



KNOWLEDGE EXPECTATIONS FOR LOCAL INFORMATIONS: ENHANCING THE ROLE OF DIVE GUIDES IN SUSTAINABLE SCUBA DIVING BUSINESSES

Mohd Khairol Nazraie^a, Kalsitinoor Set^{a*}, N Alia Fahada W Ab Rahman^a, Khatijah Omar^a, Yahaya Ibrahim^b

^a*Universiti Malaysia Terengganu, Kuala Nerus, Terengganu, 21030, Malaysia*

^b*Universiti Kebangsaan Malaysia, Bangi, Selangor, 43600, Malaysia*

Abstract

Scuba diving has been identified as a popular recreational activity that has attracted a growing number of participants each year. The rise in popularity has led to an increasing demand for qualified and competent dive guides. Dive guides are responsible for ensuring the safety and satisfaction of divers, which ultimately affects the sustainability of the scuba diving industry. As such, the role of dive guides has become increasingly important in the scuba diving industry. The study aimed to explore divers' expectations of dive guides' knowledge. This study applies a qualitative approach, an interview was set up to gather in-depth knowledge from divers who have had diving packages at local and international destinations. The study found that divers have specific expectations from their dive guides, particularly in terms of non-diving activities such as knowledge of local attractions, activities, accessibility, amenities, accommodations, and safety. Theoretical implications include advancing our understanding of the holistic role of dive guides in the customer experience and industry sustainability. The managerial implications of the study suggest that dive operators and government agencies should invest in training programs and certification courses to enhance the competency skills of scuba dive guides which will lead to the industry's sustainability. It is also important for dive operators to recognize the importance of non-diving activities and ensure that their dive guides are equipped with the necessary knowledge to provide recommendations and information to divers.

Keywords: Dive guides; Scuba diving industry, sustainability, competency, knowledge

1. Introduction

Scuba diving has emerged as a significant recreational activity, drawing an increasing number of enthusiasts globally. It is one of the ecotourism activities and a fast-growing industry that has stimulated a billion-dollar global industry (Garrod & Gosling, 2008). The ongoing demand for scuba diving has been driven by divers' desire to witness and experience the marine environment. For many island and coastal countries, scuba diving provides socio-economic benefits to local communities (Zimmerhackel et al., 2019). The economic impact of scuba diving

Corresponding author. Kalsitinoor Set - kalsitinoor@umt.edu.my

Received: 5 April 2024

Accepted: 12 December 2024

Revised: 20 December 2024

Published: 30 December 2024

DOI: 10.51200/bejstd.v13i1.5931

extends beyond direct employment; it also supports ancillary businesses such as hotels, restaurants, and transportation services (Dimmock & Musa, 2015). The global diving tourism market global annual revenue was valued at approximately in between USD 0.9 – 3.2 billion per year (Schuhbauer et al., 2023).

Additionally, the scuba diving industry as part of the marine tourism provides significant socio-economic benefits to local communities, particularly in island and coastal regions. It generates employment opportunities for dive guides, instructors, and support staff, and supports ancillary businesses such as hotels, restaurants, and transportation services, stimulating economic growth contributing to local economies (Pham, 2020). This economic activity not only boosts local economies but also promotes cultural exchange and environmental stewardship, making scuba diving a valuable component of the tourism sector (Musa et al., 2021).

Nevertheless, the scuba diving industry faces several economic and market barriers. Many scuba diving destinations are subject to weather-related challenges, particularly during monsoon seasons, which can disrupt business operations. Market volatility is evident in the seasonal fluctuations in visitor numbers and revenues, significantly impacting financial stability and business operations (Reddy & Sailesh, 2024). During peak seasons, favorable weather conditions and holidays lead to increased traffic and higher revenues, while off-peak periods see reduced visitor numbers and lower revenues. This cyclical nature of demand poses challenges for dive operators in managing cash flow, staffing, and resource allocation throughout the year. Addressing these fluctuations is crucial for maintaining financial stability and ensuring the long-term sustainability of scuba diving businesses.

