

Skills Mapping to Scale Up Tourism and Hospitality Management Education at the Tertiary Level

Dr. Md. Enayet Hossain¹, Sazu Sardar²

^{1,2}Department of Tourism and Hospitality Management, University of Rajshahi, Bangladesh

ABSTRACT: The Outcome-Based Education (OBE) approach has become increasingly important, particularly in fields like Tourism and Hospitality Management (THM) education, where practical skills and industry relevance are essential. Although OBE has made significant progress in Bangladesh's higher education system, its effectiveness in developing program-level skills remains uncertain. The main objective of this study is to evaluate the current status of OBE, assess industry-required skills, and map these skills for use in teaching and curriculum design. Various generic and specific skills are identified from existing literature and compared with industry needs. These skills are then mapped to the subjects offered by Tourism and Hospitality Management departments in public universities in Bangladesh. The study also assesses the departments' capacity and proposes a flexible guideline to reduce the existing skills gap. The expected outcome is to help other departments develop outcome-based curricula and teaching practices that enhance skill development.

INTRODUCTION

The term *skill* refers to an individual's efficiency or ability to perform a specific task or job effectively. Skills can be broadly categorized into technical and behavioral types (Noe et al., 2020). In identifying the most important skills for tourism graduates, the literature generally classifies them into soft skills, such as interpersonal communication and computing, and hard skills, such as technical abilities in food production and service. Both categories play significant roles in the labor market (Heath, 2003; Klaus, Rohman, & Hamaker, 2007; Samosir, 2025). Researchers suggest that integrating both hard and soft skills into the curriculum is essential for developing effective pedagogy at the tertiary level (Folomieiwa et al., 2024; Dikti, 2020; Thomas, 2016; Bialik et al., 2015; Ahlstrom et al., 2014). There is a strong relationship between quality education and skills development in higher education. Quality assurance in this sector has received global attention due to significant changes in the education landscape and the evolving needs of stakeholders.

Therefore, it is important to examine how effectively academic programs prepare graduates for industry requirements. Higher education should align closely with stakeholder needs, particularly with those of industries that employ graduates. Students should understand industry and societal needs to become lifelong learners. University programs should focus on preparing graduates with relevant knowledge, a positive attitude, appropriate skills, and competencies to meet both local and global demands. In Bangladesh, the Higher Education Quality Enhancement Project (HEQEP), initiated by the government, has played a key role in promoting outcome-based education (OBE) practices at the program level (UGC, 2020).

Although OBE has made significant progress in the academic sector, questions remain about its effectiveness in developing employer-required skills. Hence, the main goal of this study is to identify the essential industry-based skills highlighted in the literature and map them to the courses offered by the departments, along with explaining the mechanisms for achieving them.

Statement of the Problem and Research Questions

Bangladesh aims to eradicate poverty by 2031, achieve upper-middle-income status by 2030, and become a developed nation by 2041. Enhancing skills-based quality education at the tertiary level can play a pivotal role in achieving these ambitious goals. However, the unemployment rate among recent graduates is alarming due to a lack of alignment between the education provided by universities and the skills required in the job market.

According to the **Bangladesh Institute of Development Studies (BIDS, 2019)**, about 34% of graduates who obtained first-class honors in their Bachelor's and Master's degrees are unemployed. Even those who find employment often earn only Tk. 10,000 to 15,000 per month during their first or second year of work (Alamgir, 2019). Another **BIDS (2019)** study on labor market and skills gaps predicted that Bangladesh's labor force would grow from 63.5 million in 2016 to 88.7 million by 2025. It also projected that, from 2021 onward, labor demand would exceed the available workforce. By 2025, the top nine sectors in Bangladesh are expected to require an additional 8 million skilled workers (BIDS, 2019). Despite this growing demand, Bangladesh faces a serious skills

Skills Mapping to Scale Up Tourism and Hospitality Management Education at the Tertiary Level

shortage. Currently, around 25–36% of employers struggle to find skilled workers, leaving many entry-level positions vacant (Anwar & Kaikaus, 2021). Most employers expect job-ready graduates, but universities continue to emphasize theoretical knowledge rather than practical, skills-based education. Hasan et al. (2024) and Rahman, Mokhtar, and Hamzah (2011) also noted that modern employers expect graduates to possess essential job skills without the need for extensive additional training.

As a result, many Universities graduates face unemployment because they lack the specific competencies required by employers across various sectors. Every year, nearly five million individuals graduate from public and private universities and join the existing labor force. These graduates aspire to support their families, contribute to society, and build better lives. However, due to limited job opportunities and skill mismatches, many struggle to achieve their goals. Political instability further worsens the situation for new graduates.

Therefore, it is crucial to address several key questions:

1. Is Outcome-Based Education (OBE) properly designed by the program-offering institutions?
2. Are the skills required by industry and society clearly identified?
3. Are these skills mapped to individual courses taught in the classroom?
4. Are there mechanisms that connect classroom learning with industry practice?
5. How do departments ensure the effective implementation of OBE?
6. What strategies can be adopted to improve skills-based OBE and its application in both classroom teaching and industry settings?

