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What do hospitality undergraduates learn in different countries? An international comparison of curriculum

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ABSTRACT

Hospitality curriculum plays an important role in hospitality education and impacts the quality of the workforce entering the growing hospitality industry. From the top hospitality undergraduate programs worldwide, this study selected 36 programs from the United States, the United Kingdom, and Australia as the study sample. Curriculum related information was collected from the institutions' websites, including 620 undergraduate hospitality core courses. Content analysis generated a new 2-dimension course typology consisting of six categories of industry foci and 11 categories of topical areas. Chi-square and correspondence analysis were employed to compare the hospitality curricula across the three countries. The results indicated that hospitality curricula in the three countries had both different industry foci and topical areas. The study then provided practical suggestions on how to develop an international hospitality curriculum standard to prepare hospitality graduates for the globalized hospitality industry.

1. Introduction

The hospitality industry is huge, with the hotel sector alone generating over half a trillion dollars a year. The global hotel industry revenue reached 550 billion U.S. dollars in 2016, a 22% increase in revenue over 2011 (Mangan, 2016), including 199.3 billion dollars in the U.S., and over 73 billion pounds and 11.1 billion dollars in the UK and Australia, respectively (Statista, 2017). However, the hospitality industry is much broader still, providing an array of appealing management positions in food & beverage, destination management organizations, events, clubs, theme parks, cruise, gaming, and so on (TBS, 2017). In terms of hospitality employment, there are about 16 million employees in the U.S. in 2017 (U.S. BLS, 2017) and 3.2 million direct employment and a further 2.8 million indirectly employment in the UK in 2016 (BHA, 2017). In Australia, the hospitality industry provides employment opportunities for more than 270,000 people across the country (AHA, 2017). With such a huge demand for qualified workers within the hospitality industry, enrollment in hospitality management programs has also increased (Jiang & Alexkis, 2017).

Hospitality education dates back to the opening of the Lausanne Hotel School in Switzerland, the first hotel school in the world. Undergraduate hospitality education in the UK began with the establishment of Westminster Technical College in 1910 or overseas at the Lausanne Hotel School (Matthew, 2007). The U.S. offered its first undergraduate hospitality management program in 1922 at Cornell University, School of Hotel Administration (Scott, Puleo, & Crotts, 2008). Australian universities also began offering hospitality programs in the mid-1970s (King, Mc Kercher, & Waryszak, 2003). Due to the needs from hospitality industry, there are now thousands of institutions around the world offering hospitality programs. With so many hospitality institutions around the world, it is essential for educators to understand the nature of hospitality curriculum and its design. Many researchers have realized the

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importance of curriculum in hospitality education as it allows students to acquire a set of competencies and skills in preparation of entering the workforce (Min, Swanger, & Gursoy, 2016; Raybould & Wilkins, 2005).

This emphasis on hospitality programs has resulted in different hospitality program standards in different countries. For example, in the U.S., hospitality programs are following the national standards provided by Accreditation Commission for Programs in Hospitality Administration (ACPHA). ACPHA identifies 17 required content areas in hospitality curriculum design and connected these areas to learning outcomes (ACPHA, 2017). In the UK, hospitality programs use Quality Code developed for the higher education sector and maintained by Quality Assurance Agency (QAA). The Subject Benchmark Statement provides a general guide of learning outcomes and generic skills for hospitality programs (QAA, 2016). However, it doesn't represent a national curriculum standard. Similarly, the Australia Government Office for Learning and Teaching (OLT) also develop a set of Learning and Teaching Academic Standards (LTAS) for hospitality programs (Gross, Benckendorff, Mair, & Whitelaw, 2017). This standard defines five learning domains for hospitality graduates without discussing specific curriculum design (Whitelaw, Benckendorff, Gross, Mair, & Jose, 2015).

In many countries, hospitality programs are required to meet certain standards for accreditation purpose, thus hospitality programs in the same country usually show certain similarity in curriculum design. However, it is hard to ignore the differences among curricula across countries. As aforementioned, the hospitality program standards are different in different countries and some standards don't provide curriculum design benchmark. Therefore, a lack of consistency among hospitality curricula offered at different schools and in different countries has been widely reported (Ayoun, Johnson, Vanhyfte, & O'Neill, 2010; Formica, 1996; Knowles, Teixeira, & Egan, 2003). For example, Formica (1996) mentioned that U.S. hospitality programs focused on developing students' professional management skills and knowledge, while European hospitality programs concentrated on delivering knowledge related to the economic and social aspects of the industry. Knowles et al. (2003) revealed that most hospitality courses in the UK had a general management focus while those in Brazil were more tourism/hospitality industry focused. Ayoun et al. (2010) compared hospitality programs in the U.S. with those outside the U.S. and pointed out that U.S. programs should include international business subjects into current curriculum in order to better prepare students for the competitive markets. Since there is no established international standard for curriculum design of hospitality programs, divergences in hospitality education across countries has drawn attentions from both academia and the industry (Dale & Robinson, 2001; Lee, 2013; Lewis, 2005).

