

A Bibliometric Analysis of Training, Competencies, and Job Readiness in the Hotel and Tourism Industry: Trends and Future Directions

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ABSTRACT

The hospitality and tourism industry face significant challenges in preparing a skilled workforce to meet evolving market demands. This study analyzes research trends related to training, competencies, and job readiness in the sector, focusing on key themes, influential contributors, and existing gaps. Utilizing the Scopus database, 205 publications from 2019 to 2023 were analyzed using bibliometric tools such as VOSviewer and R software. The analysis identified significant journals, authors, institutions, and research themes, particularly in Industry 4.0, green human resource management, and post-pandemic workforce requirements. Key findings indicate a growing academic interest in these areas, highlighting the need for continuous adaptation in educational curricula to develop interpersonal, innovation, and resilience competencies. This study underscores the importance of aligning training programs with industry needs to ensure job readiness and competitiveness. Theoretically, it enhances understanding of how technological advancements and sustainability practices shape workforce development. Practically, it guides educators and industry practitioners in designing effective training programs. Methodologically, the study demonstrates the value of bibliometric analysis in uncovering research trends. However, the reliance on the Scopus database may exclude relevant publications from other sources, limiting the comprehensiveness of the analysis. The exclusion of non-English publications might also narrow the scope. Future research should integrate multiple databases and consider sector-specific analyses to address these limitations. This study provides valuable insights for enhancing hospitality and tourism workforce preparedness, contributing to academic research and practical applications.

Keywords: Training, Competencies, Job Readiness, Hospitality Industry, Bibliometric Analysis

INTRODUCTION

The hotel and tourism industry is a cornerstone of global economic growth, contributing significantly to employment and GDP in numerous countries (Sutono, 2019). As this sector expands, there is a critical need to enhance workforce competencies to meet evolving market demands. Practical training and development programs are pivotal in equipping employees with essential skills and knowledge, ultimately improving

service quality and customer satisfaction (Anh & Hung, 2019). Understanding trends in training, competencies, and job readiness within this industry is crucial for stakeholders aiming to optimize workforce performance (Feng, 2022).

Recent decades have witnessed extensive research into various aspects of workforce development in hospitality and tourism, including the effectiveness of training methodologies and the impact of job readiness on organizational success (Rajak et al., 2023). However, there remains a need for comprehensive analysis that consolidates these findings and identifies emerging research trends and gaps. Bibliometric analysis offers a powerful quantitative tool to achieve this by examining publication patterns and identifying influential works and authors (Feng, 2022).

The hotel industry's performance is intricately linked to regional economic factors, highlighting the dependence on broader economic growth for sectoral success (Yang & Cai, 2016). Moreover, tourism specialization in a destination significantly influences hotel industry efficiency, underscoring the importance of integrating broader tourism trends into competency development strategies (Zhang et al., 2020). Key competencies such as leadership, interpersonal skills, adaptability, and technical knowledge are essential for job readiness in hospitality and tourism management (Anh & Hung, 2019). Technological advancements post-pandemic have also reshaped competency requirements in the hospitality sector, emphasizing the need for skills in technology adoption, health management, and resilience (Zhang et al., 2020). Sustainability practices are increasingly influential, driving changes in competencies to align with evolving consumer preferences and regulatory standards (Chen & Wang, 2022).

This study addresses these dynamics through a focused bibliometric analysis of publications on training, competencies, and job readiness in the hotel and tourism industry. The research will identify leading journals, influential authors, top institutions, and geographic contributors by analyzing data from sources like Scopus. These insights will provide a comprehensive view of the current research landscape and suggest future directions for enhancing workforce development strategies in the sector. This research seeks valuable guidance for researchers, educators, and industry professionals on optimizing training programs and improving employee competencies in hospitality and tourism. By enhancing these aspects, stakeholders can ensure sustained growth and competitiveness in a rapidly evolving global market.

LITERATURE REVIEW

Bibliometric studies have become increasingly prevalent in exploring the scholarly landscape of training, competencies, and job readiness in the hotel and tourism sector (Pelit & Katırcıoğlu, 2021). These studies utilise quantitative methods to analyse publication patterns, identify influential authors, journals, institutions, and geographic trends, and highlight emerging research themes and gaps.

The methodology in bibliometric studies typically involves comprehensive searches of academic databases such as Scopus or Web of Science, focusing on keywords related to training, competencies, job readiness, hospitality, and tourism. These analyses often include citation analysis, co-citation analysis, bibliographic coupling, and co-authorship network analysis to map the intellectual structure of the field (Feng, 2022).

Recent bibliometric analyses have indicated a significant increase in publications on training and competencies within the hospitality and tourism sector. This growth underscores the heightened scholarly interest in understanding and improving workforce development in response to industry dynamics (Uygungil Erdoğan & Özgen Çiğdemli, 2022; Ogbeide et al., 2020). However, despite the increasing research volume, there are notable gaps and opportunities for further exploration.

