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Exploring Technology Acceptance and Resistance among Hospitality Student-Practitioners

Foeja Van Dewa[1]*, Muhamad Zhabiyan Dwi Putra[2], Amin Kiswantoro[3]

[1,2,3] Tourism Department, Sekolah Tinggi Pariwisata Ambarrukmo, Yogyakarta, Indonesia
*Corresponding Author; *Email:* foejadewa987@gmail.com

Abstract
This study examines the factors influencing technology adoption amongst hospitality industry student-practitioners in Batam City, Indonesia, using the perspectives of the Technology Acceptance Model (TAM) and Innovation Resistance Theory (IRT). A descriptive qualitative approach was employed to explore the participants' real-life experiences through semi-structured in-depth interviews with three hospitality student-practitioners. The research findings indicate that factors related to resistance to technology are more dominant than those related to acceptance. Technical barriers, including system disruptions, technological complexity, the need for training, and perceptions of risk, emerged as the main obstacles to technology adoption. Nevertheless, the participants acknowledged that technology can improve work efficiency, speed up task completion, boost productivity, and facilitate adaptation to various hospitality systems. The contribution of this research lies in three aspects: participants learnt the systems directly whilst working (rather than at university); they regarded skills in using the systems as an asset that could be transferred to other hotels; and the resistance they demonstrated was functional in nature, rather than psychological.

Keywords: innovation resistance theory, technology acceptance model, technology adoption, hospitality and tourism industry.

Abstrak
Penelitian ini mengkaji faktor-faktor yang memengaruhi adopsi teknologi di kalangan mahasiswa praktisi industri perhotelan di Kota Batam, Indonesia, dengan menggunakan perspektif Technology Acceptance Model (TAM) dan Innovation Resistance Theory (IRT). Pendekatan kualitatif deskriptif diterapkan untuk menggali pengalaman nyata para partisipan melalui wawancara mendalam semi-terstruktur dengan tiga orang mahasiswa praktisi perhotelan. Temuan penelitian menunjukkan bahwa faktor resistensi terhadap teknologi lebih dominan dibandingkan faktor penerimaan. Hambatan teknis yang mencakup gangguan sistem, kompleksitas teknologi, kebutuhan pelatihan, dan persepsi risiko muncul sebagai kendala utama dalam adopsi teknologi. Meskipun demikian, para partisipan mengakui bahwa teknologi mampu meningkatkan efisiensi kerja, mempercepat penyelesaian tugas, meningkatkan produktivitas, serta memfasilitasi adaptasi terhadap berbagai sistem perhotelan. Kontribusi penelitian ini terletak pada tiga aspek yaitu, partisipan mempelajari sistem secara langsung saat bekerja (bukan di perguruan tinggi); mereka menganggap keterampilan dalam menggunakan sistem sebagai aset yang dapat dibawa ke hotel lain; serta resistensi yang mereka tunjukkan bersifat fungsional, bukan psikologis. Penelitian ini berkontribusi pada pemahaman mengenai adopsi teknologi di negara berkembang dengan menunjukkan bahwa keberhasilan implementasi tidak hanya bergantung pada persepsi kegunaan, tetapi juga pada kemampuan organisasi dalam meminimalkan resistensi melalui pelatihan, dukungan teknis, dan pengembangan kompetensi digital.

Kata kunci: *teori penolakan inovasi, model penerimaan teknologi, adopsi teknologi, industri perhotelan dan pariwisata.*

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INTRODUCTION

In recent decades, the tourism and hospitality (T&H) industry has undergone major changes that require hotel managers to actively adopt technology. By integrating technology, guests experience an enhanced quality of experience (Khandelwal, 2024; Putra et al., 2025). With technological advancements, modern hotels are increasingly adopting digital solutions to improve their operational efficiency (Putra et al.,

2026; Ramadhan & Suharto, 2024). However, awareness of technology adoption among stakeholders in developing countries remains relatively low (Absari et al., 2025; Ghaderi et al., 2026; Jawad & Naz, 2022). Some of the reasons include limited infrastructure and technology, particularly in remote rural areas (Martinez & Hendijani, 2017), unfocused digital promotion (Martinez & Hendijani, 2017), and a lack of synergy and support from stakeholders (Hidayah et al., 2022).