Globalization has had a major impact on the hospitality industry, bringing up the concerns on international labor utilizations (Munoz, 2005) and the design of international standardized hospitality curriculum (Smith & Cooper, 2000). A standardized and universal curriculum would provide students with the necessary knowledge and skills to cope with the ever-changing hospitality industry and the challenges created by globalization (Lee, 2013). Thus, the purpose of this study is to compare and explore the differences of undergraduate hospitality curricula across the three different countries, namely, U.S., UK, and Australia. Specifically, the following questions were considered in this study: what core courses are offered by undergraduate hospitality programs in each country? Are the curriculum foci different across the three countries? If so, how are they different? The answers to these questions will provide valuable information for hospitality educators not only to improve curriculum design in the three countries, but also to develop an international hospitality curriculum standard in order to prepare hospitality graduates for the ever-changing globalized hospitality industry.

2. Literature review

2.1. Development of hospitality curricula in different countries

Hospitality curriculum in the U.S. has experienced tremendous changes in terms both of structure and content due to the transitions of hospitality programs and the changing industry needs (Chathoth & Sharma, 2007). Since the 1980s, hospitality programs in the U.S. have gradually moved from home economics programs to business related programs (Rappole, 2000), making them different from vocational based programs (Morrison & O'Mahony, 2003). In general, four different types of curriculum foci, including business, combined, food home economics, and tourism, were used in the U.S. hospitality and tourism programs (Williams, 2005). With the increasing number of hospitality programs housed in business schools, special attention was paid to curriculum design of these programs, which usually offers courses in the three areas: business core, hospitality core, and hospitality electives (Gursoy & Swanger, 2004, 2005; Swanger & Gursoy, 2007, 2010).

Hospitality programs in the UK initially adopted a vocational approach, later challenged by researchers on the grounds that it may not be able to equip students with the abilities to perform managerial duties (Alexander, Lynch, & Murray, 2009; Lashley, 2004; Morrison & O'Mahony, 2003). Therefore, researchers have suggested that hospitality curriculum should shift from the traditional focus on practical skills to a comprehensive approach that balances practical skills with leadership skills, commercial skills, and transferable skills (Alexander et al., 2009; Farbrother & Dutton, 2005). Actually, in the UK subject benchmark statement, hospitality program is defined as not a merely vocational focus program, but an integrated technical, management and scientific discipline with strong connections to the industry (QAA, 2016).

First established in the 1970s and strongly influenced by European hospitality programs, hospitality programs in Australia experienced a gradual expansion in the 1980s with degrees offered mostly with a tourism focus (Breakey & Craig-Smith, 2007; King et al., 2003). In the 1990s, hospitality degrees in Australia could be categorized into four different types: hospitality management, business management, business degrees offering a major in hospitality, and those with only a few courses in hospitality (Breakey & Craig-Smith, 2007). Many hospitality programs were business oriented and hospitality curriculum was combined with business disciplines such as marketing, human resources, or accounting (King et al., 2003). Dredge et al. (2012) indicated that there's no

nationwide balance on theoretical knowledge delivery and the development of students' managerial skills. Therefore, collaborative dialogue and shared understandings between industry and higher education is critical in curriculum design and content delivery (Dredge et al., 2012).

2.2. Key competencies and skills in hospitality curricula

A variety of models and frameworks in designing hospitality curricula have been employed in different countries (Raybould & Wilkins, 2005). Among these, the generic skills framework, which concentrates on building key competencies and employability skills, has been widely used in the U.S., the UK, and Australia (Kearns, 2001; Raybould & Wilkins, 2005). Most researchers agreed that hospitality curriculum should provide education on both the major components of education (i.e., substantive knowledge, skills, values) and the core skills and competencies for the hospitality industry (Dopson & Tas, 2004; Gursoy & Swanger, 2004, 2005). In addition, Smith and Cooper (2000) suggested that hospitality curricula should maintain a balance between industry operation knowledge-related courses and general managerial competencies-related courses. The managerial expertise, according to Nelson and Dopson (2001), may include computer, finance, general management, human resources, service, and personal attributes. In the UK, the curriculum is designed to ensure students to develop both practical and theoretical skills (Alexander et al., 2009). In Australia, Raybould and Wilkins (2005) identified that interpersonal skills, problem solving skills, and self-management skills were the core skills that should be emphasized in the curriculum.

The discussion of the core skills or competencies on which hospitality curriculum is ongoing (Chung, 2000; Dopson & Nelson, 2003; Min et al., 2016; Raybould & Wilkins, 2005; Smith & Cooper, 2000). Some researchers argued that the operation related knowledge and skills are critical to the success of hospitality graduates, while others believed that the interpersonal and managerial skills should be the emphasis of curriculum design (Christou, 2002; Dopson & Nelson, 2003; Kay & Russette, 2000). Other researchers suggested that both operational and behavioral skills are important and a combination of both allows graduates to develop a skill set in order to be successful in their careers (Chung-Herrera, Enz, & Lankau, 2003; Dopson & Tas, 2004). Using simulated or actual professional situations, hospitality education programs should be able to develop students' intellectual and practical skills (Stergiou, Airey, & Riley, 2008).