One critical gap identified is the need for more in-depth studies focusing on specific geographical regions or cultural contexts within the hotel and tourism industry (Uygungil Erdoğan & Özgen Çiğdemli, 2022; Abou-

Shouk et al., 2014). While existing research provides broad insights, a deeper analysis of regional variations in training practices, competency development, and job readiness factors could yield valuable comparative data and tailored strategies for different markets (Uygungil Erdoğan & Özgen Çiğdemli, 2022).

Additionally, while technological advancements and sustainability practices have been identified as emerging themes in the field, more comprehensive studies must examine their intersection with training and competencies in hospitality and tourism (Johnson et al., 2022). Future research could explore how technological innovations and sustainability imperatives influence the skills required by industry professionals, thereby informing more adaptive and forward-thinking training programs (Hsu & Tseng, 2022; Kusumah Putra et al., 2022).

Moreover, integrating interdisciplinary perspectives still needs to be explored in bibliometric analyses of training and competencies in the hotel and tourism industry (Ferrerias-Garcia et al., 2019). Collaborative research involving psychology, sociology, and management could provide holistic insights into factors influencing job readiness and competency development beyond traditional hospitality education frameworks (Liu et al., 2022; Lei et al., 2021).

Furthermore, while influential authors and institutions have been identified through bibliometric studies, there is potential to delve deeper into the impact of collaborative networks and international partnerships on advancing knowledge in workforce development within the sector (Zaitseva et al., 2017). Understanding these dynamics could facilitate enhanced collaboration and knowledge exchange, leading to more robust and globally relevant research outcomes.

In summary, while bibliometric studies have significantly contributed to mapping the scholarly landscape of training, competencies, and job readiness in the hotel and tourism industry, several gaps and avenues for future research exist. Addressing these gaps could enrich understanding workforce development dynamics and offer practical insights for stakeholders to optimise training strategies, improve competencies, and enhance organisational performance in this critical sector..

METHODS

This study employs a bibliometric analysis to evaluate the body of research concerning hotel and tourism training, competencies, job readiness, and graduates' employability. Bibliometric analysis is a statistical method for analysing books, articles, and other publications. It is beneficial for examining the development and structure of scientific fields (Ahmi, 2023). The Scopus database, known for its comprehensive collection of peer-reviewed literature, was chosen as the data source due to its extensive coverage and reliability.

To ensure the accuracy and relevance of the data, a specific query was formulated using keywords related to hotel and tourism training, competencies, job readiness, and graduates' employability. The search was conducted using terms like "hotel," "tourism," "training," "competencies," "job readiness," and "graduates' employability." The initial search yielded many documents, filtered to exclude review articles and other non-relevant publications. The final dataset included a comprehensive collection of articles analysed based on various bibliometric indicators, including publication year, source, author, institution, and country/territory. The analysis used tools like BiblioMagica 2.8, BiblioMagica 1.8 and Microsoft Excel.