Thus, dive guides play a pivotal role in the scuba diving industry, ensuring diver safety, enhancing the diving experience, and promoting sustainable practices. Their responsibilities include pre-dive preparations, real-time monitoring, and emergency management, which are crucial for preventing accidents and ensuring a safe diving experience (Professional Association of Diving Instructors, 2024). Additionally, their expertise and professionalism significantly enhance the overall diving experience, leading to higher customer satisfaction and repeat business. This is particularly important in managing market volatility, as satisfied customers are more likely to return during off-peak seasons, providing a more stable revenue stream. Promoting sustainable practices ensures the longevity of dive sites and the overall health of marine environments (Cohen, 2024). This can be achieved through dive guides educating divers about marine ecosystems. By fostering positive experiences and encouraging sustainable tourism, dive guides help maintain the financial stability and operational success of scuba diving businesses, even in the face of seasonal fluctuations.

Despite the growing popularity of scuba diving as a recreational activity and its significant economic contribution to local communities, there is a notable scarcity of research exploring divers' expectations towards dive guides' competencies. Most existing studies has focused on the motivations of scuba divers (Albayrak et al., 2021; Meisel-Lusby & Cottrell, 2008), sustainable diving practices (Roche et al., 2016; Zulaiha et al., 2014) and diving experiences (Kirkbride-Smith et al., 2013; Roche et al., 2016). These studies provide valuable insights but do not fully address what divers expect from their guides. Understanding these expectations is crucial for improving service delivery and ensuring customer satisfaction. However, the current body of literature provides limited insights into these expectations, which are essential for tailoring dive guide competencies to meet the needs of divers. This lack of focused research on dive guides' roles and competencies hinders the development of strategies that could enhance service quality and sustainability in the industry.

Addressing these research gaps is vital for several reasons. First, enhancing the professional competencies of dive guides can significantly improve the quality of diving experiences, leading to higher levels of diver satisfaction and repeat business. This, in turn, supports the longevity and profitability of scuba diving operations. Second, understanding and meeting divers' expectations can help dive operators develop more effective training programs, ensuring that dive guides are well-equipped to provide exceptional service. By exploring these gaps, this study aims to explore divers' expectations of dive guides' knowledge. This will provide valuable insights that can benefit dive operators, enhance the overall quality of dive services, and support the long-term sustainability of the scuba diving industry.

2. Literature Review

Scuba diving, as a recreational activity, offers unique opportunities for underwater exploration and adventure. Beside it is significantly contribute to the national income for country that promote scuba diving as their tourism products (Schuhbauer et al., 2023), scuba diving also offers numerous benefits that extend beyond recreational enjoyment. Physically, it provides a full-body workout, enhancing cardiovascular health, muscle strength, and flexibility due to the resistance of water and the need for controlled breathing (Keene, 2023). This controlled breathing also promotes relaxation and reduces stress, contributing to mental well-being (Baourda et al., 2022). Additionally, scuba diving fosters a deep connection with nature, increasing environmental awareness and encouraging conservation efforts among divers (Sumanapala et al., 2023). Socially, it provides opportunities for building strong community bonds and friendships, as divers often share their experiences and knowledge (Kler & Tribe, 2012)

To effectively harness these benefits and ensure a high-quality diving experience, it is crucial to understand the competencies required of dive guides. There are several types of competency models used in the tourism and recreation industry. The Hospitality, Tourism, and Events Industry Competency (HTEIC) model developed by the United States Educational and Training Administration outlines five tiers of competencies, ranging from personal effectiveness to industry-specific skills (Friedman, 2019). HTEIC model address competency modelling on human resource management for both organizations and employees. While, SHL Universal Competency Framework (UCF), which defines competencies across various roles, including in tourism, by focusing on key attributes such as leadership, teamwork, and customer service (Bartram, 2011). For this study, in order to further understand the role of dive guides, Activity Competency Model (ACM) is applied to measure the competency roles played by dive guides.

2.1. Activity Competency Model (ACM)

The Adaptive Competency Model (ACM) was developed based on the Job Characteristics Theory (JCT), which posits that individuals with sufficient knowledge and skills positively impact job performance, while those lacking these attributes negatively affect performance (Hackman & Oldham, 1980). JCT emphasizes that skill variety, knowledge, and attitude are crucial for job motivation and performance. Wu et al. (2007) introduced the ACM to outline the critical activities and required competencies for professional workers, focusing on knowledge, skills, and attitudes. Proficiency in these areas is essential for mastering job responsibilities and contributing to organizational success (Li et al., 2017). The ACM views competencies as talents that can be developed and are demonstrated through performance rather than potential (Oter et al., 2017). Tour guides, for instance, must provide memorable experiences and high-quality services to tourists, supporting the operations of tourism agencies (Alazaizeh et al., 2019). This is similar to dive guides, they need to understand their roles and responsibilities thoroughly to enhance their performance. The ACM provides a framework for evaluating the knowledge, skills, and attitudes required for effective scuba dive guides in this study.

