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A WORLD RANKING OF THE TOP 100 HOSPITALITY AND TOURISM PROGRAMS

Denver E. Severt
Dana V. Tesone
Timothy J. Bottorff
Monica L. Carpenter
University of Central Florida

The article provides an analysis of scholarly contributions to 11 hospitality and tourism refereed journals for the years 2002 to 2006. It presents the top 100 programs as ranked by instances of publications across 11 journals for a recent 5-year period. For the 5-year period, results indicate The Hong Kong Polytechnic University in the top position based on sums of instances, authors, and articles. Second, the researchers updated, modified, and extended a previous study published by the Journal of Hospitality & Tourism Research for similar information for the years 1992 to 2001. Following the update, an additional 15-year aggregate snapshot of research output for top producing institutions provided a top 18 over the last 15-year period. Next, researchers provide an updated analysis by contribution and world region among the specific journals with results indicating a large growth in the number of articles produced in Asia going from 6% of all publications over the earlier 10-year period from 1992 through 2001 to nearly 15% of published articles over the past 5-year period from 2002 through 2006. The article concludes with suggestions for the extension of similar studies and provides implications for hospitality and tourism educators.

KEYWORDS: *universities; hospitality journals; tourism journals; publications*

The perceptual status of departments, programs, schools, and colleges within universities is based to some extent on the ability of affiliated researchers to create and disseminate new knowledge (Treischmann, Dennis, Northcraft, & Niemi, 2000). *Academic excellence* is a term associated with many programs and departments of institutions that are recognized as possessing high-quality research output (e.g., Neary, Mirrlees, & Tirole, 2003). By and large, institutional ranking for specific programs is typically determined by national and international research publication records (Arpan, Raney, & Zivnuska, 2003). Faculty members within these institutions often manage their research productivity independently with minimal guidance from institutional administrators (Bowen, 2005). The rankings based on research records and the independence associated with the research agenda is no exception for programs of hospitality and tourism management.

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Pressure often accompanies a research stream. Embedded in this pressure are expectations that the researcher used sound methodologies, employed rigorous statistical testing, helped with the creation of theory and/or supported or refined current theories, and, finally, studied areas considered important to the respective research specialization of each faculty. Additionally, most tenure granting institutions set a goal for expectations regarding research output. Beginning tenure-track researchers might seek or be granted institutional support to assist in the development of a narrowly focused research stream. Tenured professors seem to independently evolve toward more pragmatic insights used to investigate and solve problems (Bolton & Stolcis, 2003). For these reasons, pretenured professors commonly experience pressure to produce quality research streams as the means of attaining career security and progression (Cheng, Chan, & Chan, 2003). Thus, the measurement of output across time by institutions and by various journals becomes an important activity for understanding contributions to knowledge as well as for various ranking reports that are produced for purposes of comparing programs and institutions.

Because of the importance of monitoring research progression, this article presents a 5-year snapshot (2002-2006) of research contributions to 11 prominent hospitality and tourism journals. The snapshot is based on a blend of journals including hospitality journals, tourism journals, and journals with an international focus. Based on this and because a previous study was being extended, the following journals were chosen for the analysis. The journals include *The Annals of Tourism Research (Annals)*, *The Cornell Hotel and Restaurant Administration Quarterly (CHRAQ)*, *The Florida International University Hospitality Review (FIUHR)*, *The International Journal of Contemporary Hospitality Management (IJCHM)*, *The International Journal of Hospitality Management (IJHM)*, *The Journal of Hospitality and Leisure Marketing (JHLM)*, *The Journal of Hospitality and Tourism Education (JHTE)*, *The Journal of Hospitality & Tourism Research (JHTR)*, *The Journal of Travel Research (JTR)*, *The Journal of Travel and Tourism Marketing (JTTM)*, and *The Journal of Tourism Management (TM)*. The editors, affiliations, and abbreviations for those journals are included in Table 1. The information presented represents the editors in place during the 2002 to 2006 time period analyzed in this article.

The primary method used in the study involves aggregating research instances or a counting method to identify differences between institutions by contributions. The highlights are provided regarding output by institution in article instances, number of articles, number of contributing authors, and world region. These are further classified according to a ranking of the top 100 hospitality and tourism management programs for 2002 to 2006, a world ranking of the top 20 programs classified by journal for 2002 to 2006, contributions by world regions classified by journal for 2002 to 2006, and a top 18 hospitality and tourism management programs for the years from 1992 to 2006. This and other reports concerning research contributions of any grouping of journals provide insights to current levels of scholarly activities within the hospitality and tourism disciplines. It also provides various frames of references (e.g., across time, by journal