Hospitality program standards in different countries also give directions on key competencies and skills of hospitality graduates. In the U.S., ACPHA defines six learning outcomes for hospitality programs, including operational activities, related functional areas of hospitality, effective communication, professional and personal development, awareness and application of leadership attributes, and evaluation theories and principles of management (ACPHA, 2017). In the UK, the subject benchmark statement defines the major knowledge areas in hospitality programs, including leadership, innovation, entrepreneurship, food and beverage management, and lodging management (QAA, 2016). While in Australia, the standard identifies five learning domains that have critical impact on students' career development, including service and experience design, interdisciplinary inquiry, collaboration, problem solving, and professional responsibility (Gross et al., 2017; Whitelaw et al., 2015). However, no international standard has been developed to equip hospitality students with universal key competencies and skills that lead them to success in the globalized hospitality market.

2.3. Core courses in hospitality curricula

In order to deliver the key skills and competencies to hospitality students, researchers have spent efforts on proposing and designing core courses in hospitality curriculum. Scott, Puleo, and Crotts (2008) summarized that required core courses in hospitality curricula usually include courses in business, hospitality, and tourism. Business core courses focus on developing students' managerial competencies, and frequently included subjects such as business strategy, marketing, accounting, finance, organizational behavior, legal environment, business statistics, and economics (Scott et al., 2008; Smith & Cooper, 2000). Meanwhile, hospitality and tourism core courses usually include introductory courses, lodging and facility management, service management, food and beverage management, hospitality law, finance, cost control, and internships or field experience (Scott et al., 2008). Besides, compared with other majors, the hospitality major is unique since experiential learning should be a critically important component of the curriculum (Petrillose & Montgomery, 1997; Raybould & Wilkins, 2005). Therefore, students' knowledge, skills, and abilities acquired through internships or practicums were deemed important by industry professionals and were considered as the important criteria in job interview processes (Petrillose & Montgomery, 1997).

Researchers also indicated that the importance of course topics in hospitality curricula changed over time to reflect the ever-changing needs of the hospitality industry (Gursoy & Swanger, 2004; Gursoy, Rahman, & Swanger, 2012). For example, Gursoy and Swanger (2004) found that the two top-ranked subjects from industry professionals' perspectives – ethics and leadership – were not included in the curriculum of hospitality programs and further suggested that hospitality curriculum should focus on developing students' managerial and personal skills (Gursoy & Swanger, 2005). By evaluating the challenges of the hospitality industry, Rimmington (1999) forecasted that information technology has the greatest potential impact on both the hospitality industry and education programs. Barber, Deale, and Goodman (2011) asserted that there is a need to incorporate sustainability topics in hospitality curricula to increase students' knowledge of the environment and further change their attitudes and behaviors.

To evaluate the course structure of hospitality curricula, researchers and educators had developed different frameworks. Dopson and Nelson (2003) summarized hospitality program curriculum into 37 content areas such as human resources, accounting, marketing, operation, and so on. On top of this course classification, Gursoy and Swanger (2004, 2005) also added in two foci of hospitality courses: business and hospitality. Based on all previous course classifications, Lee (2013) grouped hospitality courses in two ways: by subject area such as accounting/finance, food & beverage, general hotel management, law, marketing and so on, and by

focused fields such as general hospitality, food and beverage, hotel/resort, meeting, tourism, and so on. Although Lee (2013)'s classification was innovative, he had so many crossovers in the two approaches that it cannot be integrated into one typology. For example, food and beverage, tourism, gaming, and technology were mentioned in both approaches (by subject area and by focused field), making the classification unclear and hard to be replicated. Therefore, this study develops a new two-dimension typology of hospitality courses to address the limitations of course classification in the previous study.

Given the previous literatures, hospitality curriculum structure varies in different countries due to the historical development process of hospitality programs and the settings of education systems in different countries. Even though hospitality programs in the U.S., UK, and Australia have all pointed out the importance of developing students' key competencies and employability skills, no international consensus had been reached on designing hospitality core courses. With the impact globalization and the increased international competition, there's a need for hospitality academia to review and compare the differences among hospitality programs in order to provide hospitality educators with recommendations to improve curriculum design and the quality of core courses. However, although there has been a plethora of studies on hospitality curriculum in different countries, no research had been conducted to thoroughly evaluate and systematically compare curriculum differences across countries. Therefore, employing the new two-dimension course typology, this study intended to fill this research gap by investigating and comparing hospitality undergraduate programs and providing implications on universal hospitality program standard.

3. Methodology

3.1. Data collection

The study selected top hospitality undergraduate programs worldwide based on Severt, Tesone, Bottorff, and Carpenter (2009) world hospitality and tourism program study. The United States, United Kingdom, and Australia were selected as study countries because they had the largest number of hospitality programs on the top 100 list. Since (Severt et al., 2009) list was developed based on research activities of faculty, the study went through all the institutions listed in the three countries and excluded those with merely a tourism focus or without hospitality majors. As a result, 20 U.S. hospitality programs, nine UK hospitality programs, and seven Australian hospitality programs was selected because of high ranking and hospitality focus (Table 1).