2.1. Roles of Dive Guides

Dive tourists heavily rely on dive guides to explore dive sites, presenting opportunities for Scuba Diving Operators (SDOs) in Malaysia to gain a competitive edge and build long-term relationships with tourists, ensuring sustainable advantages. The performance of dive guides significantly influences divers' perceptions of both the business image of SDOs and the destination itself. Their professional competencies are crucial for the success of scuba diving packages, especially in recovering from the impacts of the COVID-19 pandemic. Effective dive guides enhance the diving experience, creating lasting memories and fostering repeat business. They serve as tour leaders, storytellers, and mentors (Syakier & Hanafiah, 2022), playing a vital role in the tourism system by supporting sustainable operations and promoting environmental stewardship. Recent studies emphasize the importance of dive

guides in delivering high-quality, safe, and environmentally responsible diving experiences, which are essential for the industry's resilience and growth (Lucrezi et al., 2019; Pham, 2020; Reddy & Sailesh, 2024)

3. Methodology

Creswell and Plano (2018) suggest that understanding individual experiences necessitates employing the interviewing method within the framework of phenomenological inquiry. Therefore, to gain a deep understanding of divers' expectations of dive guides, this study utilized in-depth interviews. The study utilises purposive sampling, a non-probability sampling technique in which the respondents are chosen based on the researcher's judgement (Andrade, 2021). A purposive sample comprising recreational scuba divers was selected based on the following criteria:

1. Participants must be active divers to ensure they possess up-to-date knowledge of prevailing trends and demands within the nature of scuba diving.
2. Divers must have accumulated minimum of two years of overall diving experience.
3. Divers are expected to have prior diving experience in both local and international diving destinations. This ensures that participants can evaluate and compare their different experiences.

The researchers initially contacted scuba diving operators to reach potential participants. Follow-up communication with interested participants was then established via phone and email. Semi-structured interview questions were used to explore topics in greater depth and to follow up on interesting points raised by the respondents. According to Mwita (2022), in-depth interviews in research studies typically achieve saturation between 9 and 17 interviews. In this study, data saturation was achieved after conducting 13 interviews. The inclusion of 13 participants was deemed sufficient to meet the study's objectives.

Transcriptions were meticulously performed to ensure accuracy and preserve the richness of the information provided by the participants. Thematic analysis is recognized as a systematic and suitable method for analyzing qualitative data, offering flexibility and effectiveness (Christou, 2022). It accommodates various approaches in qualitative and mixed-method research, including generic qualitative studies, even though it does not constitute a comprehensive study framework (Scharp & Sanders, 2018). In this study, data derived from interview audio recordings and transcripts were analyzed using the ATLAS.ti 23 software program.

4. Findings

4.1. Participants Profile

Table 1 presents the demographic profile of 13 respondents in this study, and reveals a diverse group of scuba divers with varying levels of experience and gender representation. The sample consisted of 62% (8) male and 38% (5) female participants, indicating a higher proportion of male divers. Occupationally, the respondents were divided into two main sectors: government agencies and private industry. Specifically, 38% (5) of the respondents were employed in government agencies, while 62% (8) worked in the private industry.

Table 1: Profile of Participants

ID	Gender	Occupational	Diving Experience	Diving Competency Level
DC01	Female	Government	≤ 2 years	Beginner
DC02	Male	Private	≥ 10 years	Advanced
DC03	Male	Private	≥ 20 years	Expert
DC04	Male	Private	≥ 5 years	Intermediate
DC05	Female	Government	≥ 18 years	Expert
DC06	Male	Government	≥ 5 years	Intermediate
DC07	Male	Government	≥ 10 years	Advanced
DC08	Male	Private	≥ 15 years	Expert
DC09	Male	Private	≤ 2 years	Beginner
DC010	Female	Private	≥ 5 years	Intermediate
DC011	Female	Government	≥ 5 years	Intermediate
DC012	Female	Private	≥ 10 years	Advanced
DC013	Male	Private	≥ 5 years	Intermediate

