
Workforce Assessment Study: Gap Analysis for Workforce Skill Assessment and Workforce Development

Lenna Shulga and Kwanglim Seo
School of Travel Industry Management, University of Hawaii, Manoa, USA

Abstract

With the emerging global population and demographic trends, the hospitality and tourism industry faces significant challenges in addressing a rapidly changing workforce landscape and in developing a sustainable workforce for the future and the long term. Given the need to better understand the future of the workforce, this study aims to develop an innovative approach and methodology based on the multi-stakeholder skill-gap analysis to identify existing and future needs in hospitality employee competencies, management and customer perceptions, and overall industry employment perceptions. To fulfill the objectives of this study, we address the workforce assessment by studying the associations between expectations, perceptions, and disconfirmation beliefs with employee competencies among hospitality customers, employers, current employees, hospitality students, and residents. The findings of the proposed workforce assessment model will help identify not only the differences in perceptions of various stakeholders but also relevant strategies to close such gaps.

Key Words: labor pool, skill gaps, workforce development, expectancy-disconfirmation paradigm

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Introduction

With declining birth rates, the global population is expected to fall for the first time since the Black Death bubonic plague pandemic in the mid-1300s. The decline in replacement populations in major countries, the decline and delay in family formation and birth rates along with an increasing aging global population are projecting significant changes for the global labor force. The workforce is also going through a major transformation where older generations are gradually replaced by newer generations, Millennials and Generation Z. According to the recent study, generation Z and younger generations are expected to make up half of the workforce within the next 10 years (Brough et al., 2023). With the emerging global population and demographic trends, the hospitality and tourism industry faces major challenges in dealing with a landscape of change in its current workforce and major challenges in its future and long-term sustainable workforce. Furthermore, the rapid shift to digitization (robotization and artificial intelligence) may require hospitality organizations to alter operations, processes and organizational structures, even business models, which may lead to changes in workforce needs, skills and knowledge requirements (Bakir et al., 2025; Sigala et al., 2024). In particular, dynamic changes and shifts in the workforce are expected to disrupt all business and government sectors the hospitality and tourism industry.

Targeted efforts and sophisticated intelligence are especially critical in the case of the investigation of the impact of workforce changes on hospitality and tourism for several reasons. First, understanding the workforce landscape is a complicated issue and many efforts must be directed towards providing a fundamental solution that attempts to develop a thorough understanding of its long-term impact on the local and business communities in the industry. It is also imperative to involve employers by providing legitimate statistics backed by solid data analytics. Second, the recent COVID-19 pandemic has dramatically changed the perceptions about the hospitality and tourism work environment, especially for young professionals. Many of them perceive the industry as unstable or vulnerable to external shocks. Therefore, the perceptions, behaviors, and experiences of the new workforce need to be better understood to prevent any significant damage to the industry.

This raises the question, what should the industry leaders and policy makers do to help come up with creative and innovative ways to evaluate the impact of the emerging workforce trends for the improvement of the hospitality and tourism industry. More and better actionable efforts and intelligence are needed to help address the evolution, sustainment, and relevance of the industry from significant workforce risks.

Given the need to better understand the future of the workforce in the hospitality and tourism industry, the purpose of this study is to develop an innovative approach and methodology based on the multi-stakeholder skill-gap analysis to identify existing and future needs in hospitality employee competencies, management and customer perceptions and overall industry employment perceptions. To fulfill this purpose, the paper aims to propose: 1) how to examine the gaps in service delivery perceptions among customers, hospitality managers, and front-line employees; 2) how to explore the industry perceptions of employment and career opportunities, 3) how to understand behaviors, perceptions, and experiences of the existing and future workforce, and 4) identify effective channels and activities to effectively promote career opportunities.