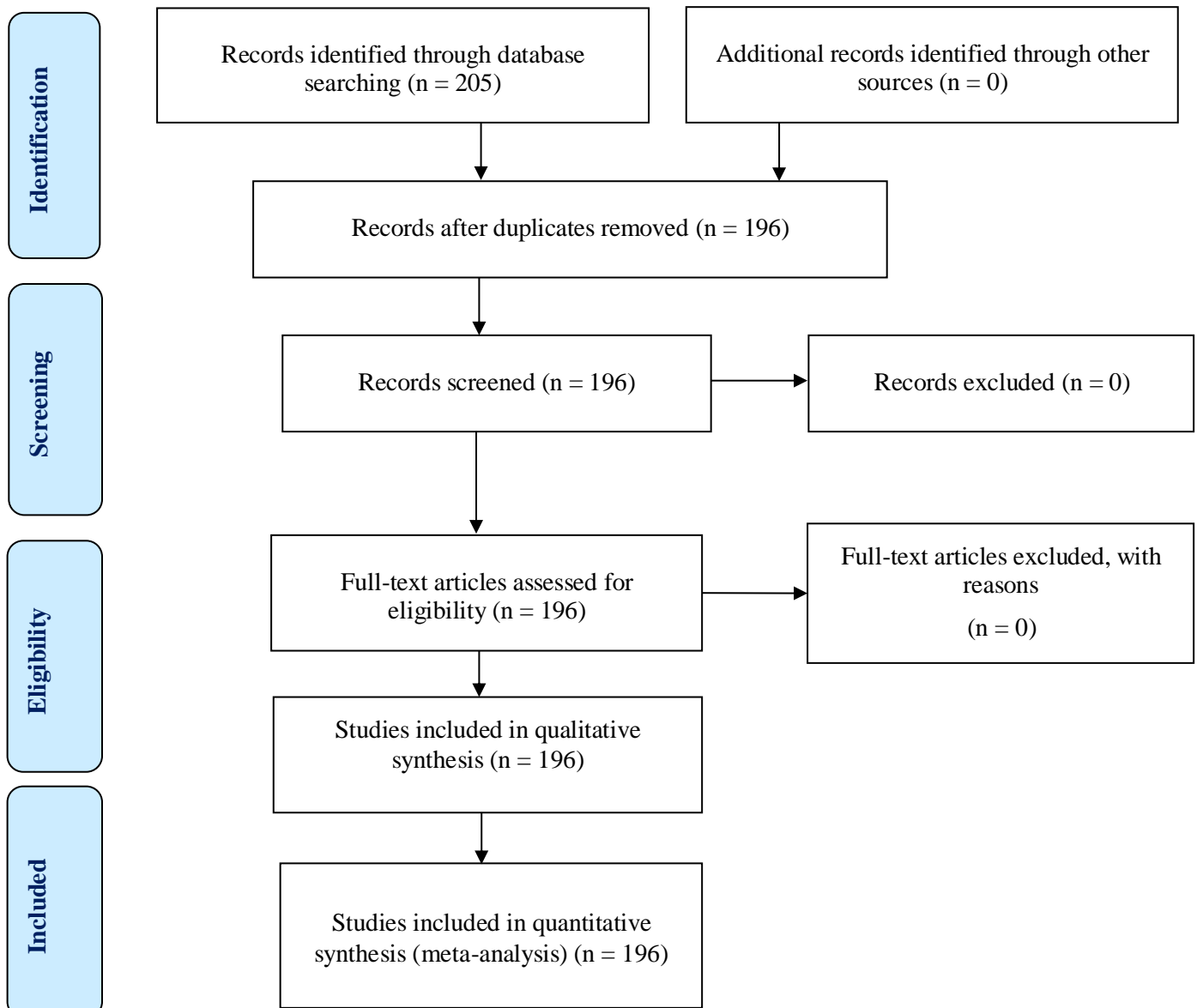


Fig. 1: PRISMA Flow Diagram

Source: Moher D, Liberati A, Tetzlaff J, Altman DG, The PRISMA Group (2009). Preferred Reporting Items for Systematic Reviews and Meta-Analyses: The PRISMA Statement. PLoS Med 6(7): e1000097. <https://doi.org/10.1016/j.jclinepi.2009.06.005>

RESULTS

Document and Source Types

Table 1 presents an overview of document types across a dataset of 205 publications. Articles dominate, comprising 69.27% (142 publications), strongly emphasising detailed, peer-reviewed research within the dataset. Following Articles, Conference Papers constitute 24.39% (50 publications), highlighting active engagement in academic conferences and dissemination of research findings. Book Chapters and both Conference Reviews and Reviews each represent smaller portions: 2.93% (6 publications), 1.46% (3 publications each), and 0.49% (1 publication), respectively, suggesting these document types are less common, possibly reflecting the specific focus or nature of the research documented. This distribution underscores the prevalence of rigorous, scholarly articles and active participation in academic conferences within the analyzed publications.

Table 1: Document Type

Document Type	Total Publications (TP)	Percentage (%)
Article	142	69.27%
Conference Paper	50	24.39%
Book Chapter	6	2.93%
Conference Review	3	1.46%
Review	3	1.46%
Book	1	0.49%
Total	205	100.00

Table 2 offers a comprehensive overview of publication distribution by source type across a dataset comprising 205 publications. Scholarly Journals emerge as the dominant source, constituting 71.22% (146 publications) of the total. This highlights a strong emphasis on peer-reviewed academic articles within the dataset, reflecting rigorous scholarly engagement and the dissemination of in-depth research. Following journals, Conference Proceedings account for 20.98% (43 publications), indicating significant participation in academic conferences as primary platforms for sharing research findings and engaging in scholarly discourse. In contrast, Book Series contribute 5.85% (12 publications), showing a modest presence of serialized book publications, while Books themselves represent the most minor expected source type at 1.95% (4 publications). These findings underscore the preference for journals and conference proceedings as primary avenues for scholarly communication and knowledge dissemination within the field while acknowledging the role of books in contributing to the research landscape, albeit to a lesser extent.

Table 2: Source Type

Source Type	Total Publications (TP)	Percentage (%)
Journal	146	71.22%
Conference Proceeding	43	20.98%
Book Series	12	5.85%
Book	4	1.95%
Total	205	100.00

Year of Publications - Evolution of Published Studies

Table 3 provides a detailed analysis of publication trends from 2019 to 2023, revealing a progressive increase in publications and their scholarly impact metrics. In 2019, 41 publications accounted for 20.00% of the total, with 20 of these publications cited, yielding 104 total citations. Each cited publication averaged 28 citations (C/P), with a cumulative impact reflected in an h-index of 28 and a g-index of 467. Subsequent years showed a consistent upward trajectory: 2020 saw 35 publications and

Table 3: Year of Publications

Year	TP	NCP	TC	C/P	C/CP	h	g
2019	41	20.00%	41	20.00%	104	28	467
2020	35	17.07%	76	37.07%	96	25	503
2021	44	21.46%	120	58.54%	145	34	237
2022	42	20.49%	162	79.02%	154	24	280
2023	43	20.98%	205	100.00%	158	25	170
Total	205						

Notes: TP=total number of publications; NCP=number of cited publications; TC=total citations; C/P=average citations per publication; C/CP=average citations per cited publication; h=h-index; and g=g-index.