In terms of diving competency, the respondents were categorized based on their years of diving experience into four groups: Beginner (≤ 2 years), Intermediate (≥ 5 years), Advanced (≥ 10 years), and Expert (≥ 15 years). The distribution of diving experience among the participants was as follows: 15% (2) were classified as Beginners, having up to 2 years of diving experience. The largest group, comprising 39% (5) of the respondents, fell into the Intermediate category with at least 5 years of experience. Both the Advanced and Expert categories accounted for 23% (3) of the participants, indicating a significant portion of the sample had extensive diving experience of 10 years or more.

4.2. Knowledge Expectation for Local Information and Services

The analysis of the interview data reveals that divers, regardless of their competency level, have expectations of dive guides that extend beyond the core competencies of knowledge, skills, and attitude as outlined in the ACM. This study focuses specifically on the knowledge component, highlighting the diverse informational needs of divers at different levels of experience. Similar to the role of tour guides, dive guides are expected to provide comprehensive local information that enhances the overall experience of divers (Ninpradith et al., 2018).

4.2.1. Accommodations

Accommodation in the context of tourism refers to the various types of lodging options available to travelers, which provide them with a place to stay during their visit. These options can range from hotels, resorts, and hostels to vacation rentals, bed and breakfasts, and guesthouses. The quality and variety of accommodation play a crucial role in the overall tourist experience, influencing their satisfaction and the likelihood of repeat visits (Dey et al., 2020). Accommodation not only provides basic shelter but also offers amenities and services that enhance the comfort and convenience of tourists, such as dining facilities, recreational activities, and transportation services (Mahdi & Esztergár-Kiss, 2021). This indicates the information on the availability and quality of accommodation are critical factors among divers to select their choices to stay during their diving trips. Three interviewees mentioned seeking local or insider information about accommodations from people who are familiar with the area. For example, DC01 and DC09 commented:

I also asked Dive Guides about the accommodation nearby the dive shop or in the island. I want to know their price and also suggestions from the dive guides. (Participant DC01)

I like to ask for recommendations from dive guides on to stay at which resorts or hotel. (Participant DC09)

Another participant highlighted the significance of dive guides in facilitating bookings and maybe obtaining reduced rates for lodging, demonstrating their additional value beyond diving services:

Most of the times, I search for information on accommodation by myself or rely on friends' suggestions. But sometimes, I also ask the dive guides if they can book on my behalf to secure the room or get a discounted price if booked through the dive shop. (Participant DC04)

4.2.2. Attractions

Attraction, in the context of tourism and leisure studies, refers to the qualities or features of a destination that draw visitors. These can include natural landscapes, cultural heritage sites, entertainment venues, and other points of interest that appeal to tourists. The concept of attraction is multifaceted, encompassing both tangible elements and intangible elements. Two interviewees from different diving competency levels, Beginner and Expert comment on information related to local attractions. Both participants emphasize the significant role of dive guides in shaping their dining experiences. Dive guides act as cultural intermediaries, bridging the gap between tourists and local culinary experiences. As divers look for meaningful ties with the local environment and its customs in addition to underwater adventures, this interaction emphasizes the importance of local attractions in the diving community. The comments below from Participants 09, 08 and 13 provide examples:

I like to ask for recommendations on local signature foods and good restaurants to try. (Participant DC09)

I will go and eat at the suggested local food stalls recommended by the dive guides. We usually go together in a group, mostly at night, along with the dive guides. (Participant DC08)

I also asked on new café at the locals and recommended seafood restaurants. (Participants DC013)

These quotations illustrate the crucial role of dive guides in enriching the trip experience with their important local insights, especially concerning culinary recommendations. This aligns with previous studies that emphasize the significance of local knowledge in influencing tourist experiences and satisfaction, where guides act as essential intermediaries between divers and the local attraction (Lucrezi et al., 2019).