Table 1
Hospitality and Tourism Journals Used in the Analysis

Abbreviation	Journal Name	Editor and Affiliation
<i>Annals</i>	<i>Annals of Tourism Research</i>	Jafar Jafari, University of Wisconsin, Stout
<i>CHRAQ</i>	<i>Cornell Hotel and Restaurant Administration Quarterly</i>	Linda Canina, Cornell University
<i>FIUHR</i>	<i>Florida International University Hospitality Review</i>	Marcel Escoffier, Florida International University
<i>IJHM</i>	<i>International Journal of Hospitality Management</i>	Abraham Pizam, University of Central Florida
<i>IJCHM</i>	<i>International Journal of Contemporary Hospitality Management</i>	Richard Teare, Global University for Lifeline Learning
<i>JHLM</i>	<i>Journal of Hospitality and Leisure Marketing</i>	Bonnie Knutson, Michigan State University
<i>JHTE</i>	<i>Journal of Hospitality and Tourism Education</i>	Linda O'Shea, University of Massachusetts, Amherst
<i>JHTR</i>	<i>Journal of Hospitality & Tourism Research</i>	Kaye Chon, The Hong Kong Polytechnic University
<i>JTR</i>	<i>Journal of Travel Research</i>	Richard Perdue, Virginia Polytechnic Institute and State University
<i>JTTM</i>	<i>Journal of Travel and Tourism Marketing</i>	Kaye Chon, The Hong Kong Polytechnic University
<i>TM</i>	<i>Tourism Management</i>	Chris Ryan, University of Waikato

Note: The editors represented here were the editors during the period 2002 to 2006. Since then, there have been several changes in editors and/or titles of some of the journals.

type, and by region) allowing leadership to compare their research output with the output of other universities with similar and different types of weighting systems for teaching, research, and service activity. Finally, this research article focuses completely on research output in the journals mentioned.

First, the article presents the top 100 programs by instances also reporting total authors by institution. Second, the article serves as an update and an extension to a former *JHTR* study by Jogaratnam, McCleary, Mena, and Yoo (2005), which featured an examination of the contributions to the same journals by academic institutions during the period starting from the year 1992 through the year 2001. In addition to adding the top 100 universities and updating portions of the information, since Jogaratnam, McCleary, et al. (2005), the researchers highlight significant changes in current 5-year trends as compared with the former 10-year period previously reported.

LITERATURE REVIEW

A number of content analyses with varying themes were published during the 1980s and 1990s. Dann, Nash, and Pearce (1988) focused on articles in *Annals of Tourism Research* and the *Journal of Leisure Research* reviewing publications

over the period of 1974 to 1986. Chon, Evans, and Sutherlin (1989) presented interesting findings concerning publications among four hospitality journals (*CHRAQ*, *JHTR*, *IJHM*, and *FIUHR*). Reid and Andereck (1989) provided a content analysis of publications within three tourism journals (*JTR*, *Annals*, and *TM*). A later study reviewed publications found within five leading hospitality journals (Crawford-Welch & McCleary, 1992), which was later replicated by Baloglu and Assante (1999), showing that there was an increase in the use of multivariate statistics from earlier research. Other studies presented findings among either tourism or hospitality publications (Hing & Dimmock, 1997). These studies, though similar to this one, were focused on a fewer number of selected journals.

The narrow scope of earlier studies may have been reflective of the limited number of existing hospitality and tourism journals during those years. There has certainly been a recent proliferation of additional academic journals in the field in more recent years. Some report the existence of between 60 and 90 possible journals related to tourism, hospitality, and business as publication avenues for hospitality and tourism research. Though the scope has broadened from previous studies, the authors acknowledge the multiple outlets for publication and refrain from making sweeping generalizations related to total publication records. This keeps the focus of this article and the subsequent rankings on only the 11 journals analyzed.

Some content analysis studies report findings that focus on a single publication, usually a commonly known premier journal such as *Annals* (e.g., Xiao & Smith, 2006). The obvious limitation to single publication studies involves the exclusion of other tourism research outlets. Other studies presented analyses of research activities across a limited number of tourism journals (e.g., *Annals*, *JTR*, and *TM*) during the 1980s (Sheldon, 1991; Sheldon & Collison, 1990). Although the aforementioned studies provided findings representative of a broader range of publication outlets, the exclusive focus on tourism journals fails to account for productivity on the part of hospitality researchers.

Certain hospitality researchers conduct studies directly related to hotel, restaurant, airline, resort, spa, and casino operations (Sturman, 2005). For others, the primary focus concerns traditional business disciplines, such as finance, marketing, and human resource management. The latter group of researchers would be more likely to publish in both hospitality and nonhospitality refereed journals (Schmidgall & Woods, 1993). It has been suggested that content analysis research should consider broader ranges of publication outlets to account for the varied venues of hospitality researchers (Roberts & Shea, 2005). The readership of certain hospitality journals includes practitioners and academics (Newman, Escoffier, & Kay, 2001). It has been reported that a number of educators and students frequently review the hospitality literature to acquire information concerning lectures, student assignments, research information, and professional development (Schmidgall & Woods, 1996). Research contributions to the content analysis literature appear to focus on quality and quantity related issues. Furthermore, many departments or programs are mixed between researchers

espousing specialties in hospitality and tourism. This enhances the relevance for reviews including hospitality, tourism, and journals with varied content including studies in hospitality and tourism.