96 citations, with an average of 25 per publication and a g-index of 503. The peak occurred in 2021 with 44 publications and 145 citations, marking an h-index of 34. This trend continued into 2022 and 2023, with 42 and 43 publications, respectively, culminating in 205 total citations by 2023. Throughout these years, the increasing h-index and g-index underscore these publications' growing influence and scholarly impact, indicating their significant contribution to the academic discourse within the field.

Languages of Documents

Table 4: Languages Used for Publications

Language	Total Publications (TP)*	Percentage (%)
English	193	94.15%
Russian	5	2.44%
Spanish	4	1.95%
Portuguese	2	0.98%
Chinese	1	0.49%
Total	205	100.00

Table 4 provides a comprehensive overview of language distribution among the 205 publications in the dataset, highlighting English as the predominant language, with 193 publications constituting 94.15% of the total. This dominance reflects a strong preference or requirement for English as the primary language of scholarly publication, likely due to its global accessibility and widespread use within academic circles. The remaining publications are divided among several other languages: Russian accounts for 2.44% with 5 publications, Spanish at 1.95% with 4 publications, Portuguese at 0.98% with 2 publications, and Chinese with a single publication, representing 0.49% of the dataset. While some linguistic diversity is represented, non-English publications remain a minority within the dataset, underscoring English as the predominant language for disseminating research findings in this field of study.

Subject Area

Table 5: Subject Area

Subject Area	Total Publications (TP)	Percentage (%)
Business, Management and Accounting	103	50.24%
Social Sciences	88	42.93%
Computer Science	41	20.00%
Environmental Science	35	17.07%
Economics, Econometrics and Finance	25	12.20%
Engineering	24	11.71%
Energy	15	7.32%
Mathematics	14	6.83%
Decision Sciences	12	5.85%
Earth and Planetary Sciences	11	5.37%
Arts and Humanities	8	3.90%
Medicine	7	3.41%
Physics and Astronomy	7	3.41%

Table 5 provides a comprehensive overview of the distribution of 205 publications across various subject areas, revealing that Business, Management, and Accounting are the most predominant fields, with 103 publications constituting 50.24% of the total. This underscores a significant focus on business-related

research within the dataset. Social Sciences follow closely behind with 88 publications (42.93%), highlighting its substantial contribution to the overall research output. Other notable subject areas include Computer Science, with 41 publications (20.00%); Environmental Science, with 35 publications (17.07%); and Economics, Econometrics, and Finance, with 25 publications (12.20%). Engineering and energy are also represented by 24 (11.71%) and 15 (7.32%) publications, respectively, indicating active research in technical fields. Less represented areas such as Medicine, Physics and Astronomy, and Arts and Humanities each contribute a smaller percentage of the total publications. This diversity illustrates the multidisciplinary nature of the research outputs, with a predominant emphasis on business and social sciences, reflecting the dataset's broad scope and interdisciplinary approaches.

Most Active Source Titles

Table 5 provides a comprehensive overview of the distribution of 205 publications across various subject areas, revealing that Business, Management, and Accounting are the most predominant fields, with 103 publications constituting 50.24% of the total. The predominance of these subjects highlights a significant focus on business-related research within the dataset. Social Sciences follow closely behind with 88 publications (42.93%), highlighting its substantial contribution to the overall research output. Other notable subject areas include Computer Science, with 41 publications (20.00%); Environmental Science, with 35 publications (17.07%); and Economics, Econometrics, and Finance, with 25 publications (12.20%). Engineering and energy are also represented by 24 (11.71%) and 15 (7.32%) publications, respectively, indicating active research in technical fields. Less represented areas such as Medicine, Physics and Astronomy, and Arts and Humanities each contribute a smaller percentage of the total publications. This diversity illustrates the multidisciplinary nature of the research outputs, with a predominant emphasis on business and social sciences, reflecting the dataset's broad scope and interdisciplinary approaches.

Table 6: Most Active Source Title

Source Title	TP	TC	Publisher	Cite Score	SJR 2023	SNIP 2023
Springer Proceedings in Business and Economics	6	16	Springer Nature	0.7	0.151	0.140
E3S Web of Conferences	5	7	Web of Conferences	0.9	0.182	0.400
Journal of Physics: Conference Series	4	5	IOP Publishing	1.2	0.180	0.303
Sustainability (Switzerland)	3	32	Multidisciplinary Digital Publishing Institute (MDPI)	6.8	0.672	1.086
Quality - Access to Success	2	13	SRAC - Societatea Romana Pentru Asigurarea Calitatii	1.4	0.177	0.316
Lecture Notes in Networks and Systems	2	0	Springer Nature	0.9	0.171	0.282
ACM International Conference Proceeding Series	2	0	ACM Publications	1.5	0.253	0.233
Renewable and Sustainable Energy Reviews	1	10	Elsevier	31.2	3.596	3.592
Proceedings of the International Conference on Industrial Engineering and Operations Management	1	0	N/A	N/A	N/A	N/A
International Journal of Innovation, Creativity and Change	1	10	Primrose Hall Publishing Group	0.5	0.225	0.304

Notes: TP=total number of publications; TC=total citations.