4.2.3. Accessibility

Accessibility in tourism refers to the ease with which all individuals, including those with disabilities, can reach and enjoy tourist destinations (Rebelo et al., 2022). This includes various aspects such as transportation modes and how tourists navigate to their destinations. Ensuring accessibility to transportation is crucial for creating inclusive tourism experiences. Certain locations present unique challenges and opportunities for accessibility due to their natural environments and infrastructure requirements (Cockburn-Wooten & McIntosh, 2020). For novice divers, unfamiliarity with the location of diving destinations makes them dependent on information from dive guides. Both interviewees categorized as Beginners expressed their reliance on dive guides for detailed directions and logistical support. On this theme, two beginner divers made the following comments:

As a beginner, I often feel a bit overwhelmed with the logistics. I usually ask the dive guides for detailed directions on how to get to the dive shop, what time should I arrived at the jetty. (Participants DC01)

I ask the dive guides about where to park my car, especially looking for places that have covered, and are safe. (Participants DC09)

These examples demonstrate how dive guides offer significant support not just with diving activities but also with logistical matters, ensuring that divers remain informed, at ease, and safe throughout their journey.

4.2.4. Amenities

Amenities are essential features that enhance the comfort and enjoyment of tourists, significantly impacting their satisfaction such as basic facilities like Wi-Fi, in-room amenities like sofas, digital media (Kim et al., 2023) . Amenities are also location-specific assets and services that make destinations attractive to individuals (Naldi et al., 2021). Being well-versed in amenities that make life easier and more pleasant during and after diving activities allows dive guides to enrich the overall diving experience for divers. Divers categorized as intermediate levels shared their experiences regarding inquiries about various amenities, emphasizing the significance of obtaining information that encompasses local food, souvenirs, and massage services. This knowledge is crucial for enhancing their overall satisfaction during the trip, allowing them to engage more fully with the local culture and available services. One participant who was interested in trying traditional massage services commented:

I ask about the quality and reputation of the local masseurs, whether they offer traditional massages, and if they are located near the dive shop. (Participant DC06)

Also, an interviewee recounted a notable incident in which a dive guide suggested a local market for an authentic cultural encounter, as mentioned by Participant DC11:

Once a dive guide told me about a local market where I could buy the best kerepok lekor to bring back for my family. I love to buy from different seller to compare the taste. (Participant DC11)

Similarly, one participant mentioned how information from the dive guide helped him find a great souvenir to bring home:

They also mentioned a local stall on my way back driving back home after diving trip, that sells giant fresh water prawn, which was perfect to bring back for my family. (Participants DC10)

These excerpts show the importance of local information for divers of all levels. They emphasize the need for dive guides to be well-versed in local knowledge to provide a comprehensive and satisfying diving experience. Inquiries from tourists about non-diving activities also play a significant role in shaping the overall diving experience. Thus, the role of dive guides can be closely compared to that of tour guides in providing personalized and engaging experiences (Huang et al., 2009).

5. Conclusions

The findings reveal a spectrum of knowledge expectations among divers across four categories—Beginner, Intermediate, Advanced, and Expert. Beginners often require detailed logistical guidance, reflecting their limited experience and familiarity with diving destinations. Intermediate divers show a strong preference for information about amenities, emphasizing practical details that enhance their trip experience. Advanced divers tend to seek diverse insights, such as accommodations and local attractions, to refine their diving experience. Meanwhile, Experts place a premium on tailored recommendations, particularly on unique cultural or culinary offerings. These variations underline that the depth and type of knowledge expected by divers are directly influenced by their diving frequency and familiarity with the destinations. This complexity highlights the critical role of dive guides in providing comprehensive and customized information to meet the varying needs of divers.

To address these needs and further support the scuba diving industry, dive centers and government authorities should enhance collaboration in several ways. Dive centers can integrate local tourism knowledge into their guides' training programs, ensuring that dive guides can offer divers detailed insights beyond the underwater experience. Government agencies, such as tourism authority, can work with dive centers to create shared local knowledge from the perspective of 5 A's element (Attractions, Activity, Accessibility, Accommodation and Amenities) which supported by Biwal and Joshi (2014), the success of any tourism activity depends on the 5As elements of tourism components. Moreover, establishing certification standards emphasizing these competencies will bolster Malaysia's position as a premier diving destination. Such partnerships not only improve the quality of services but also align with sustainability goals by promoting responsible tourism practices that benefit local communities.

However, this research has limitations that restrict the generalizability of its findings. The study's broad focus on divers without specifying particular destinations or dive centers means that its conclusions may not fully represent the competencies required in diverse contexts within Malaysia. Additionally, the reliance on qualitative methods introduces subjectivity, as participants' experiences might not comprehensively reflect industry-wide trends. Future research should consider larger samples and target-specific dive destinations to provide more actionable insights. Despite these limitations, the study offers valuable perspectives on divers' expectations, contributing to the ongoing discourse on enhancing dive guide competencies.