Objectives of the Study

Bangladesh is currently the 41st largest economy in the world and the second largest in South Asia, after India. The country aims to achieve the United Nations (UN) Sustainable Development Goals (SDGs) by 2030 and attain the status of a developed nation by 2041. Among the various sectors contributing to these goals, the tourism and hospitality industry holds great potential, as it is highly labor-intensive and generates substantial foreign exchange earnings (Hossain & Wadood, 2020). This industry contributes approximately 4.4% to the national GDP and creates around 2.23 million jobs annually in Bangladesh. The Bangladesh Tourism Board (BTB) has finalized a comprehensive Tourism Master Plan, aiming to attract 5.57 million foreign tourists per year by 2041 and create about 21.94 million jobs in the sector.

Considering these developments, it is essential to place strong emphasis on the tourism industry and prioritize the development of graduates equipped with relevant skills and competencies. Such graduates can make significant contributions to the socio-economic development of both the nation and individuals.

Therefore, the following specific objectives have been formulated in alignment with the general objective of this study:

1. To explore the multiple skills generally required in the tourism and hospitality industry.
2. To map these skills to the individual courses offered by the respective departments or program-offering entities.
3. To identify effective methods for developing professional skills through theoretical and practical learning at the program level.

LITERATURE REVIEW:

After an extensive literature review from 2006 to the present, it was found that different studies have identified multiple skills required for graduates to meet industry needs, though they describe them in various ways. **Wang et al. (2010)** discussed the reform of a hotel management program in China using Outcome-Based Education (OBE) principles to enhance students' professional skills and employability. In Malaysia, higher education institutions have explored the application of OBE in hospitality and tourism curricula, emphasizing work-based learning to strengthen practical competencies (**Adeyinka et al., 2020**). Although the merits of OBE are still debated, there is growing agreement that it provides a valuable framework for developing graduates with skills that align with industry requirements in rapidly changing sectors like tourism and hospitality (**Lashley & Barsoville, 2018**). According to **Becton and Graetz (2001)**, educational institutions should focus on developing four key areas of skills: business acumen, hospitality expertise, language and cultural competency, and sales and customer service proficiency. **Ruki (2023)** examined the qualities and skills required for front desk personnel in applying upselling techniques for hotel products. **Kong and Baum (2006)** conducted a survey of employees working in four- and five-star hotels in major tourist cities in China and identified skill profiles, work backgrounds, educational qualifications, attitudes, and career plans of front office staff. **Elshaer and Marzouk (2019)** developed an analytical framework for vocational skills and training systems by using both quantitative and qualitative research methods.

Mohanty et al. (2019) studied the gap between skill sets taught in tourism education curricula and the actual requirements of the tourism industry in Odisha, India. Through content analysis and structured surveys, they found significant differences across 20 attributes or skills between academic providers and industry professionals. Both groups agreed on the importance of oral communication, teamwork, and organizational capacity. However, academicians emphasized strategic skills such as decision-making, management, leadership, and problem-solving, while industry professionals prioritized operational skills like critical

Skills Mapping to Scale Up Tourism and Hospitality Management Education at the Tertiary Level

thinking, workplace ethics, practical abilities, attention to detail, adaptability, and customer service. **Dalimunthe and Syahputra (2022)** explored ways to enhance students' abilities across various skills within hospitality education. Their study emphasized teamwork, multitasking, flexibility, attention to detail, industry awareness, and effective communication—skills necessary to prepare adaptable and knowledgeable professionals. **Pranić, Pivčević, and Praničević (2021)** identified 30 essential skills for tourism and hospitality graduates, grouped into three categories: conceptual/creative, leadership, and interpersonal. Finally, **Booyens (2020)** found that young workers in the tourism and hospitality sector often face precarious employment conditions. They tend to possess only low-level skills, rarely continue education or training after employment, and have limited opportunities for career advancement

METHODOLOGY

A robust research methodology is essential for establishing the theoretical foundation of a study, achieving research objectives, validating research logic, and ensuring a systematic research process.

Exploratory Research Method: This study initially employed an exploratory research approach to identify various skills discussed in existing literature. This approach, often referred to as the grounded theory method, is suitable for examining problems that are not yet welldefined or are still under investigation. In the context of Bangladesh, the specific skills required at the tertiary level for tourism and hospitality education have not yet been clearly identified, and most academic programs have not finalized the skills required by the industry. Therefore, the exploratory method was considered the most appropriate for this study.

Techniques of Information Collection: The information collection process was structured into two distinct phases. The first phase was exploratory, focusing on identifying and extracting essential skills from previous literature. The second phase was confirmatory, emphasizing the skills taught by program-offering entities at the tertiary level. These two phases together helped in developing recommendations for effective skills mapping aligning industry requirements with the courses offered by universities.

Skills Identification Methods: Initially, necessary skills for tourism and hospitality education were extracted from academic literature published between 2005 and 2023. These skills were grouped into two main categories: soft skills and hard skills. The next step involved analyzing Outcome-Based Curriculum Handbooks from seven public universities in Bangladesh to identify areas relevant to the research objectives.

The selected universities were:

1. University of Dhaka
2. University of Rajshahi
3. Islamic University, Kushtia
4. Rangamati University of Science and Technology
5. Noakhali Science and Technology University
6. Bangabandhu Sheikh Mujibur Rahman Science and Technology University
7. Pabna University of Science and Technology

Target Population: The target population included students and faculty members from Tourism and Hospitality Management (THM) departments in both public and private universities in Bangladesh, with special emphasis on the University of Rajshahi. Academics with expertise in skills standards recommended by the University Grants Commission (UGC) of Bangladesh were included, as well as final-year and postgraduate students from the same departments.