Table 6 provides a comprehensive overview of the most active source titles within a dataset of 205 publications. It highlights their contributions based on total publications (TP), total citations (TC), and

citation metrics. The Springer Proceedings in Business and Economics leads the list with six publications and 16 citations. Springer Nature, the publisher, has a Cite Score of 0.7, an SJR (Scimago Journal Rank) of 0.151, and an SNIP (Source Normalized Impact per Paper) of 0.140 for 2023. The ES3 Web of Conferences follows closely, with five publications and seven citations, a Cite Score of 0.9, an SJR of 0.182, and an SNIP of 0.400. The Journal of Physics: Conference Series contributes four publications and five citations, with a Cite Score of 1.2, an SJR of 0.180, and an SNIP of 0.303. Notably, Sustainability (Switzerland) stands out with three publications but 32 citations, boasting a high impact with a Cite Score of 6.8, an SJR of 0.672, and an SNIP of 1.086. Other sources like Quality - Access to Success, Lecture Notes in Networks and Systems, and ACM International Conference Proceeding Series add to the diversity of publication venues. Renewable and Sustainable Energy Reviews achieves remarkable metrics with a Cite Score of 31.2, an SJR of 3.596, and an SNIP of 3.592 despite having just one publication, highlighting its significant impact within the field. The table underscores these sources' varied and multidisciplinary nature, encompassing conferences, journals, and proceedings that collectively contribute to the rich and diverse research landscape.

Keywords Analysis

Table 7 presents a comprehensive overview of the top 20 keywords used in a dataset of 205 publications, offering insights into the primary themes and topics covered by the research. "Tourism" emerges as the most frequently used keyword, appearing in 54 publications (8.42% of the total), indicating a significant focus on tourism-related research within the dataset.

Table 7: Top 20 Keywords

Author Keywords	Total Publications (TP)	Percentage (%)
Tourism	54	8.42%
Hotels	28	4.37%
Hotel Industry	24	3.74%
Hospitality	14	2.18%
Hospitality Industry	14	2.18%
Hotel	14	2.18%
Personnel Training	13	2.03%
Tourism Management	13	2.03%
Training	12	1.87%
Tourism Industry	11	1.72%
Education	9	1.40%
Human Resource Management	9	1.40%
Sustainability	9	1.40%
Tourism Development	8	1.25%
COVID-19	7	1.09%
E-learning	7	1.09%
Human	7	1.09%
Sentiment Analysis	7	1.09%
Article	6	0.94%
Machine Learning	6	0.94%

Keywords related to the hotel industry also feature prominently, with "Hotels" appearing in 28 publications (4.37%), "Hotel Industry" in 24 publications (3.74%), and "Hotel" in 14 publications (2.18%). "Hospitality" and "Hospitality Industry" are used in 14 publications each (2.18%), underscoring another critical area of interest. "Personnel Training" and "Tourism Management" appear in 13 publications each (2.03%),

highlighting the importance of workforce development and management in these sectors. Keywords such as "Training," "Tourism Industry," and "Education" further underscore research interests in educational and training aspects within tourism and hospitality. Additionally, keywords like "Sustainability" (1.40%) and "COVID-19" (1.09%) reflect contemporary issues impacting the field, while terms like "E-learning," "Sentiment Analysis," and "Machine Learning" indicate interest in modern technologies and methodologies. The table illustrates a diverse and comprehensive array of research topics, emphasizing the multidimensional nature of studies in tourism, hospitality, and related fields.

Geographical Distribution of Publications

Table 8 summarizes the contributions of the top 10 countries to a dataset of 205 publications. Indonesia leads with 55 publications and 138 citations, achieving a moderate C/P of 2.51 and a C/CP of 4.06. Russia follows with 45 publications and 55 citations, showing a lower impact with a C/P of 1.22 and a C/CP of 3.06. China has 42 publications and 498 citations, boasting a high impact with a C/P of 11.86 and a C/CP of 19.15. Spain closely follows with 42 publications and 383 citations, also demonstrating strong impact metrics. Other countries like Malaysia, Portugal, India, Turkey, and Brazil contribute significantly to the dataset, each showing varying levels of citation impact and research influence. This table highlights the diverse international contributions to research in the field, reflecting varying citation metrics and research impact across regions.

Table 8: Top 10 Countries contributed to the publications

Country	TP	NCP	TC	C/P	C/CP	h	g
Indonesia	55	138	34	2.51	4.06	6	11
Russian Federation	45	55	18	1.22	3.06	5	7
China	42	498	26	11.86	19.15	12	22
Spain	42	383	35	9.12	10.94	11	19
Czech Republic	39	62	23	1.59	2.70	3	7
Portugal	37	209	26	5.65	8.04	8	14
India	32	388	23	12.13	16.87	7	19
Malaysia	29	837	24	28.86	34.88	10	28
Turkey	27	209	19	7.74	11.00	7	14
Brazil	26	137	21	5.27	6.52	10	11

Notes: TP=total number of publications; NCP=number of cited publications; TC=total citations; C/P=average citations per publication; C/CP=average citations per cited publication; h=h-index; and g=g-index.