Acknowledgments

This research has been supported and funded by the Ministry of Higher Education, Malaysia through Fundamental Research Grant Schemes (FRGS/1/2022/SS01/UMT/02/12).

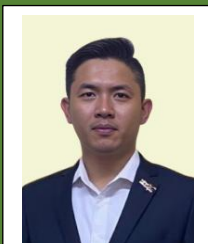
References

- Alazaizeh, M. M., Jamaliah, M. M., Mgonja, J. T., & Ababneh, A. (2019). Tour guide performance and sustainable visitor behavior at cultural heritage sites. *Journal of Sustainable Tourism*, 27(11), 1708–1724. <https://doi.org/10.1080/09669582.2019.1658766>
- Albayrak, T., Caber, M., & Cater, C. (2021). Mass tourism underwater: a segmentation approach to motivations of scuba diving holiday tourists. *Tourism Geographies*, 23(5–6), 985–1000. <https://doi.org/10.1080/14616688.2019.1696884>
- Andrade, C. (2021). The Inconvenient Truth About Convenience and Purposive Samples. *Indian Journal of Psychological Medicine*, 43(1), 86–88. <https://doi.org/10.1177/0253717620977000>
- Baourda, V. C., Brouzos, A., Mavridis, D., Vassilopoulos, S. P., Vatkali, E., & Boumpouli, C. (2022). Group Psychoeducation for Anxiety Symptoms in Youth: Systematic Review and Meta-analysis. In *Journal for*

- Specialists in Group Work* (Vol. 47, Issue 1, pp. 22–42). Routledge.
<https://doi.org/10.1080/01933922.2021.1950881>
- Bartram, D. (2011). *White Paper - The SHL Universal Competency Framework*.
- Christou, P. A. (2022). How to Use Thematic Analysis in Qualitative Research. *Journal of Qualitative Research in Tourism*, 3(2), 79–95.
- Cockburn-Wooten, C., & McIntosh, A. (2020). Improving the accessibility of the tourism industry in New Zealand. *Sustainability (Switzerland)*, 12(24), 1–17. <https://doi.org/10.3390/su122410478>
- Cohen, D. (2024). Transformative Potential of Sustainable Scuba Dive Tourism. In D. Chhabra, N. Atal, & A. Maheshwari (Eds.), *Sustainable Development and Resilience of Tourism*. Springer.
- Dey, B., Mathew, J., & Chee-Hua, C. (2020). Influence of destination attractiveness factors and travel motivations on rural homestay choice: the moderating role of need for uniqueness. *International Journal of Culture, Tourism, and Hospitality Research*, 14(4), 639–666. <https://doi.org/10.1108/IJCTHR-08-2019-0138>
- Dimmock, K., & Musa, G. (2015). Scuba diving tourism system: a framework for collaborative management and sustainability Publication details Postprint of: Dimmock, K & Musa, G 2015, “Scuba diving tourism system: a framework for collaborative management and sustainability” The Scuba Diving Tourism System: a framework for collaborative management and sustainability. *Marine Policy*, 54, 52–58.
<https://doi.org/10.1016/j.marpol.2014.12.008>
- Friedman, B. A. (2019). Hospitality, Tourism and Events Industry Competency Model: Human Resource Management Implications. *Strategic Innovative Marketing and Tourism: 7th ICSIMAT*, 49–56.
- Garrod, B., & Gosling, S. (2008). *New Frontiers in Marine Tourism* (G. Brian & Stefan Gosling, Eds.). Elsevier Science.
- Huang, S., Hsu, C. H. C., & Chan, A. (2009). Tour Guide Performance and Tourist Satisfaction: a Study of the Package Tours in Shanghai: <Http://Dx.Doi.Org/10.1177/1096348009349815>, 34(1), 3–33.
<https://doi.org/10.1177/1096348009349815>
- Keene, C. (2023). *Scuba Diving Immersion Intervention for Adolescents with Climate Change Anxiety A Master’s Project*.
- Kim, J. J., Lee, J. S., & Han, H. (2023). Tangible and intangible hotel in-room amenities in shaping customer experience and the consequences in the with-corona era. *International Journal of Contemporary Hospitality Management*, 35(2), 657–681. <https://doi.org/10.1108/IJCHM-01-2022-0014>
- Kirkbride-Smith, A. E., Wheeler, P. M., & Johnson, M. L. (2013). The Relationship between Diver Experience Levels and Perceptions of Attractiveness of Artificial Reefs - Examination of a Potential Management Tool. *PLoS ONE*, 8(7). <https://doi.org/10.1371/journal.pone.0068899>
- Kler, B. K., & Tribe, J. (2012). Flourishing through SCUBA: Understanding the pursuit of dive experiences. *Tourism in Marine Environments*, 8(1–2), 19–32. <https://doi.org/10.3727/154427312X13262430524027>
- Li, Y.-C., Lin, M.-L., & Chen, Y.-C. (2017). How tour guides’ professional competencies influence on service quality of tour guiding and tourist satisfaction: An exploratory research. *International Journal of Human Resource Studies*, 7(1).
- Lucrezi, S., Milanese, M., Cerrano, C., & Palma, M. (2019). The influence of scuba diving experience on divers’ perceptions, and its implications for managing diving destinations. *PLoS ONE*, 14(7).
<https://doi.org/10.1371/journal.pone.0219306>
- Mahdi, A., & Esztergár-Kiss, D. (2021). Modelling the Accommodation Preferences of Tourists by Combining Fuzzy-AHP and GIS Methods. *Journal of Advanced Transportation*, 2021.
<https://doi.org/10.1155/2021/9913513>
- Meisel-Lusby, C., & Cottrell, S. (2008). UNDERSTANDING MOTIVATIONS AND EXPECTATIONS OF SCUBA DIVERS. In *Tourism in Marine Environments* (Vol. 5, Issue 1).
www.cognizantcommunication.com
- Mwita, K. (2022). Factors influencing data saturation in qualitative studies. *International Journal of Research in Business and Social Science* (2147- 4478), 11(4), 414–420. <https://doi.org/10.20525/ijrbs.v11i4.1776>