For each hospitality program, the institution's website was carefully screened to collect the following information: program name, college/school affiliation, undergraduate degree name, and undergraduate core courses. When collecting undergraduate courses, the researchers used degree plans in each U.S. institution, and program handbooks and course details webpages in the UK and Australia. All elective courses and general education courses were excluded from this study. Because some institutions list economics, statistics, and computer applications as core courses while some list them as general education courses, this study excluded these courses from the core courses list to be consistent across the institutions. Finally, 620 undergraduate hospitality courses were collected from 36 hospitality programs.

3.2. Data coding and analysis

Content analysis was employed to code all courses collected from the official institutional websites. When conducting content analysis, the researchers searched the university catalog and university website for each course name and carefully read the course description from catalog, module specifications, or course details websites. For some courses, the researchers couldn't find course description after a scrutiny of website and thus used own knowledge and common sense to content analyze those courses. Based on previous course classification literature (eg., Dopson & Nelson, 2003; Gursoy & Swanger, 2004, 2005; Lee, 2013), the collected undergraduate core courses were carefully coded into two dimensions: industry focus and topical area. In order to integrate the two dimensions into one course typology, there was no crossover in the two dimensions as Lee (2013)'s classification. Recurring categories were identified for each field based on existing knowledge and literature. Three independent coders worked iteratively and a cross-rater reliability check indicated 89.9% agreement among coders. The coders then discussed any discrepancies of opinion to arrive at a final consensus.

The coded data were then analyzed in three steps. First, descriptive statistics were presented to display the overview of undergraduate hospitality education in the three countries. Second, chi-square tests were applied to identify any differences existing in industry focus and topical area of the core courses across the three countries. Lastly, correspondence analysis (CA) was utilized to explore curriculum focus patterns in each country. CA is a statistical technique used for simultaneous comparisons among objects and attributes based on categorical or nominal data. It creates perceptual maps in which a set of objects and attributes are displayed graphically in a joint space based on their associations. In a perceptual map, objects are in close proximity when they are highly associated with one another (Hair, Black, Babin, & Anderson, 2010).

4. Results

4.1. Overview of hospitality education

Hospitality programs in the three countries were generally different in multiple ways. Overall, information of hospitality programs in the U.S. are all listed under specific colleges or schools, while information of hospitality programs in the UK and Australia are usually listed not under a school or college webpage but under general institution website. Therefore, for international students

Table 1
List of hospitality programs selected in the study.

Country	Institution
US (20)	Cornell University
	University of Nevada at Las Vegas
	Pennsylvania State University
	Virginia Polytechnic Institute and State University
	Purdue University
	Oklahoma State University
	Michigan State University
	University of Central Florida
	Washington State University
	Kansas State University
	Iowa State University
	University of Houston
	University of Illinois at Urbana-Champaign
	Northern Arizona University
	Temple University
	Florida International University
	University of Massachusetts at Amherst
	Ohio State University
	Florida State University
	Texas Tech University
UK (9)	University of Surrey
	Manchester Metropolitan University
	Sheffield Hallam University
	University of Strathclyde
	Oxford Brookes University
	Glasgow Caledonian University
	University of Brighton
	Bournemouth University
	Queen Margaret University College
Leeds Metropolitan University	
AU (7)	Griffith University
	James Cook University
	La Trobe University
	Southern Cross University
	University of New South Wales
	University of Queensland
	Victoria University

Note: US stands for the United States; UK stands for the United Kingdom; AU stands for Australia.

whose information source is merely institution's website, it is hard for them to link the hospitality program with the school or college that offers it. In terms of degree types (Table 2), the majority of U.S. hospitality undergraduate programs (90%) awarded Bachelor of Science (B.S.) degrees while 10% of programs offered Bachelor of Arts (B.A.) degrees. In the UK, less than half of the hospitality undergraduate programs (44.4%) offered B.S. degrees, while the other half (55.6%) provided B.A. degrees. In Australia, more than half of the hospitality undergraduate programs (57.1%) offered students Bachelor of Business Administration (B.B.A.) degrees, 28.6% programs offered B.S. degrees, and 14.3% awarded B.A. degrees.

Table 3 shows the number of core courses offered in all of the selected hospitality programs in the three countries. In total, 374 core courses were offered in 20 U.S. hospitality programs with an average of 18.7 courses per program. Nine UK hospitality programs offered 128 core courses with an average of 14.2 courses per program. Seven Australian hospitality programs offered 118 core courses with an average of 16.9 courses per program. Thus, the U.S. hospitality programs had the biggest number of required core courses, followed by Australia, while the UK hospitality programs had the smallest number of core courses. This finding could be partially explained by the fact that the UK hospitality curriculum contains a one-year industry placement when students are required to work full-time in the hospitality industry (Alexander et al., 2009; Alexander, 2007). Therefore, hospitality students in the UK only study in

Table 2
Summary of undergraduate degree types of hospitality programs.

Degree type	US		UK		AU	
	# of Programs	%	# of Programs	%	# of Programs	%
B.S.	18	90.0%	4	44.4%	2	28.6%
B.A.	2	10.0%	5	55.6%	1	14.3%
B.B.A.					4	57.1%

Table 3
Summary of core courses of hospitality programs.