Previous studies have examined aspects of technology rejection and acceptance in the hospitality sector. According to Stafrezar (2024), access to hospitality technology is often concentrated in urban areas, creating a digital divide that hinders technology-based adoption and initiatives. Harji & Suharto (2024) explain that there are three barriers to the use of digital systems: data security, implementation costs, and an organizational culture that tends to be comfortable using older technologies. According to Ramadhan & Suharto (2024), implementation costs, integration difficulties, the technology gap, and concerns about data security are barriers to technology adoption, especially in budget or independent hotels.

The phenomenon of stakeholders' lack of awareness regarding technology adoption in the hospitality sector can be explained using the Innovation Resistance Theory (IRT) and the Technology Acceptance Model (TAM). Both theories have been used as guidelines in several studies. Hamid (2019) evaluated the TAM theoretical framework among employees working at hotels in the Klang Valley who had experience using smart housekeeping carts. Kim et al. (2026) investigated young luxury hotel guests' evaluations of smart hotel technology implementation from three perspectives: technological features, social media, and personality traits using the dimensions of the TAM theory.

To the best of the researchers' knowledge, no previous study has examined how technology in the T&H sector in Indonesia is viewed from the perspective of student-practitioners as future pioneers of the T&H industry. Therefore, this study offers a novel contribution in this regard and aims to fill this gap by exploring the perspectives of student-practitioners using TAM and IRT as analytical frameworks. This study makes a theoretical contribution by combining two theories, IRT and TAM, within the context of the T&H sector. From a managerial perspective, this study provides insights into what changes Indonesian hotel managers need to implement when formulating policies related to the Indonesian tourism education curriculum.

METHOD

Study Design

This study employs an interpretive paradigm and a qualitative descriptive design approach qualitative design to understand the perspectives of acceptance and rejection among T&H students and industry practitioners. This design aims to generate data on experiences or events from the participants' perspective, enabling researchers to remain 'close to the data' and gain a comprehensive understanding of the phenomenon without having to focus on the study of life experiences or culture, or on developing a theory (Bradshaw et al., 2017; Doyle et al., 2020; Sandelowski, 2010; Villamin et al., 2025).

Data Analysis

Once collected, the data were analyzed using thematic analysis. This technique was chosen because it helps researchers understand and interpret the meaning of the informants' experiences, particularly regarding the acceptance and rejection of technology in hotel operations. According to Braun & Clarke (2021), the stages of this analytical technique include "*(1) familiarizing yourself with the data, (2) generating initial codes, (3) searching for themes, (4) reviewing potential themes, (5) defining and naming themes, and (6) writing up the findings.*"

Coding was completed once data saturation is reached according to the criteria established by Guest et al. (2020), namely: (1) the total number of interview data used as the reference basis for unique themes has been identified; (2) the number of subsequent interviews analyzed to determine how many new themes emerge; and (3) the tolerance threshold for the emergence of new information has been reached (<5%). After obtaining the results, we tested the validity using triangulation through observation and document analysis so that the information obtained would mutually confirm one another.

Data Collection

To achieve the objectives of this study, we collected data through in-depth, semi-structured interviews with the participants. According to Kallio et al. (2016), this type of interview contributes to the objectivity and reliability of the research and makes the results of qualitative research more plausible. The participants in this study were three students in Batam who had been working in the T&H industry for more than three months.

Participants in this study were selected using the snowball technique, which involves asking participants to refer others who also meet the criteria for participation, thereby forming a referral network (Ahmed, 2024). In the context of this study, participants were asked to name someone who was also a student working in the T&H industry for at least three months. All participants were hotel employees directly involved in day-to-day operations and were therefore able to provide relevant information in line with the study's focus.