The proposed methodology is grounded in the expectancy-disconfirmation paradigm, that was first applied in studies of consumer behavior to better understand customer satisfaction (e.g., Oliver, 1980). Yet, this theoretical approach is rarely applied to conceptualize the gap analysis of employee expectations and perceptions. As a result, the findings of this study will assist hospitality and tourism practitioners, scholars and higher education institutions to create the evidence-based information that the industry and government policymakers need to formulate strategies to protect the industry from significant workforce risks. With this study we respond to the calls for closing the gap between “competencies required and competencies acquired” (Leoni, 2014, p.453). Broadly, this study brings forward a novel methodology for holistically assessing the future workforce needs of a tourism destination.

To fulfill the objectives of this study, we address the workforce assessment by studying the associations (similarities and discrepancies) between expectations, perceptions, and disconfirmation beliefs with employee competencies among hospitality customers, employers, current employees, hospitality students, and residents (stakeholders hereafter). In the context of hospitality human resource management (HRM), an employee competence is understood as a combination of skills, knowledge, and abilities (Sisson & Adams, 2013). First, we

propose two skill-gap analysis frameworks, that serve: (1) to identify the skill-gaps of existing employees (Figure 1); (2) to identify the hospitality and tourism industry employment perception-gaps (Figure 2). Next, in order to understand the future or developing preferences of the existing hospitality customers toward future of hospitality services and their willingness-to-pay for such services, a set interview-based studies with hospitality executives and customers are conducted. The results of the interviews are compared with the identified discrepancies in the skill-gap analysis to propose future workforce development needs. This proposed workforce assessment model that includes skill-gap analysis answers three key questions: (1) current state: what are hospitality employee competencies that are required by customers and employers now? (2) future desired state: what are the hospitality employee skills, knowledge (competencies) that will be required by customers and employers in the future? (3) closing the gap: what are the future research and practical agenda to close the gap between current and future workforce needs? Grounded in the expectancy-disconfirmation paradigm (Oliver, 1980), the proposed workforce assessment model is a mixed method multi-criteria evaluation model that reveals and examines the gaps between perceptions of different stakeholders. As the result of the workforce assessment model, not only the differences in perceptions of various stakeholders are identified, but also the strategies to close such gaps emerge.

Literature Review and Theoretical Framework

Expectancy-Disconfirmation Paradigm

Previously expectancy-disconfirmation paradigm (EDP, Oliver, 1980) was traditionally used to examine customer satisfaction, however, recently it was also applied in studies on employer workforce satisfaction (e.g., Sinha et al., 2020; Sharma, 2011). The core of the EDP postulates that customers have an anticipated level of expectation about a service, and after experiencing the service they develop perceptions about the actual performance. When the level of actual performance fails to meet the anticipated level of service expectation, the disconfirmation gap is created (Oliver et al., 1994). EDP measures customer satisfaction from the position of relativity by comparing to a service standard (Oliver, 1980). Previously, when EDP was applied to workforce development contexts, the employers, students, and their parents were found to be external customers (e.g., Albtoosh et al., 2024; Sinha et al., 2020). Thus, following the main explanatory description of the EDP and multi-stakeholder HRM approach, we conceptualize two sets of workforce assessment disconfirmation gaps that examine the differences in: (1) anticipated employee competencies and perceptions of actual competencies performed as assessed by hotel guests, managers, and employees at a hotel level; and (2) anticipated employee skills and perceptions of existing skills as assessed by hotel employees, managers, students, and residents at the hospitality industry level. Following the emerging HRM research based on the EDP (Sinha et al., 2020) we posit that from the workforce development standpoint, multi-stakeholders, including customers, current employees and managers, future employees or students of the hospitality and tourism programs, and residents of the travel destinations can be viewed as customers, who expect hospitality professionals to possess certain levels of competencies. To extend the EDP, if competencies of hospitality professionals (current and future) exceed original stakeholder expectations, disconfirmation is positive, which leads to positive evaluation of existing competencies. On the other hand, if perceptions of competencies are below expectations, the disconfirmation is negative, which creates skill-gaps that must be fulfilled for the workforce to meet hospitality stakeholder expectations.