Researchers have advocated citation analysis as a method to determine both quantity and quality of publications (Woods & Schmidgall, 1995). The quantitative aspect appears in the number of times authors are cited in later contributions to the literature. Weaver and McCleary (1989) conducted a citation analysis of academic contributors from 1983 through 1987 across four journals. In 1990, Weaver, McCleary, and Farrar revisited this topic, extending the former analysis to include the period between the years 1983 and 1988. Additionally, Weaver, Wilson, and McCleary (1990) examined the publication activity of the association members from the Academy of Marketing Science, the American Marketing Association, and Southern Marketing Association. This study was an extension of a previous study conducted by McCleary and Weaver (1987) providing a different viewpoint because many university faculty members are regularly involved in professional associations. Rutherford and Samenfink (1992) conducted a citation analysis from 1989 through 1999 reporting education's most influential scholars among five major journals (*CHRAQ*, *FIUHR*, *HRJ*, *JHRM*, and *JHTE*). Woods and Schmidgall (2001) conducted an update and extension of the citation analysis by Weaver, McCleary, et al. (1990) covering the period of years from 1989 through 1999. In a later study, Rutherford and Samenfink (2002a) conducted a 10-year update to their citation analysis of the most influential scholars from hospitality and tourism education published in four journals (*CHRAQ*, *FIUHR*, *IJHM*, and *JHTR*). However, these previous studies did not include tourism journals (e.g., *Annals*, *TM*, and *JTTM*). A citation study combined hospitality and tourism journals and concluded that little cross-citing existed between highly ranked hospitality (*IJHM*, *CHRAQ*, and *JHTR*) and highly ranked tourism journals (*Annals*, *JTR*, and *TM*). The article further concluded that more outside of both industry citing occurred than any other type of citing (Howey, Savage, Vergeeten, & Van Hoof, 1999). The qualitative aspect is founded on the argument that suggests that higher quality works will be cited more frequently. In this sense, prominence is noted as those authors whose work is cited by other scholars in the production of new research. Also, journals with higher rankings tend to become more available within academic databases and are more commonly accessed in citation indices. Finally, studies conducting citation analysis still warn about the possible misinterpretations that can come from these studies adding to our argument for a variety of multi-method rankings and ratings to be performed (Jamal, Smith, & Watson, 2007).

During the 12th Annual Graduate Education and Graduate Student Research Conference in Hospitality and Tourism (2007) held in Houston, Texas, Dr. Kaye Chon, editor of multiple journals (e.g., *JHTR*, *JTTM*) in the hospitality and tourism field, shared helpful tips for graduate students regarding the publication of work. Dr. Chon further discussed the evolvement of current journals and provided his opinion on the current top tier journals. According to Dr. Chon, the top-tier journals include *IJHM*, *JHTR*, *TM*, and *Annals*. Hence, various ranking

processes of journals have become the concern of contributors to the literature because journals that are more available in databases may be available to a broader range of readership. These are more likely to be found and more likely to be cited than journals that are not as accessible.

As suggested, there are many different beliefs regarding publications and scholarly activity. One study reported that 37% of Council of Hotel Restaurant Institutional Education respondents (program directors) admitted to the hierarchical rankings of refereed journals within their institutions (Ferreira, DeFranco, & Rappole, 1994). It has been suggested that ranking studies could differentiate classification according to pure research journals and applied management journals (Roberts & Shea, 2005). Others contended that journals should be rated on readership frequency, scientific and practical relevance, and overall reputation among academics (Pechlaner, Zehrer, Matzler, & Abfalter, 2004). Another assertion prescribed rigorous and sophisticated quantitative research as the primary quality measurement of hospitality journals (Crawford-Welch & McCleary, 1992).

There has been some criticism of publication counting methods being used to report research productivity. Some researchers contend that counting methods are too subjective in terms of journal selection, timeframes, and sampling procedures (Losekoot, Verginis, & Wood, 2001). However, the publication counting method has been frequently used to measure research quality and quantity (Wood, 1995). The publication counting method remains a standard practice within academic institutions as many times the counting of articles is done to add objectivity to the documents disclosing requirements for tenure and promotion of faculty. Although healthy and professionally cynical debate surrounding the best methods for assessing research output of institutions continue, many studies employ publication counting or frequency methods to measure the quantity of contributions. Finally, to overcome a portion of the quality argument, these journals are all blind reviewed securing the fact that the work meets the minimum criteria of each representative editorial review board associated with each particular journal.

Researchers using the counting method to report publication frequencies may ameliorate limitations by expanding the number of selected journals and by providing data on varied timeframes. For this reason, the authors chose to review 11 journals over a period of 5 recent years, which updates and extends the recently published article by Jogaratnam, McCleary, et al. (2005) in the *Journal of Hospitality & Tourism Research*. This update also allows for the selection of the top 100 programs according to instances in these journals. Though many general hospitality and tourism reviews have been published, none have included recent activities that provide current information concerning the 11 journals noted in this study.

METHOD

A counting or frequency method was employed to develop a recent 5-year snapshot and to provide data that are comparable with the previously mentioned

article (Jogaratanam, McCleary, et al., 2005) Researchers used a database manager with Microsoft Office Excel. They counted and recorded all the necessary information into a database. One researcher coded or entered the articles by journal into the database and another researcher verified the accuracy of the process by reentering the data. Once the data were entered, the researchers started the counting process for instances, authors, and institutions. Two researchers were in charge of a database. When the tables were constructed these researchers compared data from their respective databases. When inconsistencies existed, the researchers recounted the area for inconsistencies (i.e., recounting where inconsistencies were uncovered) until the database was deemed accurate. The third reviewer provided oversight to the steps of the two researchers who were constructing the database as a further check for accuracy in logic and reason.

