic Services through Digital Competence. To improve the quality of electronic services through digital competence, FISIP Unpad Library Librarian must always improve their communication and sharing abilities, increase their ability to create content and knowledge, improve their motives, and improve their skills. Improving the Quality of Electronic Services through Employee Performance. To improve the quality of electronic services through employee performance, FISIP Unpad Library Librarians must always increase the quantity of work, initiative, creativity and interdependence. Improving the Quality of Electronic Services. To improve the quality of electronic services themselves, the quality of electronic services can be improved by increasing system capabilities, privacy and compensation.

Based on the results of research in the field and experience in the research process, there are limitations that can be used as reference material for similar research, including: limitations in the number of respondents, of course they cannot describe the actual situation. The research object is only focused on students who use electronic services at the FISIP Library, Universitas Padjadjaran, of course if the research object is broader it will produce results that truly describe the quality of the electronic services provided. When filling out a questionnaire by a respondent does not necessarily reflect the application of variables in the field, because the respondent is faced with questions that must be filled in, besides that the level of honesty when filling out the questionnaire will also influence the results obtained.

Future researchers are advised to take more samples in order to obtain accurate research data. It is recommended that the research object be broader in scope, for example in one university so that it really describes the quality of the electronic services provided and knows the differences in the services provided. The addition of other variables such as library facilities and infrastructure and satisfaction of electronic service users will certainly influence the results of the research.

## REFERENCES

- Armstrong Michael & Baron Angela. (2004). *Performance Management* (Alih Bahasa: Toni Setiawan (ed.)). Tugu.
- Arwendria, A. (2019). Identifikasi Kompetensi Pustakawan Digital Berdasarkan Analisis Pekerjaan Pustakawan dari Tahun 2016-2018 di Indonesia. In *Maktabatuna* (Vol. 1, Issue 1). Jurnal Kajian Kepustakawanan. <https://ejournal.uinib.ac.id/jurnal/index.php/maktabatuna/article/view/977>
- Azan, K., Meirawan, D., & Sutarsih, C. (2017). Mutu Layanan Akademik. *Jurnal Administrasi Pendidikan*, 12(1). <https://doi.org/10.17509/jap.v22i1.5931>
- Boyatzis, R. E. (1982). *The Competent Manager: A Model for Effective Performance*. In *Long Range Planning*. John Wiley & Sons, New York, NY. [https://doi.org/10.1016/0024-6301\(83\)90170-x](https://doi.org/10.1016/0024-6301(83)90170-x)
- Canina, L., & Orero Blat, M. (2021). A practical tool to measure digital competences: Teamschamp. *International Journal of Services Operations and Informatics*, 11(1), 1. <https://doi.org/10.1504/ijsoi.2021.10034345>
- Fernandes, B. H. R., Mills, J. F., & Fleury, M. T. L. (2005). Resources that drive performance: An empirical investigation. *International Journal of Productivity and Performance Management*, 54(5-6), 340-354. <https://doi.org/10.1108/17410400510604511>
- Gibson, I. D. (1996). *Organisasi, Perilaku, Struktur, Proses*. Jakarta: Binarupa Aksara.

- Gomez, M. (1988). Managing Human Resource Development. In *Health Care Management Review* (Vol. 13, Issue 4). Prentice Hall, Inc. <https://doi.org/10.1097/00004010-198801340-00017>
- Keller, K. (2001). Marketing management. In *Soldering & Surface Mount Technology* (15th ed., Vol. 13, Issue 3). Pearson Education. <https://doi.org/10.1108/ssmt.2001.21913cab.040>
- Madu, C. N., & Madu, A. a. (2002). Dimensions of e-quality. *International Journal of Quality & Reliability Management*, 19(1), 246–258.
- Malek Shah, M. Y., & Liew Swee, L. (2002). Model Kompetensi dan Perkhidmatan Awam. *Jurnal Pengurusan Awam*, 1(2), 1–15.
- Marthalina. (2018). Analisis Kualitas Pelayanan Akademik dan Kepuasan Mahasiswa di IPDN Kampus Jakarta. *Jurnal MSDM*, 5(1), 1–18.
- Parasuraman, A., Zeithaml, V. A., & Berry, L. L. (1985). A Conceptual Model of Service Quality and Its Implications for Future Research. *Journal of Marketing*, 49(4), 41. <https://doi.org/10.2307/1251430>
- Parasuraman, A., Zeithaml, V. A., & Malhotra, A. (2005). E-S-QUAL a multiple-item scale for assessing electronic service quality. *Journal of Service Research*, 7(3), 213–233. <https://doi.org/10.1177/1094670504271156>
- Posselt, T. (2018). Organizational Competence for Servitization. In *Organizational Competence for Servitization*. Springer Gabler. <https://doi.org/10.1007/978-3-658-20096-1>
- Rahmadanita, A. (2022). Kompetensi Digital Pustakawan dalam Penyelenggaraan Fungsi Layanan Perpustakaan pada Masa New Normal. *Media Informasi*, 31(2), 223–236. <https://doi.org/10.22146/mi.v31i2.6290>
- Rowley, J. (2006). An analysis of the e-service literature: Towards a research agenda. *Internet Research*, 16(3), 339–359. <https://doi.org/10.1108/10662240610673736>
- Santos, J. (2003). E-service quality: A model of virtual service quality dimensions. *Managing Service Quality: An International Journal*, 13(3), 233–246. <https://doi.org/10.1108/09604520310476490>
- Spencer, S. M. (1994). Competence At Work - Models for Superior Performance - Spencer, Lm, Spencer, Sm. In *Personnel Psychology* (Vol. 47, Issue 2). John Wiley & Sons, Inc. <https://www.wiley.com/en-us/Competence+at+Work%3A+Models+for+Superior+Performance-p-9780471548096>
- Sugiyono, P. D. (2019). *Metode Penelitian Kuantitatif, Kualitatif, dan R&D* (p. 334). <https://www.pdfdrive.com/prof-dr-sugiyono-metode-penelitian-kuantitatif-kualitatif-dan-rd-intro-e56379944.html>
- Tjiptono, F. (2014). *Service, Quality & Satisfaction*. (Edisi 3.). Penerbit And.
- Tzafilkou, K., Perifanou, M., & Economides, A. A. (2022). Development and validation of students' digital competence scale (SDiCoS). *International Journal of Educational Technology in Higher Education*, 19(1). <https://doi.org/10.1186/s41239-022-00330-0>
- Vuorikari, R., Punie, Y., Carretero, S., & Van Den Brande, L. (2016). DigComp 2.0: The Digital Competence Framework for Citizens. In *Jrc-Ipts* (Issue June, pp. 1–40). European Union. <https://doi.org/10.2791/11517>
- Wood, R., & Payne, T. (1998). *Competency Based Recruitment and Selection Guide*. John Wiley and Sons Chichester, England.
- Zvegintzov, S. (1980). Management of Service Operations Text, Cases and Readings (Book Review). In *International Journal of Operations & Production Management* (Vol. 1, Issue 1). Boston: Allyn and Bacon. <http://libezproxy.must.edu.mo/login?url=http://search.ebscohost.com/login.aspx?direct=true&db=bth&AN=5128862&site=ehost-live>