Skill-Gap Analysis Methodological Framework

The first step of the proposed skill-gap analysis is centered on identifying existing hospitality service delivery processes perceptions discrepancies among customers, management and employees. The results of this analysis are in aligning customer expectations with service standards and employee performance, and may lead to the need for service delivery system redesign. Generally, measuring the gap between customer expectations and perceptions of service delivery is a routine approach utilized to understanding customer hospitality service quality and determine levels of customer expectations (Piero et al., 2005), which is extended into analysis of managers and employees' perceptions. This first step serves as a starting point to the proposed skill-gap analysis, where the following gaps are analyzed (Figure 1):

Gap 1 “Customer Satisfaction” is a gap between customer expectations and perceptions that helps to identify what customers want, need and expect from the service in comparison to what they received.

Gap 2 “Understanding of the Customer” identifies the discrepancy between customer expectations and management perceptions of these expectations. The goal of this gap analysis is to understand whether management understands what customers expect as a service quality within the organization.

Gap 3 “Service Design” results from the management inability to formulate a service design that meets perceptions of customer expectations and to translate these into efficient service standards. In this step the management understanding of customer expectations is compared to management expectations of employee performance, that are usually based on existing service standards and intended service delivery.

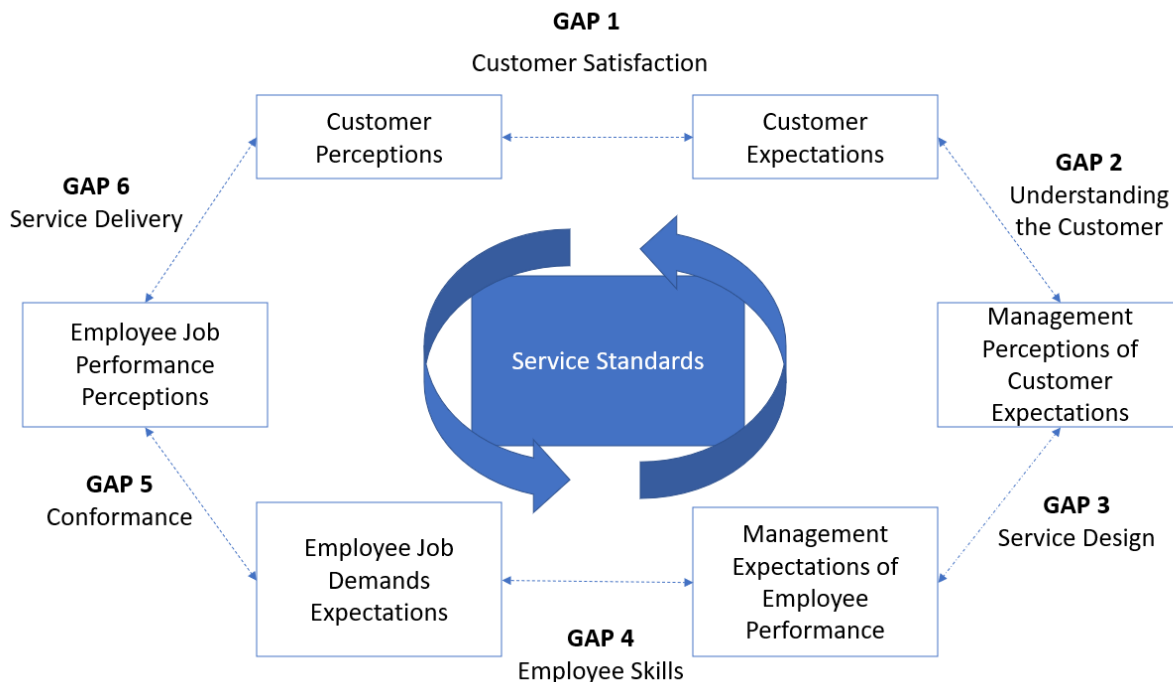
Gap 4 “Employee Skills” is a result of comparison between what management expects the employee performance should be and employees’ perceptions of what is required of them or the job demands and standards that were given to them. Gap 4 may result from broken communication, lack of controls or poor employee training.