Discussion Protocol: In-depth discussions were conducted to identify the skills currently taught in universities. The discussions focused on curriculum content and how it aligned with the skills identified from literature. A total of 14 teachers (two from each university) and 70 students (ten from each university) participated. There was no fixed discussion protocol; rather, the sessions followed the curriculum contents and compared them with the skills list developed from literature. Participants were mainly asked about both soft and hard skills, and probing questions were used when necessary to identify additional skills considered important for tourism and hospitality graduates. In the confirmatory phase, the focus shifted to mapping the findings from literature and discussion with the Outcome-Based Education (OBE) curriculum. This phase aimed to analyze the effectiveness of OBE implementation in tourism and hospitality programs in Bangladesh.

Information Organization Process: Data collected from open discussions were analyzed using a content analysis approach (Quaddus & Xu, 2005; Ray et al., 2023). This method was chosen to identify and extract the most relevant skills. Two types of analysis were applied: Inductive analysis, to identify new skills emerging from the data. Deductive analysis, to validate these findings against existing literature. The extracted skills were then used to design and refine a skills mapping framework for practical application. No specialized software was used for data analysis. The research is neither purely qualitative nor quantitative; rather, it focuses on developing a list of required skills from literature and mapping them with individual courses offered by THM departments in Bangladesh. Special focus was given to the Tourism and Hospitality Management Department, University of Rajshahi.

Skills Mapping to Scale Up Tourism and Hospitality Management Education at the Tertiary Level

Skills Mapping Technique with Program Educational Objectives (PEOs): The curriculum handbooks of the seven THM departments revealed that each defines skills differently and sets Program Educational Objectives (PEOs) individually. The THM Department of the University of Rajshahi has clearly defined its PEOs, which represent commitments to students regarding their expected achievements within four to five years after graduation. These objectives focus on career development, technical competency, and behavioral (soft/generic) skills. Therefore, the University of Rajshahi's THM Department was selected as a model for mapping skills with individual courses.

Program Learning Outcomes (PLOs): Program Learning Outcomes (PLOs) represent the broad competencies students are expected to achieve upon completing their BBA or MBA in THM. To ensure academic quality and relevance, PEOs and PLOs must align with the graduate attributes set by the University Grants Commission (UGC) of Bangladesh and supported by the Bangladesh Accreditation Council (BAC). The effective implementation of course objectives, outcomes, and learning elements should be guided by the Outcome-Based Education (OBE) framework. This framework ensures that students' knowledge, skills, and competencies are properly documented and assessed upon completion of the program. The current study has adopted and reinforced this standard to ensure alignment between academic learning and industry needs.

FINDINGS AND DISCUSSION

OBE and Skills Development: The program offering entities where OBE is practicing provides a structured framework for producing graduates equipped with both academic knowledge and practical competencies. Bangladesh's higher education system, recognizing the need to adapt to a rapidly changing world, has also embraced OBE. This shift aligns with the National Education Policy of 2010, emphasizing the importance of producing graduates capable of meeting the demands of the evolving job market (Bangladesh Ministry of Education, 2010). The University Grants Committee (UGC) of Bangladesh has actively promoted the adoption of outcome-based approaches among its funded institutions, aiming to ensure effective resource utilization and student achievement of intended learning outcomes (UGC Bulletin, 2020). As a result, OBE has become integral part at the tertiary education in Bangladesh, reflecting the both soft and hard skills in the graduates.

Soft Skills Extracted from the Existing Literature: Soft skills encompass abilities that facilitate employees' integration into a workplace, encompassing traits, adaptability, drive, objectives, and inclinations (Heckman and Kautz, 2012). These skills represent a fusion of personal characteristics, competencies, mindsets, and actions within an individual (Pandey and Pandey, 2015), empowering them to adeptly manage the requirements of both work settings and everyday activities (Hurrell, 2016). Within the tourism and hospitality industry, a variety of soft skills are deemed essential, such as communication skills (comprising oral, written, negotiation, and persuasive presentation skills, as well as proficiency in English), leadership skills (encompassing teamwork, problem-solving, analytical thinking, critical thinking, relationship-building, decision-making, and networking abilities), behavioral skills (including workplace ethics, dependability, adherence to professional standards, social interaction, active citizenship, demonstrating respect, integrity, kindness, and responsibility), and Information Technology (IT) skills (encompassing computer literacy, recording and editing proficiency, familiarity with central reservation systems, reservation systems, cost control/inventory software, and online marketing tools). As per the literature any graduates from the Tourism and Hospitality Management Department needs to possess the multiple soft skills which are depicted in appendix 1.