This study involved three participants: J (Informant 1 / INF1), who works in the front office and has been employed for about one year in four-star hotel (the interview lasted 8 minutes and 26 seconds); AJPH (INF2), who works as a cook helper and has been employed for about six months in five-star hotel (the interview lasted 7 minutes and 10 seconds); Finally, FA (INF3) works as a chef with four months of service in four-star hotel (the interview lasted 6 minutes and 53 seconds). All three participants reviewed the findings to ensure there was no bias that could lead to subjective results.

RESULTS AND DISCUSSION

The Dominance of Rejection Factors

Figure 1 shows that the level of rejection is higher than that of acceptance (see Figure 2). Most participants still express skepticism toward existing technology in the hospitality sector. The most significant barriers relate to technical issues such as systems that frequently malfunction, do not always run smoothly, experience errors, internet disruptions, and system integration errors. These findings are illustrated by one participant's opinion:

> "*If the system is experiencing an error or is down, the query definitely won't be answered because all the data is stored within the system.*" (INF1), and "*Perhaps the biggest concern with implementing it is that the device sometimes doesn't work properly.*" (INF3)

Another challenge lies in managing human resources who are skilled at adopting technology. Participants view technology as complex because it requires training, involves manual data entry, and has the potential to lead to misunderstandings in its use. This is illustrated by the following statement:

> "*It's difficult because there are some files, or perhaps there are certain sections that we need to be taught first*" (INF2) and "*I'm having trouble with the system. Since my supervisor taught me on the fly, I have to learn it thoroughly because the system is very complicated. We have to go here, click this, then type that, and there are several keywords we need to memorize for the items we want to order.*" (INF2)

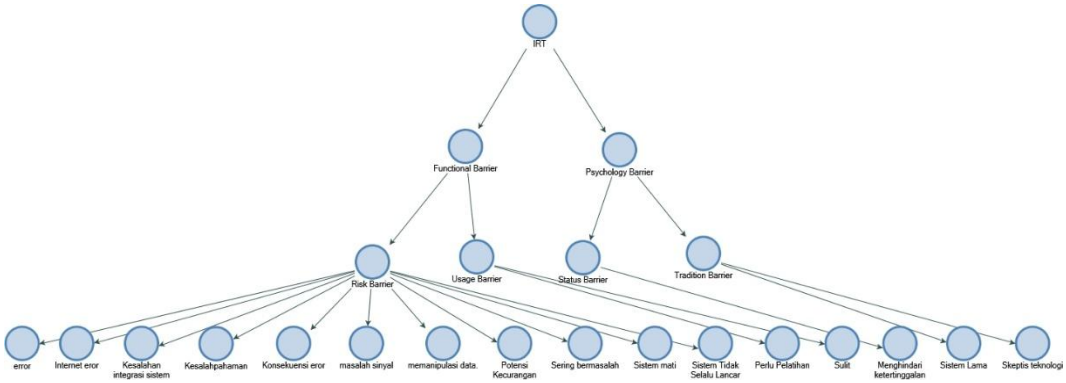


Figure 1. Rejection Factors in Technology Adoption

Risk factors are also a source of resistance, particularly regarding the potential for fraud, data manipulation, and the consequences of errors. This is clearly illustrated by the following narrative:

> "*Maybe my concern is that it will be easier for people to manipulate data because some people know how to do it and others don't, but perhaps it comes down more to how each individual chooses to use that technology for the right purposes.*" (INF3) and "*The system is down, so we have no choice but to ask the guests to wait for a few minutes.*" (INF1)

The Dominance of Rejection Factors

Hospitality practitioners in developing countries (particularly in the city of Batam, Indonesia) generally accept the use of technology because it is seen as capable of providing benefits in supporting hotel operations. Although various technical obstacles remain, all informants acknowledged that they are open to new technologies that help improve work efficiency, speed up task completion, facilitate access to information, and enhance coordination between departments. These findings indicate that perceived benefits are the primary driving factor behind technology adoption. Informants explained that the most commonly cited benefit is increased work efficiency, as reflected in the following statement:

> "*In my opinion, we don't want all our activities to be hindered by time constraints, so we use advanced technology to save time and improve efficiency.*" (INF2)

Technology also offers benefits in the form of increased knowledge and the ability to adapt to the systems used in various hotels. The informant explained that experience using hospitality systems provides valuable skills when working in different work environments.