Gap 5 “Conformance” is the discrepancy between what employees understand their managers expect of their performance and what employees perceive as their job performance should be.

Gap 6 “Service Delivery” is the result of a difference between employees and customers in their perceptions of employee and service delivery system’s performance.

The proposed first skill-gap analysis framework will result in the importance-performance analysis (IPA), which will allow to consider hospitality customer preferences and satisfaction simultaneously to produce managerial strategies for reducing the customer service delivery gaps, thus improving hospitality service standards and service quality.

Figure 1: Employee Skills Gap Analysis



The second step of the proposed skill-gap analysis is related to industry employment and career opportunities perception-gaps that allow to understand the differences in stakeholder expectations of current and future competencies needed for attaining and sustaining careers in hospitality. The results of this analysis are in aligning employee, management, student and residents' expectations with existing and future job conditions, job demands, competency needs to fulfil performance standards, and employment opportunities in hospitality industry. To extend the skill-gap analysis the residents' perceptions of hospitality industry and perceived employment opportunities are added in order to examine the existing and future labor pools to predict barriers and threats of future hospitality industry workforce shortages. This second step serves to broaden the proposed skill-gap analysis, where the following gaps are analyzed (Figure 2):

Gap 1 "Employee Satisfaction" is a gap between hospitality employee expectations and perceptions of the industry and the job that helps to identify what employees want, need and expect from the hospitality company in comparison to what they received.

Gap 2 "Understanding of the Employee" identifies the discrepancy between employee expectations and management perceptions of these expectations. The goal of this gap analysis is to understand whether management understands what employees expect as a job and career conditions and opportunities within the organization and the industry.

Gap 3 "Generational Gap" results from the management inability to formulate a job design that meets perceptions of existing and new employees, specifically the employees of the new generations (Generation Z and Generation Alpha), and to translate these into efficient competency and job design requirements. In this step the management understanding of employee expectations is compared to new generation's employee expectations of job design and job-career opportunities within the company and the industry. The perceptions of students enrolled in the hospitality and tourism management higher-education programs are examined as representatives of future new generations of hospitality employees (students hereafter).

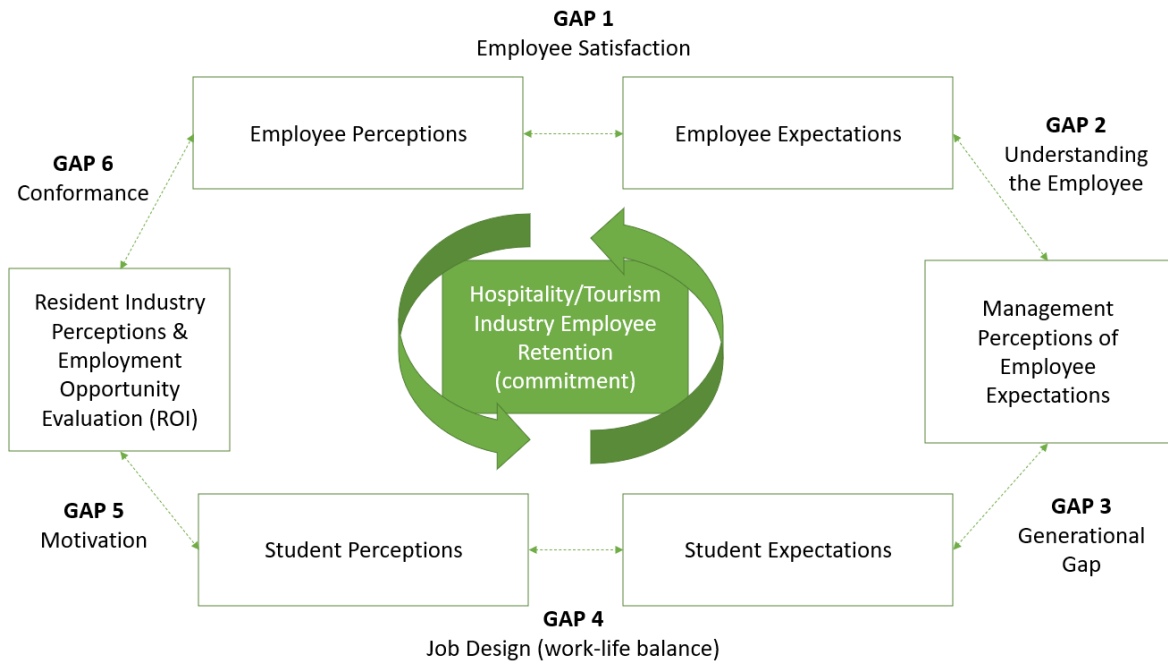
Gap 4 "Job Design" is a result of comparison between what students expects the hospitality organizational job design should be and students' perceptions of what is required of them to be successful in hospitality industry and organization. Gap 4 may result from the shift in generational expectation of employment such as work-life balance.