The reviewed journals are refereed and have more than 10 volumes of publishing history. The general hospitality journals included *CHRAQ*, *FIUHR*, *JHLM*, and *JHTR*. The travel and tourism journals included *Annals*, *JTR*, and *TM*. A final group of journals was added to enhance breadth and international viewpoints also replicating the logic of the previous study (Jogaratanam, McCleary, et al., 2005). These journals included the *IJCHM*, *IJHM*, *JHTE*, and the *JTTM*. As mentioned earlier, an inclusive list of journals examined here is listed in Table 1.

The selected journals employ a double-blind peer review process for manuscript selection providing an assumption that the published articles possess appropriate quality levels (Heck & Cooley, 1998; Samenfink & Rutherford, 2002b, as cited in Jogaratanam, McCleary, Mena & Yoo, 2005). It was not the intent of the researchers to analyze the quality but rather the quantity of articles published. A count was conducted using a procedure that provides actual numbers of instances (i.e., instances of articles and instances of authors). This method is unlike other methods that use the number of citations or total volume and has been used and justified by other authors (e.g., Barry, 1990; Jogaratanam, McCleary, Mena & Yoo, 2005; Jogaratanam, Chon, McCleary, Mena & Yoo, 2005; Sheldon, 1991). The researchers analyzed total output of institutions and authors through counting the instances of articles and authors represented across the analysis period and across the journals analyzed.

“Instances” refers to the number of times a university or author is represented in a journal. The study analysis used “university instances,” “article instances,” and “author instances” as the primary units of analysis in this study. For example, if an article were cowritten by an author from Virginia Polytechnic Institute and State University and an author from Purdue University that would be counted as one “university instance” for each Virginia Polytechnic Institute and State University and one “university instance” for Purdue University. Also, credit for an article is not adjusted based on multiple authored articles; though some have called for fractional awarding of credit by multiple authors, no partial credit was calculated in this analysis, keeping with past output reviews (e.g., Barry, 1990). As a quality check and also another metric, the number of articles counted to provide readers with a comparison between the number of articles and instances.

RESULTS

A World Ranking of the Top 100 Programs by Research Instances (2002-2006)

The top 100 universities that provided the most instances by journal article are presented in Table 2. It also presents the total number of contributing author instances and the total number of articles from an institution. In the case of a tie in instances of articles, the total instances of authors were used. In the case of a tie between article instances and instances of authors, the number of articles was used. No same rank was given to institutions unless they had equal instances, authors, and articles. This was simply done in an effort to reduce confusion and to provide a unique number ranking for as many institutions as possible.

Data presented include the top 100 institutions by research output, ranked according to total instances across 11 journals over a recent 5-year period. The total number of authors and article instances is presented. The most recent top five contributors by instances along with the associated absolute number of instances from the years 2002 through 2006 were (a) The Hong Kong Polytechnic University (211 instances), (b) Cornell University (128 instances), (c) University of Nevada at Las Vegas (104 instances), (d) Pennsylvania State University (99 instances), and (e) University of Surrey (79 instances).

The past 10-year review presented by Jogaratnam, Chon, et al. (2005) showed the following rankings: (a) Cornell University (354 instances), (b) Michigan State University (248 instances), (c) Virginia Polytechnic Institute and State University (194 instances), (d) The Hong Kong Polytechnic University (185 instances), and (e) University of Nevada at Las Vegas (174 instances). The Hong Kong Polytechnic University repositioned to first from a previous fourth place. The University of Surrey became the institution with the fifth most volume in the 11 journals whereas Virginia Polytechnic Institute and State University moved to sixth place. Pennsylvania State University is fourth in the ranking and Michigan State University was second in the prior study and is now ninth.

The top five institutions by number of author contribution to these 11 journals for the 5-year period from the years 2002 through 2006 along with their associated absolute number of authors include (a) The Hong Kong Polytechnic University (68 authors), (b) Cornell University (51 authors), (c) University of Nevada at Las Vegas (47 authors), (d) Pennsylvania State University (36 authors), and (e) University of Surrey (37 authors). This can be compared with the number of contributing authors from 10-year period of 1992 through 2001 in the Jogaratnam, Chon, et al. (2005) study that revealed (a) Cornell University (106 authors), (b) Pennsylvania State University (73 authors), (c) University of Nevada at Las Vegas (72 authors), (d) The Hong Kong Polytechnic University (68 authors), and (e) University of Surrey (48 authors).

When comparing and updating the article from the *JHTR* Jogaratnam, McCleary, et al. (2005) study, Cornell had many less contributing authors over the recent period of 5 years than during the previous 10-year period across these

Table 2
World Ranking of the Top 100 Programs by Research Instances (2002-2006)