Authorship and Co-Authorship Analysis

Table 9 summarises the number of authors per document within a dataset of 124 publications. Most publications, 39 (26.84%), are authored by a single individual, followed closely by 29 (25.75%) with two authors. Publications with three authors account for 23 (15.87%) documents, indicating the dataset's prevalence of single or dual-author contributions. As the number of authors increases, the number of publications decreases: those with four authors make up 19 (6.07%), while five authors contribute 9 (3.81%) documents. Publications with six and seven authors are rare, comprising only 3 (0.82%) and 1 (0.63%) document, respectively. Notably, one conference review document needs listed authors, accounting for 18.68% of the total. This distribution highlights a predominant trend towards individual and small team authorship, with some instances of more considerable collaborative efforts in the dataset.

Table 9: Number of Author(s) per Document

Author Count	Total Publications (TP)	Percentage (%)
0	1	18.68
1	39	26.84
2	29	25.75
3	23	15.87
4	19	6.07
5	9	3.81
6	3	0.82
7	1	0.63
Total	124	100.00

Conference review document. No author is listed.

Table 10 summarizes the dataset's top 10 most productive authors, detailing their affiliation, country, and publication metrics. Authors from the Czech Republic, including Kriz, Pavel, Poulova, Petra, Han, Jan, and Ulrych, Zdenek, have three publications each. However, only one publication per author has been cited, accumulating three citations each. This results in modest citation metrics with an average of 1.00 citations per publication and 3.00 citations per cited publication, alongside an h-index and g-index of 1. In contrast, Karatepe, Osman M. from Turkey stands out with three highly cited publications totalling 90 citations, achieving an impressive average of 30.00 citations per publication and cited publication, with an h-index and g-index of 3.

Table 10: Top 10 Most Productive Authors

Author's Name	Affiliation	Country	TP	NCP	TC	C/P	C/CP	h	g
Kriz, Pavel	Univerzita Hradec Králové	Czech Republic	3	1	3	1.00	3.00	1	1
Poulova, Petra	Univerzita Hradec Králové	Czech Republic	3	1	3	1.00	3.00	1	1
Han, Jan	Institute of Hospitality Management	Czech Republic	3	1	3	1.00	3.00	1	1
Ulrych, Zdenek	University of West Bohemia	Czech Republic	3	1	3	1.00	3.00	1	1
Karatepe, Osman M.	"		3	3	90	30.00	30.00	3	3
Belias, Dimitrios	Eastern Mediterranean University"	Turkey	2	1	14	7.00	14.00	1	2
Filimonau, Viachaslau	University of Thessaly	Greece	2	2	29	14.50	14.50	2	2
Tunsakul, Aphisit	University of Surrey	United Kingdom	2	2	26	13.00	13.00	2	2
Kozel, Tomas	Thailand National Science and Technology Development Agency	Thailand	2	0	0	0.00	0.00	0	0
Kocourek, Martin	Univerzita Hradec Králové	Czech Republic	2	0	0	0.00	0.00	0	0

Notes: TP=total number of publications; NCP=number of cited publications; TC=total citations; C/P=average citations per publication; C/CP=average citations per cited publication; h=h-index; and g=g-index.

Similarly, Filimonau, Viachaslau from Greece and Tunsakul, Aphisit from the UK exhibit significant impact with higher citation averages (14.50 and 13.00 respectively) across their two publications. Authors like Kozel and Tomas from Thailand and Kocourek and Martin from the Czech Republic have two publications, each without citations, reflecting zero citation metrics. This table illustrates the top authors' varying productivity and impact levels, showcasing a mix of prolific yet moderately cited researchers and those with fewer but highly impactful publications.

Most Influential Institutions

Table 11 presents the top 10 most influential institutions based on a minimum of five publications, detailing their contributions in terms of total publications (TP), cited publications (NCP), total citations (TC), and citation metrics. Leading the list is the University of Hradec Kralove in the Czech Republic with 17 publications, but showing modest impact with 6 cited publications and 18 total citations, resulting in a C/P of 1.06 and C/CP of 3.00, alongside h-index and g-index values of 3 and 4, respectively. In contrast, Universiti Sains Malaysia stands out with 10 publications, 7 cited publications, and 598 total citations, achieving high averages of 59.80 citations per publication and 85.43 citations per cited publication, with an h-index of 3 and g-index of 10. Other notable institutions include V.I. Vernadsky Crimean Federal University in Russia, with 9 publications and 37 citations (C/P and C/CP of 4.11), and Plekhanov Russian University of Economics, with 6 publications and 14 citations (C/P and C/CP of 2.33). The table highlights diverse levels of research impact among these institutions, ranging from significant influence with high citation metrics to more modest contributions with fewer citations.