Hard Skills Extracted from the Existing Literature: On the other hand, "Hard" skills denote competencies that enable employees to compete in a task, encompassing scientific knowledge, professional aptitudes, and technical proficiencies (Avi and Sardar, 2021; Laker and Powell, 2011). Spencer (1993) characterizes hard skills as technical and academic abilities rooted in knowledge background. They are technical, specific, definable, and quantifiable (Sitompul et al., 2017). In the Tourism and Hospitality industry, various types of skills are considered essential, such as Front Office operations related skills (including Guest Handling, Proficiency in Property Management Systems (PMS), Billing, Knowledge of Room Types, Proper Use of Front Office Equipment, etc.), Housekeeping skills (including Carpet Cleaning, Maintaining Neat and Clean Spaces for Guests, Sweeping Designated Areas, Mopping, Window Treatment Cleaning, Vacuuming, etc.), Food and Beverage Production related skills (including Cooking Techniques, Multipurpose Serving, Mastery of Lab Instruments, Knowledge of Food Ingredients, etc.), Food and Beverage Service skills (including Buffet Management, Familiarity with Menu Items, Table Setting, Techniques for Handling Food and Beverages, Wine and Beverage Presentation, etc.), and Sales and Marketing Related Skills (including Customer Relations, Packaging, Point of Purchase and Point of Parity Strategies, Upselling Techniques, etc.). Multiple hard skills are extracted from the existing literature which are also divided into five heads and depicted in the appendixes 2.

Skills Mapping (SM) with Program Education Objective (PEO's): Bachelor of Business Administration (BBA) in Tourism and Hospitality Management Education at the program level is offered to attain the following Program Educational Objectives (PEOs)

PEO 1: Cultivate well-qualified and knowledgeable based citizens through comprehensive teaching and practical experiences in Tourism and Hospitality Management (THM) education, ensuring that the graduate possess professional competence.

Skills Mapping to Scale Up Tourism and Hospitality Management Education at the Tertiary Level

PEO 2: Offer accessible and practical-based educational opportunities to the students of THM, enabling them to adapt with growing business landscape.

PEO 3: Critically evaluates the role of Tourism and service marketing, and market intelligence during the new destination management processes.

PEO 4: Perform complex assessments, analyses, and discussions on entrepreneurship, employability, and creativity within the context of developing new tourism and hospitality service businesses globally, with having strong ethical standards.

Program Learning Outcomes (PLOs: Following are the Bachelor of Business Administration (BBA) in Tourism and Hospitality Management learning objectives which students will learn after the completion of the program:

PLO1: Develop qualified citizens through teaching and learning in Business and THM who will be equipped for professional success.

PLO 2: Become well-acquainted with the social, economic, institutional, and environmental contexts in which the tourism and hospitality industry operates.

PLO 3: Identify the structure, nature, and operating characteristics of the different sectors of the tourism and hospitality industry, including food service, lodging, food production, and tourism. **PLO 4:** Identify the role of the manager in the tourism and hospitality industries and apply necessary techniques to their principal responsibilities, practicing at the highest level of ethics.

PLO 5: Provide measurable opportunities for developing essential skills important for personal and societal benefits, such as food production, accommodation operations, housekeeping, digital library skills, and language skills.

PLO 6: Assess whether careers in tourism and hospitality align with the student's abilities, tastes, and interests for future development.

Table 10: Mapping with PLOs and PEOs

STATEMENTS	PEO1	PEO2	PEO3	PEO4
PLO 1		√		√
PLO 2	√			√
PLO 3		√	√	
PLO 4	√	√	√	
PLO 5	√			√
PLO 6		√	√	

(The program offering entity has mapped Program Learning Objective with Program Education Objectives. Here √ denotes individual PLO can satisfy individual PEO)

Table 11: Program Learning Outcome (PLO) Mapping with Individual Course

BNQ COD	Name of the courses	PLO1	PLO	PLO	PLO	PLO	PLO
1015THM111	Fundamentals of Tourism and Hospitality	√	2	3 √	4	5	√6
0413THM112	Introduction to Business (C)	√			√	√	
0222THM113	Bangladesh Studies		√				
0311THM114	Micro Economics (C)	√		√			
0411THM115	Principles and Practices of	√		√	√	√	
1022THM121	Accounting (C)First Aid, Safety & Security		√		√		
1022THM121-	Occupational Health & Safety	√					
041THMP1 122	(Business Communication (C)Practical)			√	√	√	
0413THM123	Principles of Management (C)		√		√		√
0721THM124	Theory & Practice of Culinary			√			√
0721THM125-	ArtF&B Production and Services	√		√	√		
THMP2- V1	(Viva VoceLab)			√		√	√
1015THM211	Tour Operation Management	√	√		√	√	
1015THM211-	Tour Operation Management		√	√	√	√	
0414THMP3 212	(Principles of Marketing (C)Pra tical		√	√		√	√
1013THM213	Food & Beverage Management	√		√	√		√
0611THM214	Computer Application in				√	√	
1019THM215	Business (C)Professional Etiquette &		√		√	√	
1015THM221	GroomingTourism Culture, Heritage &	√			√	√	

Society

BNQ COD	Name of the courses	PLO1	PLO	PLO	PLO	PLO	PLO
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Skills Mapping to Scale Up Tourism and Hospitality Management Education at the Tertiary Level