Course category	US		UK		AU	
	# of Courses	%	# of Courses	%	# of Courses	%
Industry focus						
Business	55	14.7%	53	41.4%	40	33.9%
Hospitality	216	57.8%	57	44.5%	39	33.1%
Lodging	24	6.4%	2	1.6%	11	9.3%
Foodservice	68	18.2%	7	5.5%	7	5.9%
Tourism	6	1.6%	5	3.9%	15	12.7%
Others	5	1.3%	4	3.1%	6	5.1%
Topical area						
Management fundamental	15	4.0%	19	14.8%	18	15.3%
Industry overview	34	9.1%	20	15.6%	14	11.9%
Finance & revenue management	72	19.3%	13	10.2%	9	7.6%
Sales & marketing	25	6.7%	11	8.6%	12	10.2%
HR & OB	29	7.8%	16	12.5%	6	5.1%
Legal issues	19	5.1%	0	0.0%	5	4.2%
Operations	87	23.3%	23	18.0%	26	22.0%
Information technology	13	3.5%	1	0.8%	3	2.5%
Facility	11	2.9%	1	0.8%	1	0.8%
Professional development	47	12.6%	9	7.0%	13	11.0%
Research project/Capstone	22	5.9%	15	11.7%	11	9.3%
Total courses	374		128		118	
Average courses per program	18.7		14.2		16.9	

college for three years, resulting in less required courses.

Combining content analysis of the study data with the previous course typology literature, this study developed a two-dimension typology of hospitality undergraduate core courses. The new typology consisted of two key attributes: industry focus and topical area. Industry focus referred to which industry the hospitality course involved, while topical area talked about the content area of the hospitality course. Through the data coding process, categories were adjusted, deleted, or added in order to improve the clarity and applications. As a result, a 6-category industry focus and 11-category topical area classification of core courses was created in the present study (Table 3).

The core courses in undergraduate hospitality programs can be categorized into six different industry foci: business, hospitality, lodging, foodservice, tourism, and others. Business focus courses usually refer to general business knowledge, principles, and techniques that do not focus specifically on the hospitality industry. Hospitality focus courses discuss the hospitality industry in general without a focus on specific hospitality segments. Lodging focus courses study hotels, motels, resorts, and other lodging facilities. Foodservice focus courses examine the foodservice industry including restaurants and food and beverage operations. Tourism focus courses explore the travel and tourism industry. All other hospitality industry segments are included in the other focus category due to the limited number of courses. Thus, others focus courses include courses regarding the MICE industry, the gaming and casino industry, and the club industry. This classification not only deepened the dichotomy of industry focus raised in Gursoy and Swanger (2004, 2005)' studies, but also avoided the crossover limitation of Lee (2013)'s classification to only consider real industry as categories while eliminating more subject-related categories such as international, hotel planning, and hospitality technology.

As shown in Table 3, core courses in the U.S. hospitality undergraduate programs had more of a general hospitality focus (57.8%), followed by foodservice focus (18.2%) and general business focus (14.7%). Lodging focus courses (6.4%) also played a considerable role in hospitality curriculum while both tourism focus (1.6%) and other focus courses (1.3%) were very limited in the curriculum. In the UK and Australia, hospitality program curriculum valued both general business and general hospitality focus courses on a similar basis (41.4% and 44.5%, 33.9% and 33.1%, respectively). Besides, a strong tourism (12.7%) and lodging focus (9.3%) was found in Australia's hospitality curriculum. This difference can be explained by the fact that the hospitality programs in both the UK and Australia were first developed as business programs (Alexander, 2007; Breakey & Craig-Smith, 2007). However, in the U.S., hospitality programs started in home economics and human environmental science colleges and slowly moved to business colleges (Rappole, 2000), which makes the general business focus in core courses not as strong as in its two counterparts.

This study categorized undergraduate hospitality core courses into 11 different topical areas: management fundamentals; industry overview; finance and revenue management; sales and marketing; human resources (HR) and organizational behavior (OB); legal issues; operations; information technology; facility; professional development; and research project/capstone. Management fundamental courses discuss management concepts, theories, principles, and knowledge based subjects such as nutrition knowledge. Industry overview courses cover general knowledge of the industry and its segments, as well as trends in the industry. Finance and revenue management courses are math-related courses including accounting, finance, cost control, and revenue management. Sales and marketing courses discuss sales, branding, marketing, and customer behavior. HR and OB courses study human resources, organizational behavior, diversity, leadership, and ethics. Legal issues courses are law-related courses. Operations courses focus on the daily operations of business, including hotel operations, restaurant operations, food preparation and sanitation, and customer service management. Information technology courses involve technology, the internet, and computer applications. Facility courses

examine facility design of hotels and restaurants, and disaster and crisis management. Professional development courses intend to prepare students for their future careers, including communication, field trips, study tours, orientations, internships, placements, and work experience. Research project and capstone courses are integrative courses that are usually offered in the last semester to let students apply the tools and principles they learned from all previous courses in real world situations in order to make decisions. Again, comparing to Lee (2013)'s classification by subject area, this classification eliminated those industry-related categories such as F&B, tourism, gaming, international hotel, in order to make the typology of this study clearer and easier to be replicated.