- Naldi, L., Nilsson, P., Westlund, H., & Wixe, S. (2021). Amenities and new firm formation in rural areas. *Journal of Rural Studies*, 85, 32–42. <https://doi.org/10.1016/j.jrurstud.2021.05.023>
- Ninpradith, N., Viriyasuebphong, P., & Voraseyanot, P. (2018). A study of tour guide competency, service quality and tourist satisfaction of Chinese Tourist. *Burapha Journal of Business Management*, 7(2). <https://doi.org/https://so01.tci-thaijo.org/index.php/BJBM/article/view/212944>
- Oter, Z., Lin, Y.-C., Lin, M.-L., & Chen, Y.-C. (2017). Tour Guides' Professional Competencies Influence on Service Quality of Tour Guiding and Tourist Satisfaction: An Exploratory Research. *International Journal of Human Resource Studies*, 7(1). <https://doi.org/10.5296/ijhrs.v7i1.10602>
- Pham, T. T. T. (2020). Tourism in marine protected areas: Can it be considered as an alternative livelihood for local communities? *Marine Policy*, 115, 103891. <https://doi.org/10.1016/J.MARPOL.2020.103891>
- Professional Association of Diving Instructors. (2024). *PADI.Divemaster*. <https://www.padi.com/>
- Rebelo, S., Patuleia, M., & Dias, Á. (2022). Inclusive Tourism: Assessing the Accessibility of Lisbon as a Tourist Destination. *Tourism and Hospitality*, 3(2), 466–495. <https://doi.org/10.3390/tourhosp3020030>
- Reddy, K., & Sailesh, B. (2024). Integrating Marine Tourism into the Blue Economy Framework. *Journal of Environmental Management and Tourism*, XV(3 (75)), 501–520. [https://doi.org/https://doi.org/10.14505/jemt.v15.3\(75\).07](https://doi.org/https://doi.org/10.14505/jemt.v15.3(75).07)
- Roche, R. C., Harvey, C. V., Harvey, J. J., Kavanagh, A. P., McDonald, M., Stein-Rostaing, V. R., & Turner, J. R. (2016). Recreational Diving Impacts on Coral Reefs and the Adoption of Environmentally Responsible Practices within the SCUBA Diving Industry. *Environmental Management*, 58(1), 107–116. <https://doi.org/10.1007/s00267-016-0696-0>
- Scharp, K. M., & Sanders, M. L. (2018). What is a theme? Teaching thematic analysis in qualitative communication research methods. <https://doi.org/10.1080/17404622.2018.1536794>, 33(2), 117–121. <https://doi.org/10.1080/17404622.2018.1536794>
- Schuhbauer, A., Favoretto, F., Wang, T., Aburto-Oropeza, O., Sala, E., Millage, K., Cabral, R., Sumaila, U. R., Lucrezi, S., Hsu, A., Tighsazzadeh, M. N., Cruz, M. P. de la, & Cisneros-Montemayor, A. (2023). *Global economic impact of scuba dive tourism*. <https://doi.org/10.21203/rs.3.rs-2609621/v1>
- Sumanapala, D., Dimmock, K., & Wolf, I. D. (2023). A review of ecological impacts from recreational SCUBA diving: Current evidence and future practice. *Tourism and Hospitality Research*, 23(4), 564–577. <https://doi.org/10.1177/14673584221112602>
- Syakier, W. A., & Hanafiah, M. H. (2022). Tour Guide Performances, Tourist Satisfaction And Behavioural Intentions: A Study On Tours In Kuala Lumpur City Centre. *Journal of Quality Assurance in Hospitality and Tourism*, 23(3), 597–614. <https://doi.org/10.1080/1528008X.2021.1891599>
- Zimmerhackel, J. S., Kragt, M. E., Rogers, A. A., Ali, K., & Meekan, M. G. (2019). Evidence of increased economic benefits from shark-diving tourism in the Maldives. *Marine Policy*, 100, 21–26. <https://doi.org/10.1016/J.MARPOL.2018.11.004>
- Zulaiha, S., Abidin, Z., & Mohamed, B. (2014). A Review of SCUBA Diving Impacts and Implication for Coral Reefs Conservation and Tourism Management. *SHS Web of Conferences* 12, 01093. <https://doi.org/10.1051/C>