0388THM222	Technology in Tourism and		√2	3	4	√5	6
1013THM223	Housekeeping Managementspitality		√	√			√
1013THM223-	Housekeeping Management (Lab)	√		√		√	
1015THMP4 224	Human Resource Management	√	√	√	√		
0411THM225	(Taxation (C)HRM)	√		√			
THM-V2	Viva Voce					√	
1013THM311	Front Office		√			√	√
1013THM311-	Front Office		√		√	√	
1015THMP5 312	Operation/Management (Lab)Consumer Behavior	√	√		√		√
1015THM313	Ticketing & Reservation		√	√	√		
0417THM314	Service Management		√		√		√
0412THM315	Principles of Finance (C)		√	√		√	
1015THM321	Tourism Product Development	√	√	√	√		
0414THM322	Digital Marketing & Promotion	√		√	√		
1015THM323	Community Based Tourism		√	√			√
0542THM324	(Business Statistics (C)CBT)			√	√	√	
0412THM325	Principles & Practices of Banking		√	√	√		
THM-V3	(Viva VoceC)	√	√	√	√	√	√
0413 THM411	Revenue Management			√	√		√
1015 THM412	Ecotourism Management		√		√	√	
1013 THM413	Event Management	√	√		√	√	
0417THM413-	Event Management (Practical)		√		√	√	
1015THMP6 414	SMART Destination Management	√		√	√		
0413THM415	Organizational Behavior	√	√			√	√
0231THM416	Foreign Language (other than	√	√	√		√	
1015THM417-	English) French/Arabic/ChineseStudy Tour & Report Preparation	√	√	√			√
1015 THMP7 421	Agro-Tourism			√	√	√	√
0413 THM422	Tourism and Hospitality		√	√			√
1015 THM423	EntrepreneurshipAviation and Flight Management		√		√	√	√
1015 THM424	Blue Tourism	√	√	√	√		
041 THM425	Business Research Methods (C)			√	√	√	
9904 THM-IN	Internship	√	√	√	√	√	√
THM-V4	Viva Voce	√	√	√	√	√	√

(Individual courses those are offering by the department has mapped with Program Learning Objective; Here √ denotes individual course can satisfy individual specific PLO)

Table 12: Skills Mapping with Individual Courses

Soft Skills					Hard Skills					
Courses	CS	LS	BS	ITS	ES	FOS	HRS	FPS	FSS	MS
1015 THM-111	√					√	√			
0413 THM-112	√				√					
0222 THM-113	√	√								
0311 THM-114			√							
0411 THM-115		√		√						
1022 THM-121	√		√			√	√			
1022 THM-121-P1	√		√			√	√			
041 THM-122	√		√	√		√				
0413 THM-123		√	√		√					
0721 THM-124		√	√		√			√	√	
Soft Skills					Hard Skills					
Courses	CS	LS	BS	ITS	ES	FOS	HRS	FPS	FSS	MS
0721 THM-125-P2			√					√	√	
THM-V1	√		√		√					
1015 THM-211	√	√	√		√					
1015 THM-211-P3	√	√	√		√					

Skills Mapping to Scale Up Tourism and Hospitality Management Education at the Tertiary Level

0414 THM-212	√	√	√							
1013 THM-213	√							√	√	
0611 THM-214	√	√		√		√				
1019THM-215	√		√			√				
1015 THM-221	√			√						√
0388 THM-222	√	√	√	√		√	√			√
1013 THM-223		√	√		√		√			√
1013 THM-223-P4	√						√			√
1015 THM-224	√	√	√							
0411 THM-225	√			√				√		
THM-V2	√		√							√
1013 THM-311	√		√	√		√		√		
1013 THM-311-P5	√		√	√		√				
1015 THM-312	√	√	√					√		√
1015 THM-313				√						
THM-314									√	
0412 THM-315	√		√	√						
1015 THM-321					√					√
0414 THM-322		√		√			√			√
1015 THM-323	√	√	√		√					√
0542 THM-324	√	√	√		√					√
0412 THM-325	√	√	√		√					√
THM-V3	√		√							
0413 THM-411		√		√	√					
1015 THM-412		√			√					√
1013 THM-413	√	√	√		√	√	√			√
0417 THM-413-P6	√	√	√		√					
1015 THM-414	√		√	√	√					
0413 THM-415		√	√		√					
0231 THM-416	√									
THM-417-P7	√	√	√							√
1015 THM-421	√			√	√					
0413 THM-422	√	√	√		√					
1015 THM-423	√	√		√			√			√
1015 THM-424	√		√						√	√
041 THM-425	√	√	√		√					√
THM-V4	√		√							√
9904 THM-IN	√	√	√	√	√	√	√	√	√	

(Soft skills and hard skills are mapped with individual course which are offering by the department; **Soft Skills:** CS: Communication Skills, LS: Leadership Skills, BS: Behavioral Skills, ITS: Information Communication Skills, ES: Entrepreneurship Skills) **Hard Skills:** FOS: Front Skills Operation Skills, HRS: Housekeeping Related Skills, FPS: Food Production Skills, FSS: Food services Skills, MS: Marketing Skills)

DISCUSSION

Tourism is one of the fastest growing sectors of the economy across the world. As per the report of the WTTC (World Travel & Tourism Council) 2023, Travel & Tourism is the third-largest industry showing the significant recovery is around 95% from the impact of Covid-2019. The report anticipates revenue of \$9.5 trillion in 2023, just 5% below pre-pandemic levels in 2019. Notably, 34 countries in the meantime have exceeded their 2019 levels. Report also mentioned that, job recovery to reach 95% of the 2019 levels. Currently, Bangladesh has approximately 0.5-0.6 million jobs in the tourism sector, and it is projected that more than 5 million jobs will be generated by 2030, presenting significant potential and opportunities for growth in the country (Sardar et al., 2024). As this industry is highly labor-intensive, inhouse capacity building for the graduates is highly required.