Rank	Institution	Instances ^a	Authors ^b	Articles ^c
1	The Hong Kong Polytechnic University	211	68	134
2	Cornell University	128	51	87
3	University of Nevada at Las Vegas	104	47	69
4	Pennsylvania State University	99	36	70
5	University of Surrey	79	37	48
6	Virginia Polytechnic Institute and State University	72	27	54
7	Purdue University	71	27	49
8	Oklahoma State University	65	20	43
9	Michigan State University	59	20	39
10	University of Central Florida	55	18	35
11	Washington State University	48	12	34
12	Texas A&M University	46	15	41
13	Griffith University	45	31	29
14	Kansas State University	37	13	24
15	Iowa State University	36	13	24
16	University of Houston	34	22	12
17	Sejong University	34	13	30
18	University of Illinois at Urbana-Champaign	33	18	22
19	Eastern Mediterranean University	30	16	16
20	Chinese University of Hong Kong	29	18	16
21	University of Guelph	28	17	23
22	Northern Arizona University	28	14	19
23	Manchester Metropolitan University	27	10	22
24	Temple University	27	8	20
25	Florida International University	26	15	20
26	University of Queensland	25	17	17
27	Victoria University	24	15	15
28	Arizona State University	24	13	19
29	Ben-Gurion University of the Negev	24	9	16
30	University of Massachusetts at Amherst	23	13	15
31	Ohio State University	22	11	15
32	Sheffield Hallam University	21	15	18
33	Florida State University	21	13	14
34	Monash University	21	11	16
35	University of Nottingham	20	11	10
36	University of Waikato	20	10	16
37	Universidad of Las Palmas de Gran Canaria	20	9	10
38	University of Otago	19	12	14
39	James Cook University	19	12	12
40	University of the West Indies	19	10	14
41	University of Western Australia	19	7	9
42	Texas Tech University	18	14	10
43	Universidad de les Illes Balears	18	14	8
44	University of Strathclyde	18	11	15
45	Chinese Culture University	18	10	11
46	University of Delaware	18	7	14
47	Eastern Michigan University	18	7	13

(continued)

Table 2 (continued)

Rank	Institution	Instances ^a	Authors ^b	Articles ^c
48	University of Florida	17	9	11
49	Oxford Brookes University	17	7	18
50	University of Calgary	17	7	14
51	Glasgow Caledonian University	16	13	10
52	University of Alicante	16	10	10
53	Colorado State University	16	9	14
54	College of Charleston	16	5	10
55	University of Missouri at Columbia	15	8	7
56	Seattle University	15	6	6
57	Kyunghee University	15	6	5
58	La Trobe University	14	11	10
58	University of Brighton	14	11	10
60	Ming Chuan University	14	11	8
61	University of North Texas	14	9	9
62	Lincoln University	14	8	8
62	University of Valencia	14	8	8
64	George Washington University	14	4	5
65	Eindhoven University of Technology	14	4	3
66	Bournemouth University	13	9	11
67	East Carolina University	13	6	9
68	Hebrew University of Jerusalem	13	6	8
69	Mugla University	13	5	9
70	Clemson University	13	5	7
71	University of Stirling	13	4	11
72	Queen Margaret University College	12	8	10
73	University of New South Wales	12	7	9
74	University of Memphis	12	6	12
75	University of New Orleans	12	6	10
76	University of Hawaii	11	7	9
77	RMIT University	11	7	7
78	Southern Cross University	11	7	6
79	University of Kentucky	11	5	9
80	New Mexico State University	11	5	5
81	Adnan Menderes University	11	4	9
82	University of Waterloo	11	4	8
83	Ecole Hoteliere de Lausanne	9	8	5
84	University of Hawaii at Manoa	9	7	4
85	San Francisco State University	9	6	7
86	University of Hong Kong	9	6	4
87	Leeds Metropolitan University	9	5	7
88	Massey University	9	5	6
89	Bowling Green State University	9	5	3
90	Kaohsiung Hospitality College	8	5	8
91	San Deigo State University	8	5	6
92	Yonsei University	8	3	7
93	East Tennessee State University	8	2	6
94	Georgia Southern University	7	6	5
95	Ryerson University	7	5	6
96	Brock University	7	5	4

(continued)

Table 2 (continued)

Rank	Institution	Instances ^a	Authors ^b	Articles ^c
96	University of Southern Mississippi	7	5	4
98	University of Utah	7	4	7
99	University of Western Sydney	7	4	6
100	University of Wollongong	7	4	5

a. Rank refers to the absolute number of research instances. In the case of a tie in instances, number of authors was considered to break the tie. In the case of ties based on instances and number of authors, the number of articles was used to break the tie. This resulted in only one tie for 96.

b. Instances refer to the total count of journal articles for the university—if two authors are listed from one university, then two instances are awarded, thus this ranking is inflated based on dual authorship. The number of contributing authors and the number of articles are presented to give a better indication of the output as well.

c. One article occurrence is equal to the number of articles from the university. This number was not double counted for dual authorship at the same university but if the same article was coauthored by an individual at Georgia Southern University and University of Western Sydney, then each institution would receive one occurrence for an article. Thus, this score is slightly inflated for dual authorship between universities. These biases are likely not big enough to change rank at the top of the table but of course become more sizeable because of smaller absolute numbers.

11 journals. This does not imply less contribution to research by Cornell faculty but fewer contributions to the 11 journals studied. The results further showed that Virginia Polytechnic Institute and State University had more than 40 contributing authors during the 10-year period versus 27 during the recent 5-year period. Additionally, the data indicated that Oklahoma State University had 20 contributing authors produce 65 instances during the most recent 5-year period analyzed. This was the largest increase noted placing Oklahoma State University as the eighth most productive institution among the top 100.

The World Top 20 Programs by Journal Contribution (2002-2006)

Additionally, the contributions to the 11 journals for the top 20 institutions were compiled to reveal the contributions of the top 20 by journal title over the 5-year period. These data are presented in Table 3. It allows a further detailed look at where various institutions are publishing their research output.