Table 11: Top 10 Most influential institutions with a minimum of five publications

Affiliation	Country	TP	NCP	TC	C/P	C/CP	h	g
University of Hradec Kralove	Czech Republic	17	6	18	1.06	3.00	3	4
Universiti Sains Malaysia	Malaysia	10	7	598	59.80	85.43	3	10
V.I. Vernadsky Crimean Federal University	Russia	9	9	37	4.11	4.11	5	6
Plekhanov Russian University of Economics	Russia	6	6	14	2.33	2.33	3	3
Bina Nusantara University	Indonesia	6	0	0	0.00	0.00	0	0
University of West Bohemia	Czech Republic	6	4	6	1.00	1.50	1	2
University of Johannesburg	South Africa	6	3	15	2.50	5.00	3	3
University of Tehran	Iran	6	2	58	9.67	29.00	2	6
Kyiv National University of Culture and Arts	Ukraine	6	0	0	0.00	0.00	0	0
Kazan Federal University	Russia	5	0	0	0.00	0.00	0	0

Notes: TP=total number of publications; NCP=number of cited publications; TC=total citations; C/P=average citations per publication; C/CP=average citations per cited publication; h=h-index; and g=g-index.

Citation Analysis

Table 12 provides a comprehensive overview of citation metrics for 205 publications published between 2019 and 2023. These publications collectively received 1,657 citations, averaging 8.08 citations per paper. Of these, 136 publications were cited, with an average of 12.18 citations per cited paper. The citation rate 414.25 per year indicates cumulative citation growth over the specified timeframe. The data also shows 657 contributing authors, averaging 2.52 citations per author and 3.20 authors per paper, highlighting a collaborative research environment. Key indices include an h-index of 20, indicating 20 papers with at least 20 citations each, and a g-index of 36, showing the top 36 papers received 1,361 citations collectively. The m-index of 3.333 reflects a steady citation impact relative to the years since the first publication. Overall, these metrics underscore the productive and influential nature of the research, emphasizing substantial collaboration and citation impact in the academic community.

Table 12: Citations Metrics

Metrics	Data
Publication Years	2019 - 2023
Total Publications	205
Citable Year	6
Number of Contributing Authors	657
Number of Cited Papers	136
Total Citations	1,657
Citation per Paper	8.08
Citation per Cited Paper	12.18
Citation per Year	414.25
Citation per Author	2.52
Author per Paper	3.20
Citation sum within h-Core	1,361
h-index	20
g-index	36
m-index	3.333

Table 13 showcases the top 10 highly cited articles from a dataset, detailing their authors, titles, publication years, total citations, and average citations per year. Leading the list is Ivanov et al.'s (2019) "Progress on robotics in hospitality and tourism: a review of the literature," with 233 citations and an average of 38.83 citations per year, underscoring its significant impact in robotics for hospitality and tourism. Yusoff et al.'s (2020) "Linking Green Human Resource Management Practices to Environmental Performance in Hotel Industry" follows closely with 198 citations and the highest average citations per year at 39.60, highlighting the rising importance of green practices in hotels. Other notable articles include research on sustainability in tourism and hospitality by Sakshi et al. (2020), COVID-19 responses in Egypt by Salem et al. (2022), and green competencies by Qu et al. (2022). These articles reflect diverse research interests, including youth employment skills, turnover intentions, and COVID-19 safety measures in hotels, illustrating the breadth of topics within the hospitality and tourism sectors and their current research focus.

Table 13: Top 10 Highly cited articles

No.	Authors	Title	Year	Cites	Cites per Year
1	Ivanov S.; Gretzel U.; Berezina K.; Sigala M.; Webster C. (2019)	Progress on robotics in hospitality and tourism: A review of the literature	2019	233	38.83
2	Yusoff Y.M.; Nejati M.; Kee D.M.H.; Amran A. (2020)	Linking Green Human Resource Management Practices to Environmental Performance in Hotel Industry	2020	198	39.60
3	Sakshi; Shashi; Cerchione R.; Bansal H. (2020)	Measuring the impact of sustainability policy and practices in tourism and hospitality industry	2020	84	16.80
4	Salem I.E.; Elkhwesky Z.; Ramkissoon H. (2022)	A content analysis for government's and hotels' response to COVID-19 pandemic in Egypt	2022	71	23.67
5	Qu X.; Khan A.; Yahya S.; Zafar A.U.; Shahzad M. (2022)	Green core competencies to prompt green absorptive capacity and bolster green innovation: the moderating role of organization's green culture	2022	66	22.00