The tourism and hospitality industry encompasses various fields, offering opportunities for capable graduates who can be engaged in the hotels, motel, restaurant, resorts, meeting halls, conference room, different accommodations, catering and other with customer care. It also extends to management roles across industries such as airlines, cruises, hospitals, transportation services, spas, beauty parlors, etc. The leisure industry, a subset of tourism and hospitality, expands its scope to include sports and entertainment, creating additional employment in sport center, gyms, spa, and playground etc. Different entertainment centers, simplex, theater, cinemas, and theme parks. Opportunities also arise in service-oriented organization such as retailing, human resources training and

Skills Mapping to Scale Up Tourism and Hospitality Management Education at the Tertiary Level

management, and multiple events planning and implementation. Many individuals venture into entrepreneurship within the service industry, establishing businesses like tour agencies, clubs, travel services, events management, restaurants, and hotels. Although operation area of this industry is vast, teaching is giving by tourism and hospitality education offering entity at the tertiary level. Therefore, it has become an inevitable to find out the skills those are in the meant time disclosed in the literature and latter on match with curriculum offering by the THM department.

Limitations and Further Study

Despite of having a large number of positive findings, this research has a few limitations. In the current study, researcher considers variables extracted from the literatures which might not enough for generalization of the research outcome. In Bangladesh, there are seven public universities and 32 private universities offer tourism and hospitality management education but the program offering entity does not follow the OBE guided by UGC perfectly. Skills those are extracted from the literature may not all are usable for Bangladesh culture. In addition, industries are yet formulating required skills that they think should have in the graduates. Therefore, extracted skills might not be enough for ensuring the development of skills for tourism and hospitality industries. Our future plan is to conduct qualitative research using depth interview technique as well as quantitative data analysis will be made as per need of the study.

CONCLUSION

Assessing academic programs and industry needs shows the importance of developing both generic and professional skills, which are emphasized in Outcome-Based Education (OBE) formulated by BAC. Without a placement policy, mismatches in managerial and technical skills, along with insufficient skill development, contribute to unemployment and depression among educated graduates in Bangladesh. To address this, it is essential to improve the quality of tertiary education and prepare graduates for a dynamic job market and national development. All program offering entities should adopt OBE principles and integrate them into their programs and curricula. Both soft and hard skills should be clearly defined and developed through classroom teaching and learning. Although OBE has made significant progress at the tertiary level, it is important to assess its current status and effectiveness in real-life situations. Therefore, implementing OBE in academic programs is crucial to ensure that students learn effectively and can apply their knowledge in practice

The present study has systematically identified a range of essential skills relevant to tourism and hospitality education, with a particular focus on examining how Outcome-Based Education (OBE) is developed in alignment with the requirements of both classroom practices and industry needs for the THM education. Providing a structured benchmark for skill identification, this research contributes to curriculum design in a way that minimizes the gap between academic learning and professional demands, thereby reducing skills mismatch. The overarching objective is to ensure that graduates are adequately equipped to meet the challenges of the dynamic and multifaceted hospitality and tourism sector, where the acquisition of up-to-date and industry-relevant skills is indispensable for professional success.

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APPENDIXES

Appendix 1. Soft Skills and their Sources.

Table1: Communication Skills

Items	Dimensions/Variables	Sources
CS1	English Speaking	Wahyanti Rahardjo & Dewi (2018), Ruki (2023)
CS2	Written skill	Mohanty, (2019), Wahyanti Rahardjo & Dewi (2018), Tanković, Kapeš & Kraljić, (2021)
CS3	Reading skill	Wahyanti Rahardjo& Dewi (2018)
CS4	Listening skill	Wahyanti Rahardjo & Dewi (2018),
CS5	Negotiation skill	(Mohanty 2019), Pivčević & Praničević (2021)
CS6	Appropriate feedback providing	Pranić & Praničević (2021)
CS7	Presenting ideas in a convincing	Pranić Pivčević & Praničević (2021)
CS8	Ability to inform information	Shariff et al., (2014)
CS9	Message delegate	Shariff et al., (2014)
CS10	Bangla Speaking	Open Discussion
CS11	Digital Communication	Shariff et al., (2014)
CS12	Non-verbal	Shariff et al., (2014)
CS13	Questioning	Singh & Sharma, (2020)
CS14	Question Response	Singh & Sharma, (2020)
CS15	Multicultural aspect understanding	Singh & Sharma, (2020)

Table 2: Leadership Skills (LS)