For the 5-year period analyzed, and as compared with the other universities reported, The Hong Kong Polytechnic University made the most contributions to five of the journals including (a) *IJCHM*, (b) *IJHM*, (c) *JHTR*, (d) *JTTM*, and (e) *TM*, confirming the large growth in publications for that institution. Cornell University was the largest contributor to the *CHRAQ* with approximate instances of 68 of the 86 total instances reported among the top 20 institutions. For *Annals*, the University of Surrey and Texas A&M University were tied as the largest contributors out of the top 20 institutions. For the *JHLM*, Virginia Polytechnic Institute and State University and Michigan State University were the most frequent contributors, whereas University of Nevada at Las Vegas was

Table 3
The World Top 20 Programs Classified by Journal Contribution (2002-2006)

No.	Institution	Annals	CHRAQ	FIUHR	IJCHM	IJHM	JHLM	JHTE	JHTR	JTR	JTTM	TM	Total
1	The Hong Kong Polytechnic University	6	2	5	18	26	2	5	20	9	19	20	132
2	Cornell University	—	68	3	1	4	1	1	7	1	—	—	86
3	University of Nevada at Las Vegas	—	6	5	9	8	1	11	16	1	9	4	70
4	Pennsylvania State University	4	10	3	5	6	8	4	16	5	3	5	69
5	University of Surrey	7	2	2	5	6	5	—	2	9	3	7	48
6	Virginia Polytechnic and State University	6	—	1	3	5	9	4	11	3	5	5	52
7	Purdue University	2	2	1	2	1	6	8	4	2	12	9	49
8	Oklahoma State University	1	2	3	1	8	4	5	6	1	8	4	43
9	Michigan State University	2	4	11	3	—	9	2	—	6	2	—	39
10	University of Central Florida	—	2	3	2	8	6	1	2	2	4	4	34
11	Washington State University	6	—	2	—	8	2	5	6	—	1	4	34
12	Texas A&M University	7	—	—	—	1	—	1	1	11	3	16	40
13	Griffith University	3	1	—	5	4	1	—	2	1	1	11	29
14	Kansas State University	2	—	—	1	2	2	4	6	2	5	3	27
15	Iowa State University	1	1	—	2	4	4	4	4	1	1	1	23
16	University of Houston	—	2	1	7	—	—	3	—	—	3	—	16
17	Sejong University	3	1	—	1	—	1	—	2	2	—	18	28
18	University of Illinois at Urbana-Champaign	3	3	—	—	1	—	1	1	3	2	7	21
19	Eastern Mediterranean University	—	—	—	7	1	1	—	—	—	1	5	15
20	Chinese University of Hong Kong	—	4	—	1	8	—	—	3	—	—	—	16
	Total	53	110	40	73	101	62	59	109	59	82	123	871

the most frequent contributor to the *JHTE*. Michigan State University was also the most frequent contributor to the *FIUHR*. Texas A&M University was the most frequent contributor to the *JTR*.

The Contributions of the World Regions Classified by Journal (2002-2006)

Of further interest, the absolute and relative contributions of world regions to the 11 journals are listed at the bottom of Table 4. These numbers indicate the relative contribution in absolute numbers and percentages for the research instances analyzed. It is important to keep in mind that where two authors from different regions contributed an article, each of the regions got an instance. In this regard, Table 4 will be inflated by those journals with the most authors across regions. Because journals are published in various times and according to various rules with some featuring many short research briefs, research in progress, and research in full sections, no conclusions can be drawn about the contributions of the journals from the data presented.

However, the numbers have been presented because they may be of interest to various readers. For example, *TM* indicates a relatively high number of 406 instances with a total relative contribution of 18.59% of the total research output. *Annals* contributed 257 instances and 11.77% of the total. The third is the *IJCHM* with 273 or 12.50% of the contributions followed by the *IJHM* with 191 instances or 8.75% of the contributions to instances. The fifth journal is the *JTTM* with 195 instances making up 8.93% of the total contributed instances by regions across the 11 journals for the 5-year period analyzed.

The contributions to journals by geographic area were tabulated in an effort to observe the most significant contributors by region across the 11 journals analyzed. The totals by region across the 11 journals are given in Table 3, both listed by percentages and absolute totals. Of course, the location of the editor of the journal and the country represented may have some impact on the authors publishing in that journal. As can be seen in Table 4, certain journals based out of North America have a solid number of contributors from North America including, but not limited to, *CHRAQ*, *JHTE*, and *FIUHR*. The biggest difference in these findings as compared with the 10-year period analyzed by Jogaratnam, Chon, et al. (2005) was that Asia has become a substantial contributor across 11 journals going from 6.3% (see Jogaratnam, McCleary, Mena & Yoo, 2005) of all contributions in the period analyzed by Jogaratnam, McCleary, Mena & Yoo (2005) to approximately 15% of all contributions to these journals over the 5-year period analyzed. This indicates that Asia is the continent with the fastest rate of growth in research contribution, which is no surprise given the rankings and changes in the earlier tables.