> "*One definite benefit of using the systems on the waiter and front office monitors is that it expands our knowledge of hotel systems. Since every hotel has its own unique system, once we're familiar with a particular system at one hotel, it may be easier for us to understand it when we move to another one.*" (INF2)

The final acceptance factor is the perception that technology can help complete repetitive operational tasks, thereby lightening the workload. Informants explained that the use of technology allows work to be carried out on a larger scale with more consistent results.

> "*In my opinion, technology is very important for the development of the tourism industry because it greatly facilitates work and improves time efficiency.*" (P3) or "*Things are bound to keep evolving, and as technology continues to advance, everything will automatically become easier. So there's no need to make things complicated.*" (INF1) and "*As a practitioner in the field, I agree that technology is very useful. So, as the hotel industry continues to advance in the future, we won't be left behind.*". (INF2)

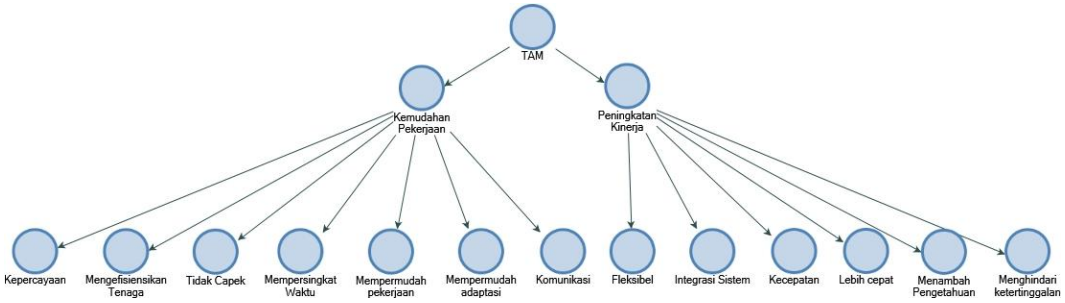


Figure 2. Acceptance Factors in Technology Adoption

Findings Discussion

The main findings of the study indicate that hospitality industry students and practitioners in Batam City tend to exhibit more factors of resistance than acceptance toward technology adoption, with technical barriers being the most dominant cause. Factors that reinforce resistance to technology include system disruptions, difficulties in use due to technological complexity, the need for training, and concerns about the risks of data manipulation and operational errors. These results highlight the need for training programs that can enhance the quality of human resources in developing countries, particularly in Batam City, Indonesia. These findings confirm the results of Rosman et al. (2023) and Lee & Bugler (2017), but contradict those of Stamam et al. (2012). The study by Rosman et al. (2023), conducted at a five-star hotel in Indonesia, found that information technology training programs have a positive effect on hotel employee performance. Study by Lee & Bugler (2017), conducted in the Hong Kong hotel industry, found that the relationship between budget allocation and outcomes is often unclear, thereby reducing the confidence of executives and managers in providing technology training. Meanwhile, the study by Stamam et al. (2012) focused on employees' acceptance of POS systems in coffee shop operations and found that some employees were already quite proficient in using the system and believed that the absence of a POS system in coffee shop operations could affect their performance. This difference may be due to the varying levels of complexity between hotel and coffee shop systems.