Items	Dimensions/Variables	Sources
LS1	Teamwork	Babalola, (2019), Yong, et al, (2020), (Mohanty and
LS2	Problem-solving	Mohanty, 2019)Kasa et al (2020)
LS3	Analytical	Babalola, (2019)
LS4	Critical Thinking	Mohanty and Mohanty, (2019), Rao, N. (2020).
LS5	Relationship Building	Mohanty and Mohanty, (2019)
LS6	Decision Making Ability	Mohanty and Mohanty, (2019)
LS7	Networking Ability	Pranić Pivčević & Praničević (2021)
LS8	Crisis Management	Pranić Pivčević, & Praničević (2021)
LS9	Respect on individual differences	Pranić Pivčević, & Praničević (2021)
LS10	Steering conflicts away	Pranić Pivčević & Praničević (2021)
LS11	Expire disagreement tactfully	Pranić Pivčević, & Praničević (2021)
LS12	Multitasking	Dalimunthe & Syahputra (2022)
LS13	Flexibility	Dalimunthe & Syahputra (2022)
LS14	Innovative	Rachmawati et al., (2019)
LS15	Initiative	Shariff et al., (2014)
LS16	Motivation	Shariff et al., (2014)
LS17	Mentoring	Shariff et al., (2014)
LS18	Building team bonds	Tanković, Kapeš, & Kraljić, (2021)
LS19	Time management	Dalimunthe and Syahputra (2022)
LS20	Risk taking	Singh and Sharma, (2020); Muttakin et al., 2024

Skills Mapping to Scale Up Tourism and Hospitality Management Education at the Tertiary Level

Table 3: Behavioral Skills (BI)

Items	Dimensions/Variables	Sources
BS1	Ethics at workplace	Elshaer and Marzouk (2019).
BS2	Acting courteously and respectfully	Pranić Pivčević & Pranićević
BS3	Demonstrating awareness of others' feelings	(2021)Pranić Pivčević & Pranićević
BS4	Demonstrating empathy	(2021)Pranić & Pranićević (2021)
BS5	Manifesting intercultural sensitivity	Pranić & Pranićević (2021)
BS6	Managing guest requests	Pranić & Pranićević (2021)
BS7	Exhibiting emotional intelligence	Pranić & Pranićević (2021)
BS8	Integrity skill	Shariff et al., (2014)
BS9	Coordinating	Shariff et al., (2014)
BS10	Social Interaction	Rao (2020). Neazy, N. S. (2019)
BS11	Effective Citizenship	Rao (2020). Neazy, N. S. (2019)
BS12	Demonstrating emotional self-control	Pranić & Pranićević (2021)
BS13	Building relationship	Mohanty and Mohanty, (2019),
BS14	Building trust	Tanković, Kapeš & Kraljić,
BS15	Kindness	Tanković, Kapeš & Kraljić,
BS16	Flexibility	(2021)Tanković, Kapeš & Kraljić,
BS17	Self-motivation	(2021)Singh and Sharma (2021), Dalimunthe and (2020)
BS18	Adaptability	Singh and Sharma (2020)
BS19	Smiling face even under pressure	Burns (1997).

Table 4: Information Technology (IT) Skills (ITS)

Items	Dimensions/Variables	Sources
ITS1	Computer application skill	Shariff et al., (2014)
ITS2	Analyze numerical data with computers	Choudhury (2019).
ITS3	Audio recording and editing (Audio Podcast)	Shariff et al., (2014) Zainal & Yong (2020)
ITS4	Play Business Intelligence Software	Bilgihan et al., (2014). Zainal & Yong (2020)
ITS5	Central Reservation System	Bilgihan et al., (2014). Zainal & Yong (2020)
ITS6	Cost Control/Inventory Software	Bilgihan et al., (2014). Zainal & Yong (2020)
ITS7	Create and maintain a computer network	Bilgihan et al., (2014). Zainal & Yong (2020)
ITS8	Create and update a website	Bilgihan et al., (2014). Zainal & Yong (2020)
ITS9	Delete virus and spyware	Bilgihan et al., (2014). Zainal & Yong (2020)
ITS10	Global Reservation systems	Bilgihan et al., (2014). Zainal & Yong (2020)
ITS11	Hospitality E-purchasing system	Bilgihan et al., (2014).
ITS12	Nutrition analysis software	Bilgihan et al., (2014).
ITS13	Online marketing tools	Bilgihan et al., (2014).
ITS14	Organizing virtual meetings	Bilgihan et al., (2014).
ITS15	Project Management Software (i.e. Microsoft Project)	Bilgihan et al., (2014).
ITS16	Property Management Systems (i.e. Fidelio, FOSSE)	Bilgihan et al., (2014).
ITS17	E-Commerce handling	Bilgihan et al., (2014).
ITS18	Social Networking Tools (i.e. blogs, wikis, Facebook, Flickr)	Bilgihan et al., (2014).
ITS19	System Selection and Implementation	Bilgihan et al., (2014).
ITS20	Use graphic drawing programs (i.e. Photoshop)	Bilgihan et al., (2014).
ITS21	Use presentation programs (PowerPoint)	Bilgihan et al., (2014).
ITS22	Use spreadsheet programs	Bilgihan et al., (2014).
ITS23	Use word processing programs	Bilgihan et al., (2014).
ITS24	Online Reservation system	Bilgihan et al., (2014).

Appendix 2. Hard Skills

Table 5: Front Office Related Skills (FRS)

Items	Dimensions/Variables	Sources
FRS1	Property management systems	Ruki (2023)
FRS2	Guest Handling	Jawabreh et al. (2022), Elshaer & MarzoukM. (2019).