Gap 5 "Motivation" is the discrepancy between what students and residents perceive the employment opportunities are in hospitality industry and the differences in motivations to enter and remain committed to hospitality and organization are. This gap explores the generational, behavioral and attitudinal differences among different target workforce audiences in the external labor pools.

Gap 6 "Conformance" is the result of a difference between existing employees and residents in their perceptions of employment in hospitality industry and hospitality organizations within the travel destination.

The proposed second perception-gap analysis framework will result in the importance-retention analysis (IRA), which will allow to consider hospitality employee preferences and satisfaction simultaneously to produce managerial strategies for reducing hospitality employee turnover, increasing organizational and industry commitment and improving attractiveness of hospitality jobs to future and existing workforce.

Figure 2. Tourism Industry Employment Perceptions Gap Analysis



Methodology

The proposed workforce assessment framework requires a mixed-method six-study design, with the study samples drawing from the following travel destination populations in the lodging industry: (1) customers, (2) employees, (3) managers, (4) students, (5) residents, (6) target customers invited for interviews. The random stratified or cluster sampling technique is preferred. A minimum size of 200 respondents per study must be achieved for the self-administered online surveys in Study 1 through Study 5. In Study 6 the interviews with customers for each target segment must continue until saturation is reached (Babbie & Edgerton, 2023). For example, if a luxury hotel segment is targeted then at least 20 customers shall be interviewed and interviews must continue until saturation is reached. Both quantitative and qualitative data shall be collected, with open-ended questions included in the self-administered surveys. For quantitative data, the analysis of variance (ANOVA) is proposed as main statistical analysis to identify the skill- and perception- gaps among the groups. To analyze qualitative data the thematic analysis shall be utilized to identify the existing and future workforce development needs and trends (Babbie & Edgerton, 2023).

Discussion and Implications

Building on the EDP (Oliver, 1980; Sinha et al., 2020), our paper brings forward a novel approach to holistically assess existing and forecast future workforce needs and propose strategies for workforce development in a travel destination. Results indicate that the identified skill- and perception- gaps shall be further analyzed and, using IPA and IRA, strategies to close these workforce skill-gaps must be developed. The levels of disconfirmation for each stakeholder group must be assessed and the relationship among stakeholders' perceptions and expectations must be established. The proposed workforce assessment frameworks advance EDP by introducing and examining an extended list of skill-gaps beyond customer-employee-manager organizational-level customer-oriented service quality analysis, into HRM and industry-level external labor pool sphere. Results of this research are relevant to multiple stakeholders in a travel destination, such as policymakers, destination management organizations (DMOs), vocational and higher education institutions, hospitality organizations, and residents. Vocational and higher education institutions in collaboration with the policymakers are responsible for closing the skill-gaps in their graduates and ensuring fulfilment of existing and future employment needs for tourism and hospitality organizations (Solnet et al., 2014; Manfreda et al., 2024). Not only students, but also