Table 3 displays the composition of topical areas in three different countries. Operations was the most common topical area in hospitality undergraduate curriculum in all three countries (23.3%, 18.0%, and 22.0% respectively). However, it was followed by different topical areas in each country. In the U.S., hospitality curriculum valued finance and revenue management (19.3%) and professional development (12.6%) areas besides operations. This is partly because that accounting, finance, professional development and internship are some of the main required content areas in the hospitality curriculum by ACPHA (2017). The UK and Australia hospitality curricula both emphasized the industry overview (15.6% and 11.9% respectively) and management fundamental (14.8% and 15.3% respectively) areas besides operations. This could trace back to UK's subject benchmark statement of hospitality program which expressed a big focus on both nature of the hospitality and business management (QAA, 2016). UK hospitality programs were also interested in the HR and OB (12.5%) and research project/capstone (11.7%) areas, while Australian hospitality programs also focused on professional development (11.0%) and sales and marketing (10.2%) areas. A possible explanation could refer to Australian hospitality program set up service & experience design (marketing) and professional responsibility as two of the five learning goals for hospitality graduates (Whitelaw et al., 2015).

4.2. Curriculum-country map

The study used chi-square tests to examine whether differences existed in industry focus and topical areas of the core courses across the three countries. The results indicated that both industry focus ($\chi^2 = 102.6, p < 0.001$) and topical area ($\chi^2 = 62.6, p < 0.001$) changed significantly across the three countries, indicating that hospitality curricula in the U.S., the UK, and Australia had a different industry focus and topical area emphasis. Thus, CA was conducted to further explore the patterns of hospitality curriculum in different countries.

For the reason that only three countries were included in this study, a two-dimensional solution is the only solution CA suggested, which explained 100% of the variance in all variables. The first dimension explained 80.5% of the total variance, while the second dimension accounted for 19.5%. The perceptual map generated by CA is shown in Fig. 1, in which attributes near the dimension axes explain the meaning of the dimensions (Hair et al., 2010). Dimension 1 distinguished the U.S., where programs focused more on the foodservice industry, from the UK and Australia, where programs emphasized general business and the tourism industry. Dimension 2 differentiated the UK, where curriculum emphasized HR and OB, from Australia, where curriculum did not typically include HR and OB.

In a perceptual map, the attributes close to an object explain its characteristics (Hair et al., 2010). Fig. 1 reveals the characteristics and preferences of hospitality undergraduate curricula in the three countries. In terms of industry focus, the U.S. hospitality program focused more on general hospitality, foodservice and lodging industries. The UK hospitality programs were more business oriented and did not have any specific hospitality industry focus. Australian hospitality programs emphasized tourism and other hospitality industries. These differences could be explained by different program designs in different countries. In the U.S., a tourism program is

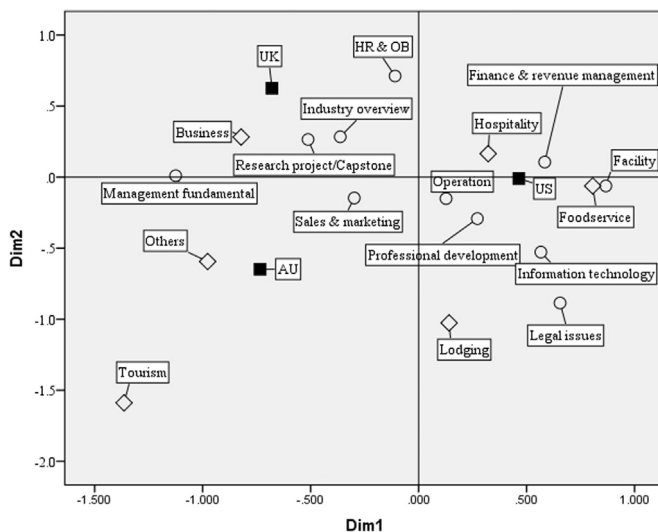


Fig. 1. Perceptual map of curriculum patterns in the three countries (Black squares represent countries; open diamonds represent industry focus; open circles represent topical area).

a separate program, so tourism-related courses are usually not core courses in hospitality programs. Besides, in the U.S., courses related to particular hospitality industries such as events, clubs, and casinos and gaming are usually elective courses in hospitality programs that were not represented on this map.

In terms of topical areas, the U.S. hospitality curriculum had the most diverse topical area, including operations, finance & revenue management, facility, information technology, legal issues, and professional development. The UK hospitality curriculum focused more on an industry overview, HR & OB, and research project/capstone. Australian hospitality curriculum emphasized management fundamental and sales & marketing. The differences in topical area indicated that what undergraduate students learn is different in these three countries. Hospitality undergraduates in the UK and Australia do not get as much exposure to diverse topical areas as students in the U.S. On the contrary, students in the UK received more training in research and human resources, while students in Australia gained more knowledge in sales and marketing.