For all 11 journals, the contributors by region indicated that North America produced the greatest number of instances in journals, totaling 1,027 instances and making up 47.02% of the contributions. Second is Europe with 520 instances making up 23.81% of the contributions over the past 5-year period. Third is Asia with 14.84% or 365 instances, followed by Australia with 214 instances representing 9.80%. The significance of rapid growth in the research

Table 4
The Contributions of the World Regions Classified by Journal (2002-2006)

Region	Journal											Total ^a												
	Annals	CHRAQ	FIUHR	IJCHM	IJHM	JHLM	JHTE	JHTR	JTR	JTTM	TM	No.	%											
Africa	2 ^b	—	—	3	1	—	—	—	1	2	7	35	1.60											
Asia	19	14	6	28	40	12	8	38	22	30	107	324	14.84											
Australia	30	5	4	19	15	8	3	8	31	18	73	214	9.80											
Europe	96	12	5	120	49	23	6	12	34	41	122	520	23.81											
Latin America	2	—	—	13	—	—	—	—	1	—	—	16	0.73											
Mid East	7	2	1	5	6	3	—	2	5	2	7	40	1.83											
North America	80	155	60	82	80	93	103	103	80	101	90	1027	47.02											
South America	2	—	—	3	—	1	—	—	1	1	—	8	0.37											
Journal	Annals	CHRAQ	FIUHR	IJCHM	IJHM	JHLM	JHTE	JHTR	JTR	JTTM	TM	Total	Total											
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%										
Total ^a	257	11.77	188	8.61	76	3.48	273	12.50	191	8.75	140	6.41	120	5.49	163	7.46	175	8.01	195	8.93	406	18.59	2184	100

a. This column represents the geographic region total for the 11 journals from 2002 to 2006 with number (No.) representing the absolute number and percentage representing the relative or percentage total article occurrence by region when compared with total contributions by all regions.

b. Absolute number of occurrences for regions and journals. Explanation: A simple article count sorted by region. Cowritten articles in more than one region such as in Asia and in Latin America are given one occurrence for each region (i.e., the total number of articles will be greater than the total number of articles published in that journal during that period because of this inflation factor). The purpose of the table was to examine at contribution by geographic region to articles.

c. This represents the total absolute number (No.) and the relative contribution of instances to the total combined instance contribution for all the journals. For example, *Annals* contributed 257 instances or 11.77% of all the works published in this data set.

output of Asia is likely because of the increase in number of hotel schools in Taiwan and Hong Kong and because of the research commitment made by The Hong Kong Polytechnic University. Of equal importance, though smaller in numbers, are the other geographical areas including but not limited to Africa, the Middle East, Latin America, and South America with 1.60%, 1.83%, 0.73%, and 0.37%, respectively.

A World Ranking of the Top 18 Programs by Research Output (1992-2006)

Table 5 presents the top 18 institutions over the 15-year period. Combining the top producing universities from the previously reported data (i.e., the top 20) and the data reported here (i.e., the top 100) allowed for an aggregated list of the top producers. Because the only data available from the previous study were the top 20, they were the only data available for the period of 1992 to 2001. This resulted in a listing of the top 18 institutions ranked according to total research volume in the 11 journals over the 15-year period. For comparative purposes, the data from the recent 5-year period and the previously reported data for the 10-year period are reported.

By university instances, the top five contributors to these 11 journals for the 15-year period of 1992-2006 included (a) Cornell University (480 article instances), (b) The Hong Kong Polytechnic University (396 article instances), (c) Michigan State University (307 article instances), (c) University of Nevada at Las Vegas (278 article instances), and (e) Pennsylvania State University (261 article instances).

DISCUSSION AND CONCLUSIONS

This article argued that a counting method of refereed journals can provide significant information related to the top research producing universities and can provide helpful information for purposes of comparison of data across ratings of programs and universities. Next, by employing a counting method a database was created, which helped identify the top 100 hospitality and tourism programs by instances. Additional information was also provided related to the number of articles and authors. Also, a previous 1992 to 2001 *JHTR* article was updated to include the years 2002 to 2006. The top university by instances to the 11 journals across the 5-year period was The Hong Kong Polytechnic University up from fourth in the comparison study to the same 11 journals over a 10-year period. Next, a 15-year total for contributions made to 11 journals was created with the available data from the Jogaratnam, Chon, McCleary, Mena & Yoo (2005) article and from the data from the current database yielding the top 18 programs over a 15-year period of 1992-2006.

The 15-year tabulation showed many universities that had not previously been in the top 20 analyzed by Jogaratnam, Chon, McCleary, Mena & Yoo (2005) to have now made the list of top producers, particularly Oklahoma State University, which placed in the top 8 out of the top 100. Additionally, the institutional contributions by journal were totaled to show the contributions made by

Table 5
World Ranking of the Top 18 Programs by Research Output (1992-2006)

Rank ^a	1992-2006 ^b	Institution	1992-2001	2002-2006
1	480	Cornell University	352	128
2	396	The Hong Kong Polytechnic University	185	211
3	307	Michigan State University	248	59
4	278	University of Nevada at Las Vegas	174	104
5	261	Pennsylvania State University	162	99
6	266	Virginia Polytechnic and State University	194	72
7	229	Purdue University	158	71
8	187	University of Surrey	108	79
9	165	University of Central Florida	110	55
10	117	Griffith University	72	45
11	113	Northern Arizona University	85	28
12	115	Texas A&M University	69	46
13	102	Kansas State University	65	37
16	100	Washington State University	52	48
14	98	University of Houston	64	34
15	91	University of Massachusetts at Amherst	68	23
17	72	Manchester Metropolitan University	45	27
18	66	James Cook University	47	19

a. Database used is compiled from the top lists by instances for the 2002 to 2006 period, and from the data available from the top 20 in the Jogaratnam, McCleary, et al. (2005) *JHTR* article for 1992 to 2001. Data limited to the combining the two top 20 from which a top 18 across the 11 journals analyzed over a period of 15 years was found. These totals were then ranked to arrive at the total.