DMOs, tourists, employers and residents of the travel destination could be perceived as the customers of the hospitality vocational and higher education institutions as they are the end-users of service, such as trained workforce. Overall, given the advancements in technology, demographics and geo-political shifts, the hospitality workforce assessment and workforce development issues are critical supply-side concerns that will determine the future competitiveness of travel destinations (Solnet et al., 2014). Hence, this study's proposed workforce assessment model, including the skill-gaps frameworks, IPA and IRA, may advance our knowledge of future workforce development and engage the interest of a wide-range hospitality stakeholders in a travel destination.

References

- Albtoosh, Q. A. A., & Ngah, A. H. (2024). Testing the expectation confirmation theory on the training satisfaction context: the mediation role of mind wandering. *International Journal of Public Administration*, 47(1), 26-40.
- Babbie, E., & Edgerton, J. D. (2023). *Fundamentals of social research*. Cengage Canada.
- Bakir, S., Ayoun, B., Wei, C., & Bilgihan, A. (2025). Understanding employee retention in the age of AI and robotics: a study of technology competencies and turnover intentions in the hotel sector. *Journal of Hospitality and Tourism Technology*.
- Brough, P., Troth, A., Radford, K., Meissner, E., Gai, S., Langerud, D., Rose, M. (2023). *Multi-generational workplaces research: Final report*. Griffith University.
- Leoni, R. (2014). Graduate employability and the development of competencies. The incomplete reform of the "Bologna Process". *International Journal of Manpower*, 35(4), 448-469.
- Manfreda, A., Bisson, A., Lee, C., Scerri, M., Marcial, G. A., & Presbury, R. (2024). The Pedagogy of Hospitableness: A transformative approach for hospitality workforce development. *Journal of Hospitality & Tourism Research*, 10963480241302812.
- Oliver, R. L. (1980). A cognitive model of the antecedents and consequences of satisfaction decisions. *Journal of marketing research*, 17(4), 460-469
- Oliver, R. L., Balakrishnan, P. S., & Barry, B. (1994). Outcome satisfaction in negotiation: A test of expectancy disconfirmation. *Organizational Behavior and Human Decision Processes*, 60(2), 252-275.
- Peiró, J. M., Martínez-Tur, V., & Ramos, J. (2005). Employees' overestimation of functional and relational service quality: A gap analysis. *Service Industries Journal*, 25(6), 773-788.
- Sharma, P. (2011). Gap analysis of skills provided in hotel management education with respect to skills required in the hospitality industry: The Indian scenario. *International Journal of Hospitality & Tourism Systems*, 4(1).
- Sigala, M., Ooi, K. B., Tan, G. W. H., Aw, E. C. X., Cham, T. H., Dwivedi, Y. K., ... & Wirtz, J. (2024). ChatGPT and service: opportunities, challenges, and research directions. *Journal of Service Theory and Practice*, 34(5), 726-737.
- Sinha, S., Ghosh, P., & Mishra, A. (2020). Employability of fresh engineering graduates in India: A fresh look applying Expectation Confirmation Theory. *Education+ Training*, 62(1), 47-63.
- Sisson, L. G., & Adams, A. R. (2013). Essential hospitality management competencies: The importance of soft skills. *Journal of Hospitality & Tourism Education*, 25(3), 131-145.
- Solnet, D., Nickson, D., Robinson, R. N., Kralj, A., & Baum, T. (2014). Discourse about workforce development in tourism—An analysis of public policy, planning, and implementation in Australia and Scotland: Hot air or making a difference?. *Tourism Analysis*, 19(5), 609-623.
- Zaharim, A., Ahmad, I., Yusoff, Y. M., Omar, M. Z., & Basri, H. (2012). Evaluating the soft skills performed by applicants of Malaysian engineers. *Procedia-social and behavioral sciences*, 60, 522-528.