The findings supporting this study indicate that technology provides tangible benefits for hotel operations, particularly in improving work efficiency, accelerating task completion, and boosting productivity. The acceptance of technology is supported by the perception that it can enhance knowledge, facilitate adaptation to different hotel systems, and reduce the burden of repetitive operational tasks. These results contradict the findings of Tavitiyaman et al. (2024). The study by Tavitiyaman et al. (2024) examined employees' attitudes toward technology adoption through their perceptions of the technology's usefulness and ease of use. The study's findings were that "*employees' perceived usefulness did not influence their attitudes, and employee engagement had no impact on employee retention.*". Simply put, the findings of this study can be illustrated in Figure 3.

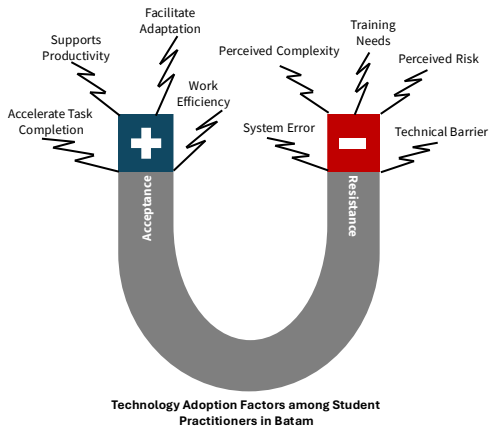


Figure 3. Summary of Research Findings

Research Implication

This study offers theoretical implications by extending the application of TAM and IRT to the context of hospitality industry student-practitioners. These two theories are not contradictory or at odds with one another; rather, they can coexist. Unlike Ahmad (2026) and Ahmad & Rasheed (2025), who examined the relationships between variables through surveys, this study explores participants' real-world experiences, thereby elucidating how the benefits of technology and various technical barriers are directly perceived in hotel operations. These findings indicate that resistance factors particularly technical constraints, system complexity, training needs, and risk perceptions remain more dominant than the perceived benefits, thereby enriching our understanding of the technology adoption process in the hospitality sector.

In practical terms, the results of this study indicate that hotel managers and tourism education institutions need to prioritize improving digital competencies through ongoing training, simplifying technology systems, and providing adequate technical support. These efforts are expected to reduce barriers to technology adoption while enhancing the readiness of students and practitioners as prospective employees in the hospitality industry.

Limitations and Future Research

This study has several limitations that may present opportunities for future research. First, the study involved only three student-practitioners in Batam City; therefore, the results cannot yet represent the experiences of all students or hospitality practitioners in Indonesia. Second, the study focused on individual experiences through a descriptive approach, so the findings emphasize the depth of information rather than the generalizability of the results. Furthermore, this study relied solely on the perspectives of student-practitioners and did not involve other stakeholders such as hotel managers, faculty members, or technology developers who could potentially provide a more comprehensive viewpoint.

Future research is recommended to include participants from various regions and sectors of the hospitality industry to gain a broader understanding of the factors influencing technology adoption. Furthermore, future research could employ a mixed-methods approach to examine the relationships among the factors identified in this study. Research could also expand the scope of analysis to more specific technologies, such as artificial intelligence, smart hotel systems, or other digital technologies, thereby providing a more in-depth understanding of the technology adoption process in the hospitality industry.

The results and discussion sub title contains the results of data processing and hypothetical tests (for quantitative study), analysis and discussion of the results of the study. The discussion may include comparisons to empirical studies which have been performed previously (Kristianto & Wibowo, 2021).

CONCLUSION

This study aims to explore the factors influencing technology adoption among hospitality industry student-practitioners in Batam City using the TAM and IRT perspectives. The results show that rejection factors remain more dominant than acceptance factors. The main barriers identified include technical constraints, system complexity, training needs, and risk perceptions, while acceptance factors are driven by the benefits of technology in improving work efficiency, accelerating task completion, facilitating adaptation to hotel systems, and supporting productivity. These findings suggest that the success of technology implementation depends not only on the benefits offered but also on the organization's ability to reduce various barriers to use through training, technical support, and the development of digital competencies. Thus, this study contributes to the understanding of the technology adoption process in the hospitality industry, particularly from the perspective of student-practitioners as future workers in developing countries.