6	Singh A.; Jaykumar P. (2019)	On the road to consensus: key soft skills required for youth employment in the service sector	2019	37	6.17
7	Islam M.A.; Jantan A.H.; Yusoff Y.M.; Chong C.W.; Hossain M.S. (2023)	Green Human Resource Management (GHRM) Practices and Millennial Employees' Turnover Intentions in Tourism Industry in Malaysia: Moderating Role of Work Environment	2023	35	17.50
8	Karatepe O.M.; Rezapouraghdam H.; Hassannia R. (2021)	Sense of calling, emotional exhaustion and their effects on hotel employees' green and non-green work outcomes	2021	35	8.75
9	Moro S.; Esmerado J.; Ramos P.; Alturas B. (2020)	Evaluating a guest satisfaction model through data mining	2020	33	6.60
10	Robina-Ramírez R.; Medina-Merodio J.-A.; Moreno-Luna L.; Jiménez-Naranjo H.V.; Sánchez-Oro M. (2021)	Safety and health measures for COVID-19 transition period in the hotel industry in Spain	2021	33	8.25

DISCUSSION

The comprehensive analysis of hospitality and tourism research over recent years reveals several significant trends and insights (Ogbeide et al., 2020). The field's focus on peer-reviewed articles published primarily in English demonstrates a commitment to rigorous methodologies and widespread dissemination of findings, ensuring global accessibility and collaboration.

From 2019 to 2023, there has been a noticeable increase in publications and citations, indicating a growing scholarly interest in addressing contemporary challenges and advancing knowledge within these sectors (Johnson et al., 2022; Abou-Shouk et al., 2014). This upward trend is supported by rising citation metrics such as the h-index and g-index, reflecting the expanding influence of research outputs and their enduring relevance and impact.

Hospitality and tourism research is inherently multidisciplinary, drawing insights from business, management, social sciences, and environmental science (Ferreras-Garcia et al., 2019). This interdisciplinary approach enriches theoretical frameworks and informs practical strategies and policy developments, contributing to a deeper understanding of industry dynamics and global challenges.

Institutional contributions vary widely regarding citation metrics, highlighting the diverse geographic and academic landscape that shapes hospitality and tourism research (Zaitseva et al., 2017). Institutions with higher impact metrics are crucial for advancing knowledge and influencing global academic discourse and industry practices.

Critical articles within this research dataset cover diverse topics such as robotics in hospitality, sustainable practices, and responses to crises like COVID-19 (Pelit & Katircioğlu, 2021). These articles serve as critical milestones, advancing theoretical knowledge, guiding practical applications, and shaping best practices within the industry.

In parallel, trends and future directions in training, competencies, and job readiness within the hotel and tourism industry indicate a dynamic shift towards more comprehensive, adaptive, and forward-thinking strategies (Alejziak & Szczechowicz, 2020). Technological advancements such as virtual reality (VR) and augmented reality (AR) are revolutionizing training methodologies, offering immersive learning experiences that enhance skill development for hospitality roles. Moreover, a growing emphasis on soft skills—like communication, empathy, and adaptability—is crucial for delivering exceptional guest experiences and fostering employee satisfaction (Provenzano & Baggio, 2019).

Sustainability is increasingly becoming integral to training in the tourism sector, with programs incorporating environmental stewardship and responsible tourism practices (Yallop & Séraphin, 2020). Cross-training and multiskilling initiatives are also gaining traction, equipping employees with diverse skill sets to meet changing operational demands and enhance organizational flexibility (Altendorfer et al., 2021).

The COVID-19 pandemic accelerated the adoption of remote and hybrid training models, demonstrating the industry's adaptability and resilience in maintaining workforce readiness amidst disruption (Nusair et al., 2019). This shift towards flexible learning approaches underscores the importance of continuous learning and upskilling in ensuring employee readiness and competitiveness.

Leadership and management development programs are essential for nurturing talent and preparing future leaders within hospitality and tourism (Leong et al., 2020). Integrating academia and industry is critical in shaping relevant and effective training programs that align with industry needs, reducing skill gaps and enhancing job readiness.

These integrated trends and future directions underscore hospitality and tourism research's pivotal role in shaping academic scholarship and industry practices worldwide (Hosen et al., 2022). By addressing emerging challenges and opportunities, this body of work continues to drive innovation, inform policy-making, and enhance the sustainability and resilience of the global hospitality and tourism sectors.

CONCLUSION

The study of training, competencies, and job readiness in the hotel and tourism industry has advanced significantly through rigorous research and practical applications. Hospitality and tourism research, primarily published in English and focused on peer-reviewed articles, is pivotal in academic scholarship and industry practices globally. The increasing publications and citations reflect growing scholarly interest and the enduring impact of research outputs. Critical articles covering robotics, sustainable practices, and crisis responses contribute theoretical advancements and practical insights, shaping industry best practices. Despite these contributions, challenges remain, including variability in institutional contributions and the rapid evolution of technology affecting training relevance and accessibility. Future directions should focus on personalized learning paths, integrating innovative technologies like AI and VR, and enhancing sustainability through responsible tourism practices. Collaboration between academia, industry, and policymakers will be crucial in developing inclusive and adaptive training strategies. In conclusion, while strides have been made in training and competencies within hospitality and tourism, ongoing research and collaborative efforts are essential to meet emerging challenges and foster innovation and sustainable growth.

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