b. A simple totaling of the 1992 to 2001 column with the 2002 to 2006 allowed for the 1992 to 2006 summations.

region by the top 20 universities across the 11 journals. The most significant change was the increase in contributions by Asia, particularly from Hong Kong, attributable to the large number of contributions of The Hong Kong Polytechnic University and the Chinese University of Hong Kong. North America still had the highest number of accepted articles making up 47.02% of the total followed by Europe with 23.81% and then Asia with 14.84%.

However, most of this article confirmed trends established in the similar study by Jogaratnam, Chon, McCleary, Mena & Yoo (2005). This was particularly true in the larger more established research institutions (e.g., University of Nevada at Las Vegas, Pennsylvania State University), changing little in performance over the periods observed. Certain exceptions were discovered in the number of instances per established institution such as Cornell University and Virginia Polytechnic Institute and State University, possibly subject to changes, as the composition of tenured and tenure-earning faculty becomes altered within institutions or because faculty contribute to other journals outside the 11 included in this study. Additionally, universities that grow significantly in size and universities with new doctorate of philosophy programs seem likely to increase the number of publications at a quicker rate than other universities. For

example, Oklahoma State University's rank of eighth in the current 5-year period after not making the top 20 in the previous 10-year period may be indicative of the establishment of a growing PhD program.

Although this article does not attempt to assess overall rankings or quality issues among institutions, the information indicates output trends across the 11 journals by the most frequently contributing institutions, allowing for the creation of the top 100 list of contributing universities to hospitality and tourism research. The measurements presented in this study can be used for many reasons including but not limited to (a) assisting hospitality educators in identifying research contributions across certain journals, (b) assisting would-be doctoral students with research information by program, and (c) showing changes in contribution at various institutions (e.g., an increasing, decreasing, or stable productivity) over a number of years.

Future studies might produce content analyses to include qualitative and quantitative reports on varying aspects of hospitality and tourism research contributions. Additionally, tables could be included that adjust for single-author versus multiple-author contributions, which is a limitation of this current study as compared with the Jogaratnam et al. (2005) study, which featured three levels of frequency of contributions by authors. Additionally, as research databases become more sophisticated, it is more possible for studies to offer information broader in scope than a few journals. For example, some highly specialized institutions may contribute a great deal but to only a select few journals. A more comprehensive database may reveal this information and allow for more comprehensive valuations related to contribution by quality and quantity to be made across programs. Other topics of future interest would be to analyze institutional contributions by subject matter (i.e., tourism, human resource, finance, guest services, marketing, etc.), methods employed (i.e., qualitative or quantitative techniques), and to identify the expertise of scholars at different universities in a more useable format that would be helpful for the identification of scholars based on specialty area (i.e., most frequent contributing tourism scholar). This would also prove useful for potential graduate students desiring to select schools based on a focused area of research concentration. Finally, a tiered system of journals combined with a sole versus multiple author reduction may again provide more realistic examples of the work being carried out by various institutions.

The tables by region raise some interesting research questions that merit further investigation as well (Jogaratnam et al., 2005; Ryan, 2005). Are the regions that contribute very little to the research also underresearched? If this is the case, scholars may attempt to focus international research efforts toward investigations in the geographic regions that have contributed less to the research efforts. Though many of these may not be surprising as they are lesser developed countries, the output can still provide helpful information in determining where research efforts are needed. This may serve those regions well if it could be surmised that those not contributing are underresearched and so may need various research outputs more than other regions that are thoroughly studied.

Regardless of the varying arguments surrounding methodologies, the continued practice of analyzing hospitality and tourism research production provides insights concerning current trends in research. The existing patterns of program expansion and globalization make this an interesting time period to produce studies to track the dissemination of scholarly publications. The fields of hospitality and tourism combine to form a relatively young discipline in comparison with more established academic areas. The proliferation of additional journal titles lends evidence to the assertion that the field is constantly expanding. Future content analyses will provide more insightful snapshots of recognizing development patterns in the hospitality and tourism knowledge base and can help further development the knowledge base in the hospitality and tourism field (Jamal et al., 2007).

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Denver E. Severt, PhD (e-mail: dsevert@mail.ucf.edu), is an associate professor in Rosen School of Hospitality Management at University of Central Florida, Orlando, Florida.

Dana V. Tesone, PhD (e-mail: dtesone@mail.ucf.edu), is an assistant professor in Rosen School of Hospitality Management at University of Central Florida, Orlando, Florida.

Timothy J. Bottorff (e-mail: tbottorf@mail.ucf.edu) is an assistant librarian in Rosen School of Hospitality Management at University of Central Florida, Orlando, Florida.

Monica L. Carpenter (e-mail: mlcarpen@mail.ucf.edu) is a doctoral student in Rosen School of Hospitality Management at University of Central Florida, Orlando, Florida.