Authors' Biographies



Khairol Nazraie is MSc. Tourism candidate at Faculty of Business, Economics, and Social Development (FBESD), Universiti Malaysia Terengganu (UMT). He holds a Bachelor of Tourism Management (Hons.) from UMT and Diploma in Tourism Management at Politeknik Tuanku Syed Sirajuddin. His current research focuses on dive guides competency within Malaysia's scuba diving industry.



ORCID ID: <https://orcid.org/0000-0002-2347-3121>

Kalsitinoor Set is a Senior Lecturer in Tourism Department at Faculty of Business, Economics and Social Development (FBESD), Universiti Malaysia Terengganu. She holds a Doctor of Philosophy (PhD) from University of Newcastle (UoN), Australia. Her research interests include tourism management and marine tourism.



ORCID ID: <https://orcid.org/0000-0001-9485-301X>

N Alia Fahada W Ab Rahman is a senior lecturer at the Tourism Department, Faculty of Business, Economics and Social Development, Universiti Malaysia Terengganu, Malaysia. She holds a PhD in Tourism, from Flinders University, Australia. Her key research interests include tourist experience and tourist behavior with a focus on technology adoption.



ORCID ID: <https://orcid.org/0000-0003-2410-1909>

Khatijah Omar is a Professor at Institute of Tropical Biodiversity & Sustainable Development, Universiti Malaysia Terengganu. She is also a certified Human Resource Officer, a member of the American International Research Association (AAIR), Malaysian Institute of Management (MIM) and Malaysian Institute of Human Resource Malaysia (MIHRM). She serves on the editorial board of the Journal of Human Resource Management and Labour Studies, and Editorial Board of Post Graduate Management Journal. She is also a reviewer of the articles for a few international journals. Her expertise is in the field of Human Resource Management and Strategic Management.



Professor Datuk Dr. Yahaya Ibrahim is a Fellow at the Institute of Malaysian and International Studies (IKMAS), Universiti Kebangsaan Malaysia. He holds a PhD in Development Studies from the University of Sheffield, UK. He has conducted extensive studies in Malaysia and across ASEAN countries. He has presented over 100 papers at both national and international conferences. His scholarly work has been widely published in academic journals (both national and international), academic books at the university level, and has also contributed to local newspapers.