REFERENCES

Absari, D. T., Djunaidy, A., & Susanto, T. D. (2025). Multidimensional Readiness Evaluation of Smart Tourism Destinations: A Natural Language Processing and Thematic Analysis Approach. *IEEE Access*, *13*, 108284–108305. https://doi.org/10.1109/ACCESS.2025.3581962

Ahmad, N. (2026). A Dual-Theory Perspective of BRT and IRT: Exploring ChatGPT Adoption for Learning and Knowledge Development in the Age of Generative AI. *Journal of the Knowledge Economy*. https://doi.org/10.1007/s13132-026-03313-y

Ahmad, N., & Rasheed, H. M. W. (2025). Tourism and hospitality SMEs and digital marketing: what factors influence their attitude and intention to use from the perspective of BRT, TAM and IRT. *Journal of Hospitality and Tourism Insights*, *8*(4), 1546–1563. https://doi.org/10.1108/JHTI-05-2024-0508

Ahmed, S. K. (2024). How to choose a sampling technique and determine sample size for research: A simplified guide for researchers. *Oral Oncology Reports*, *12*, 100662. https://doi.org/10.1016/j.oor.2024.100662

Bradshaw, C., Atkinson, S., & Doody, O. (2017). Employing a Qualitative Description Approach in Health Care Research. *Global Qualitative Nursing Research*, *4*. https://doi.org/10.1177/2333393617742282

Braun, V., & Clarke, V. (2021). *Thematic analysis: A practical guide*. https://doi.org/10.1177/1035719X211058251

Doyle, L., McCabe, C., Keogh, B., Brady, A., & McCann, M. (2020). An overview of the qualitative descriptive design within nursing research. *Journal of Research in Nursing*, *25*(5), 443–455. https://doi.org/10.1177/1744987119880234

Ghaderi, Z., Shekari, F., & Azizi, F. (2026). Adopting Smart Technologies in Rural Tourism: Insights From Local Community Stakeholders. *Journal of Smart Tourism*. https://doi.org/10.1177/27652157261450546

Guest, G., Namey, E., & Chen, M. (2020). A simple method to assess and report thematic saturation in qualitative research. *PLOS ONE*, *15*(5), e0232076. https://doi.org/10.1371/journal.pone.0232076

Hamid, R. (2019). User Acceptance of Smart Housekeeping: A Study of TAM Model Prototype in Hotel Industry. In *Int. J Sup. Chain. Mgt* (Vol. 8, Number 5). http://excelingtech.co.uk/

Harji, L. putri, & Suharto, B. (2024). Analisis Peluang Dan Hambatan Penggunaan Sistem Digital Dalam Mengoptimalkan Operasional Bisnis Hotel. *Jurnal Ilmiah Hospitality Management*, *14*(2), 193–212. https://doi.org/10.22334/jihm.v14i2.280

Hidayah, N., Suherlan, H., & Putra, F. K. K. (2022). Stakeholders' Synergies in Developing Smart Tourism Destination. A Phenomenographic Study. *Journal of Environmental Management and Tourism*, *13*(2), 313. https://doi.org/10.14505/jemt.v13.2(58).02

Jawad, M., & Naz, M. (2022). Technological Mediation in Tourism: A New Era Begins in Pakistan. In *Handbook of Technology Application in Tourism in Asia* (pp. 815–847). Springer Nature Singapore. https://doi.org/10.1007/978-981-16-2210-6_38

Kallio, H., Pietilä, A., Johnson, M., & Kangasniemi, M. (2016). Systematic methodological review: developing a framework for a qualitative semi-structured interview guide. *Journal of Advanced Nursing*, *72*(12), 2954–2965. https://doi.org/10.1111/jan.13031

Khandelwal, J. (2024). *Enhancing Journeys in the Digital Age of Tourism Through the Implementation of Smart Tourism Framework* (pp. 149–164). https://doi.org/10.4018/979-8-3693-3715-8.ch008