5. Discussion and conclusion

The growing globalization has changed the hospitality business dynamics. It not only increases capital flows and economic interdependencies across countries, but also brings up international labor utilizations and cross-border knowledge sharing (Munoz, 2005). Hospitality education needs continuous improvement in order to satisfy the changing needs from the industry and to embrace globalization and diverse cultures (Smith & Cooper, 2000). The current study compared the differences in curriculum development of undergraduate hospitality programs in the U.S., the UK and Australia in an attempt to provide recommendations to educators in order to improve the curriculum design and prepare students for the globalized hospitality industry. In other words, with suggestions on creating international hospitality program standards, the study intends to make hospitality programs comparable across countries and provide the same knowledge and skills to hospitality students no matter which country the program is in. The study collected curriculum-related information from 36 top undergraduate hospitality programs in the three countries. In general, the majority of U.S. hospitality undergraduate programs offered B.S. degrees. The UK hospitality undergraduate programs awarded both B.S. degrees and B.A. degrees. More than half of the Australian hospitality undergraduate programs provided B.B.A. degrees.

In previous studies, the analysis of core course structure is the key to understanding curriculum development (Chathoth & Sharma, 2007). Therefore, 620 core courses were analyzed and grouped into a two-dimension hospitality course typology. Based on different classifications of hospitality courses used in the literature (eg., Dopson & Nelson, 2003; Gursoy & Swanger, 2004; Lee, 2013), the new typology developed in the study consisted of two key attributes of undergraduate hospitality courses: industry focus and topical area. The justification of this two-dimension typology is that the same topical area could be taught differently with a different industry focus (Chathoth & Sharma, 2007), such as regular business accounting versus hospitality accounting, hotel operations versus restaurant operations, and so forth. The study then compared core courses across the three countries by two dimensions using both chi-square test and correspondence analysis. Results of the chi-square tests proved that hospitality curricula in the U.S., the UK, and Australia had significant different industry foci and topical area emphases. CA results further revealed that there are different core course structures of hospitality programs in the three countries.

In terms of industry focus, U.S. hospitality programs focused more on general hospitality, foodservice and lodging industries. In a previous study, Harris (1995) proposed that hospitality curriculum should be derived from management activities associated with both lodging and food and beverage provisions. Dopson and Nelson (2003) also found that hospitality program alumni ranked food and beverage management as the most helpful course. UK hospitality programs were more business oriented without any specific hospitality industry focus. This can be explained by the fact that UK hospitality programs began as business programs (Alexander, 2007) and have not evolved a lot in the past thirty years (Jones, 2004). Even in current subject benchmark statement, hospitality programs still place a lot of emphasis on general business management (QAA, 2016). Australian hospitality programs emphasized tourism and other hospitality industries, including events, clubs, and the gaming industry. A possible reason for this finding is that in Australia, tourism has been a significant part of hospitality program since the 1980s, with degrees offered mostly with a tourism focus (Breakey & Craig-Smith, 2007; King et al., 2003). Nowadays, a lot of hospitality programs still have a dual focus on hospitality and tourism (Breakey & Craig-Smith, 2007). However, tourism programs are offered separately from hospitality programs in both the U.S. and the UK, thus hospitality programs in these two countries don't show a strong industry focus on tourism.

In terms of topical area, operations was the most common topical area in hospitality undergraduate courses in all three countries. This confirms the well-known idea of the vocational foundation of hospitality programs that intends to prepare future industry managers with technical skills and practical experience of operating systems (Alexander, 2007; Lashley, 2004). The U.S. hospitality curriculum had the most diverse topical area among the three countries, including operations, finance & revenue management, facility, information technology, legal issues, and professional development. This finding of diverse topical areas is consistent with Chathoth and Sharma (2007) conclusion that hospitality programs offer diverse knowledge and skills in order to meet industry needs. ACPHA (2017) also identified 17 content areas as required courses in the U.S. hospitality program standard. The UK hospitality curriculum structure focused more on industry overview, HR & OB, and research project/capstone. This finding confirms Jenkins (2001) statement that the focus on the "people" resource in the UK hospitality curriculum led to the popularity of human resources departments in hospitality graduates' career preferences. Alexander et al. (2009) also expressed concerns that UK hospitality curriculum was not diverse enough to train students with both practical and theoretical skills for the industry. Industry overview and human resources are also two major study areas mentioned in UK subject benchmark statement (QAA, 2016). In Australia, the curriculum structure emphasized management fundamental and sales & marketing. This finding is partially consistent with King et al.'s (2003) study results that the Australian hospitality curriculum was business oriented with focus on marketing and principles. Australian hospitality program also identified service & experience design which involves marketing, and interdisciplinary inquiry

Table 4
Suggested core course for international hospitality curriculum standard.