Skills Mapping to Scale Up Tourism and Hospitality Management Education at the Tertiary Level

FRS3	Understanding Body language of	Jawabreh et al. (2022)
FRS4	guestsBilling Capacity	Jawabreh et al. (2022)
FRS5	Stamina to Stand for Long Periods	Brown (2006).
FRS6	Transparent Knowledge on company	Baum (2002).
FRS7	Use front office equipment properly	Ruki (2023)
FRS8	Room type knowledge	Jawabreh et al. (2022)
FRS9	Technical Computer Literacy	Hai-yan & Baum, (2006)
FRS10	Typing capacity	Mohanty and Mohanty (2019),
FRS11	Computer use and equipment	Ruki (2023), Hai-yan & Baum (2006)
FRS12	Reservation system	Johanson et al. (2010) , Elshaer, Marzouk, (2019)
FRS13	Management of credit card	Johanson et al. (2010)
FRS14	Document writing and printing	Ruki (2023), Elshaer & Marzouk (2019).
FRS15	Grooming and Mannerism	Ruki (2023), Elshaer & Marzouk (2019).
FRS16	Time conscious	Dalimunthe and Syahputra (2022)

Table 6: Housekeeping Related Skills (HRS)

Items	Dimensions/Variables	Sources
HRS1	Carpet cleaning	Jubaedah et al., (2019)
HRS2	Managing guest with neat and clean	Jawabreh et al. (2022), Elshaer, Marzouk, (2019).
HRS3	Storing procedures	Johanson et al. (2010)
HRS4	Store predicts procurement	Johanson et al. (2010)
HRS5	Sweeping necessary area	Jubaedah et al., (2019)
HRS6	Deep cleaning guest rooms and other	Jubaedah et al., (2019)
HRS7	Teddy Mopping	Jubaedah et al., (2019)
HRS8	Window treatment cleaning	Jubaedah et al., (2019)
HRS9	Vacuuming	Jubaedah et al., (2019)
HRS10	Dusting	Jubaedah et al., (2019)
HRS11	Bathroom and bedroom cleaning	Jubaedah et al., (2019)
HRS12	Infection control	Jubaedah et al., (2019)
HRS13	Polishing	Jubaedah et al., (2019)
HRS14	Knowledge about chemical	Jubaedah et al., (2019)
HRS15	Pest control skills	Jubaedah et al., (2019)

Table 7: Food and Beverage Production Related Skills (FPRS)

Items	Dimensions/Variables	Sources
FPRS1	Cooking technique	Rachmawati et al., (2019)
FPRS2	Multipurpose serving	Open discussion
FPRS3	Skills on using lab instruments.	Open discussion
FPRS4	Knowledge about food	Elshaer & Marzouk, (2019)
FPRS5	Proper cutting, malting,	Okeiyi, Finley, & Postel, R. T. (1994 online 2013)
FPRS6	Slicing system,	Open discussion
FPRS7	Dicing methods	Open discussion
FPRS8	Understanding of ingredient	Open discussion
FPRS9	Measurements	Open discussion
FPRS10	Kitchen and catering function	Okeiyi, Finley, & Postel, R. T. (1994 online 2013)
FPRS11	Beverage operation	Okeiyi, Finley, & Postel, R. T. (1994 online 2013)
FPRS12	Food processing knowledges	Okeiyi, Finley, & Postel, R. T. (1994 online 2013)
FPRS13	Food preserving capacity	Okeiyi, Finley, & Postel, R. T. (1994 online 2013)
FPRS14	Waste management	Open discussion
FPRS15	Environmental hazard control	Open discussion

Table 8: Food and Beverage Service-Related Skills (FBRs)

Items	Dimensions/Variables	Sources
FBRs1	Buffet management	Johanson et al. (2010)
FBRs2	Menu items	Johanson et al. (2010)

Skills Mapping to Scale Up Tourism and Hospitality Management Education at the Tertiary Level

FBR3	Table setting	Open discussion
FBR4	F &B handling techniques	Cha and Postel (2013)
FBR5	Guest interaction skills	Jawabreh et al. (2022)
FBR6	Wine and beverage display	Johanson et al. (2010)
FBR7	Order-taking process	Open discussion
FBR8	Adaptability capacity	Mohanty and Mohanty, (2019)
FBR9	Handling complaints	Pranić & Praničević (2021)
FBR10	Promptly service	Pranić, & Praničević (2021)
FBR11	Table etiquette	Johanson et al. (2010)
FBR12	Handling materials	Rachmawati et al., (2019)
FBR13	Planning menus and material requirements	Johanson et al. (2010)
FBR14	Hygiene and sanitation	Rachmawati et al., (2019), Johanson et al. (2010)
FBR15	Decorated food display	Johanson et al. (2010)

Table 9: Marketing Related Skills (MRS)

Items	Dimensions/Variables	Sources
MRS1	Customer relation	Elshaer & Marzouk (2019)
MRS2	Hotel products and services (Room)	Ruki (2023), Johanson et al. (2010)
MRS3	KnowledPackaging e	Elshaer & Marzouk (2019)
MRS4	Point of purchases and point of parity	Elshaer & Marzouk (2019).
MRS5	Upselling	Ruki (2023), Johanson et al. (2010)
MRS6	Professionalism in all aspects	Hai-Yan & Baum, (2006)
MRS7	Team management	Mohanty and Mohanty (2019), Cha
MRS8	Training facility	and Postel (2013)Mohanty and Mohanty, (2019)
MRS9	Client support	Jawabreh et al (2022),
MRS10	Plan operations experience	Elshaer & Marzouk, (2019).
MRS11	Leadership qualities	Hai-yan & Baum, (2006)

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