Kim, M., Long, X., & Boo, S. (2026). Young luxury hotel guests' smart hotel technology acceptance: examining the influencing factors using TAM and the SOR model. *Journal of Hospitality and Tourism Technology*, *17*(3), 699–719. https://doi.org/10.1108/JHTT-03-2025-0258

Lee, P. C., & Bugler, M. R. (2017). Training practices in the Hong Kong hotel industry: Managerial and executive perspectives. *Journal of Human Resources in Hospitality & Tourism*, *16*(1), 88–107. https://doi.org/10.1080/15332845.2016.1202066

Martinez, J. J. L., & Hendijani, R. B. (2017). To identify the importance of a mobile application for Indonesia's hidden beauty. *Journal of Environmental Management and Tourism*, *8*(6), 1284–1289. https://doi.org/10.14505/jemt.v8.6(22).16

Putra, M. Z. D., Adean, R. D., Augris, E., Rizky, F. M., Vania, A. A., & Setiawan, F. D. A. (2026). Smart Tourism Perspectives on TikTok-Driven Cultural Visits: Evidence from Pacu Jalur Festival. *MDP Student Conference 2026*, 1046–1053. https://doi.org/https://doi.org/10.35957/mdp-sc.v5i2.15293

Putra, M. Z. D., Fahlevi, R., Sinambela, F. A., Viony, V., Stevani, S., Ang, J. F., Pratama, W. A., & Mangkey, J. K. (2025). Implementasi Smart Tourism menggunakan Virtual Tour 360° di Belalang Adventure Batam. *Jurnal Ilmiah Teknologi Informasi Asia*, *19*(2), 73–79. https://doi.org/10.32815/jitika.v19i2.1075

Ramadhan, K. Z., & Suharto, B. (2024). Transformasi Digital Di Bidang Hospitalitas: Menjelajahi Peran Teknologi Dalam Memperlancar Operasional Hotel. *Jurnal Ilmiah Hospitality Management*, *14*(2), 181–192. https://doi.org/10.22334/jihm.v14i2.281

Rosman, D., Putranto, T. S., Yuliana, Kusdiana, R. N., Masnadi, I., & Pratomo, A. (2023). The Correlation Between Hotel Employees' Technological Stress, IT Training, and Job Performance. *2023 International Conference on Digital Applications, Transformation & Economy (ICDATE)*, 1–6. https://doi.org/10.1109/ICDATE58146.2023.10248883

Sandelowski, M. (2010). What's in a name? Qualitative description revisited. *Research in Nursing & Health*, *33*(1), 77–84. https://doi.org/10.1002/nur.20362

Stafrezar, B. (2024). Potensi dan Tantangan Digitalisasi dalam Memajukan Wisata Halal di Indonesia: Solusi dan Implementasi. *Journal of Economics, Business, Management, Accounting and Social Sciences*, *2*(6), 342–351. https://doi.org/10.63200/jebmass.v2i6.157

Stamam, M. S. M., Nenin, M., Hashim, R., & Radzi, S. M. (2012). Food and beverage technology and employees' acceptance in 4 and 5 star hotels in Kuala Lumpur, Malaysia. *Current Issues in Hospitality and Tourism Research and Innovations - Proceedings of the International Hospitality and Tourism Conference, IHTC 2012*, 237–241.

Tavitiyaman, P., So, C. Y. A., & Chan, O. L. K. (2024). Hotel employees' attitudes toward technology adoption and training support and their engagement, satisfaction, and retention. *Journal of Human Resources in Hospitality & Tourism*, *23*(2), 266–288. https://doi.org/10.1080/15332845.2024.2282214

Villamin, P., Lopez, V., Thapa, D. K., & Cleary, M. (2025). A Worked Example of Qualitative Descriptive Design: A Step-by-Step Guide for Novice and Early Career Researchers. *Journal of Advanced Nursing*, *81*(8), 5181–5195. https://doi.org/10.1111/jan.16481