Core course suggestions	Industry focus	Topical area
Principles of Management / Management Concepts	Business	Management fundamental
Intro to Hospitality Industry	Hospitality	Industry overview
Global Cultures & Tourism	Tourism	Industry overview
Hotel Operations	Lodging	Operations
Food Safety & Sanitation	Foodservice	Operations
Restaurant Operations	Foodservice	Operations
Travel & Tourism Management	Tourism	Operations
Financial & Managerial Accounting	Business / Hospitality	Finance & revenue management
Hospitality and Tourism Marketing	Hospitality	Sales & marketing
Human Resource Management in the Hospitality Industry	Hospitality	HR & OB
Hospitality Law	Hospitality	Legal issues
Information Technology in the Hospitality & Tourism	Hospitality	Information technology
Revenue Management for Hotels	Lodging	Finance & revenue management
Hospitality Facilities Management	Hospitality	Facility
Internship / Placement / Industry Experience	Hospitality	Professional development
Hospitality Capstone / Research Project	Hospitality	Research project/Capstone

which involves basic knowledge and theory from other disciplines, as two of the five learning goals of hospitality graduates (Gross et al., 2017; Whitelaw et al., 2015).

Overall, this study makes valuable theoretical and practical contributions. From a theoretical perspective, the study developed a two-dimension framework to understand the typology of hospitality courses. Although previous studies used different course classifications, all of them were one-dimensional classifications. The present study represents a first attempt to analyze hospitality courses by both industry focus and topical area. This framework lays a solid foundation for further hospitality curriculum and education studies. Additionally, this study is also among the first of its kind to employ correspondence analysis in exploring course structures in different countries. The CA method provides visualization of curriculum patterns that is easy to navigate and comprehend. Therefore, the present study introduces a new method to analyze and display content analysis data.

The study also provides practical implications for hospitality educators. First and foremost, the new two-dimension typology proposed in this study can be used as a baseline to develop an international hospitality curriculum standard or international hospitality program benchmark. That is to say, the international curriculum standard should cover the five industry foci, business, hospitality, lodging, foodservice, and tourism, and 11 topical areas, management fundamentals; industry overview; finance and revenue management; sales and marketing; HR & OB; legal issues; operations; information technology; facility; professional development; and research project/capstone, identified in this study. Based on study findings, Table 4 listed 16 core course suggestions for international hospitality curriculum standard that cover all five industry foci and 11 topical areas. This suggestion also tried to move the industry focus of hospitality curriculum from general business to specific hospitality industry considering that the hospitality industry is very different from other business dealing with tangible product. Therefore, it will be beneficial for students to learn more about unique features of service industry in hospitality-focused courses. With this type of international hospitality program standard, hospitality students will be able to learn the same knowledge and skills from programs located in any country. Therefore, it will be easier for them to relocate to any other country and still pursue the hospitality industry. It will also be helpful for global hospitality companies to access a much larger hospitality workforce and thus largely save employee training cost.

Second, the results of this study provide hospitality educators with insight into the curriculum design in other countries. Thus, the comparison of curriculum structures in different countries could be used as a guideline in improving their curriculum design and increasing student competencies for the international hospitality industry. For example, just as Rappole (2000) suggested, U.S. hospitality curriculum could incorporate more business oriented courses such as management theories and principles. Both the UK and Australian hospitality programs could focus more on food & beverage courses given that this is a fast-growing global industry. Both the UK and Australian hospitality curricula are still very traditional and need to be diversified to include all new topics and trends in the hospitality industry such as information technology, legal issues, facility management, and so on. Learning from its two counterparts, Australia may consider separating tourism degrees from hospitality degrees in order to make each of them more specialized and focused.

Third, for potential hospitality students, the overall knowledge of hospitality programs in different countries will help them to decide which country they would go to pursue a hospitality undergraduate degree. They will also better understand the skills, knowledge, and experiences they will learn from different hospitality programs. Lastly, since globalization is a trend in the hospitality industry, industry leaders will also benefit from a general understanding of the focus of hospitality programs in different countries. It will help them to both recruit and train future employees.

6. Limitations and future research

The current study has several limitations. First, its generalizability is limited because it only selected 36 hospitality programs in the three countries as the study sample. Although the study used Severt et al. (2009) hospitality undergraduate program ranking, this

ranking was generated based on research activities instead of teaching activities. Furthermore, the comparison of hospitality curricula in the three countries selected in this study was not an equal comparison. In the UK and Australia, hospitality programs usually offer 4-year degrees with the third year reserved for professional practical working experience (King et al., 2003). In other words, hospitality curriculum in the UK and Australia consist of three years of courses for students to take in the university setting. U.S. hospitality undergraduate programs require four years of courses to be finished at the university. Future research may include more hospitality programs and more countries to improve generalizability.

Moreover, data collection and the data coding process were somewhat biased. First, the study collected all curriculum-related information through the official websites of these programs and assumed that the websites were updated to reflect the exact curriculum content. Therefore, any discrepancy between website information and real program curriculum would affect the findings of this study. However, this study focus was not on the whole curriculum, but on the core courses of the hospitality programs. The changes on core courses are usually not as frequent and thus the study findings could still be considered moderately reflective of the real status quo. Second, the data coding was based on course titles and course descriptions on the website. Since the description of some courses were not available online, researchers had to use common sense to categorize those courses. Plus, any deviation between the course description and course content taught by individual faculty would also affect the findings of this study. Future research efforts should strive to address these limitations. For instance, future studies may interview faculty in the institutions with hospitality programs to find out the real course content, including industry focus and topical area.

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