

# The Relationship between Infrastructural Facilities and Development of Skilled Labor Force for Star-Rated Hotels in Uganda

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## Abstract:

*This study examined the relationship between infrastructural facilities and the development of a skilled labor force for star-rated hotels in Uganda, recognizing infrastructure as a critical foundation for practical hospitality education and industry readiness. The problem was the persistent mismatch between training environments and the operational requirements of star-rated hotels, reflected in inadequate practical facilities, equipment, and simulation laboratories. Specifically, the study sought to assess the availability and adequacy of infrastructural facilities in hospitality training institutions for star-rated hotels in Uganda. The study was anchored in Systems Theory, which conceptualized training institutions as interconnected systems in which infrastructural and other inputs are transformed through teaching, practical training, internships, and industrial exposure into competent graduates, with industry feedback informing improvement. The study used a target population of 5,341 where a sample of 372 respondents was drawn comprising management of hospitality training institutions, faculty members, final-year students, management of star-rated hotels, Uganda Tourism Board personnel, and hotel guests. Data was collected using a structured questionnaire administered through a blended approach of online and physical distribution. Validity was ensured through experts' review while pilot testing was carried out to test reliability where an overall Cronbach's alpha coefficient of 0.748 was achieved. Mean, percentage, and standard deviation were used to summarize responses, while Pearson correlation and linear regression models were used to determine the influence of infrastructural facilities on development of skilled labor force. The findings indicated moderate adequacy of infrastructural facilities (Mean = 3.28, SD = 1.12), with notable deficiencies in hotel-like practical facilities, student-equipment ratios, and simulation laboratories. Infrastructural facilities demonstrated a positive and statistically significant relationship with skilled development of skilled labor force ( $R = .386$ ,  $p < .05$ ), significantly predicting outcomes ( $\beta = .743$ ,  $t = 7.648$ ,  $p < .05$ ) and explaining 14.9% of variance ( $R^2 = .149$ ). The study concludes that sustained investment in modern, adequate, and accessible hospitality infrastructure is essential for developing industry-ready skilled labor.*

**Keywords:** *Infrastructural Facilities; Skilled Labor Force; Star-Rated Hotels; Hospitality Training; Systems Theory; Practical Training; Graduate Competence; Uganda*

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## I. Introduction

The hospitality industry is a significant contributor to employment, tourism development, and economic growth, creating increasing demand for a competent and industry-ready labor force. Star-rated hotels, in particular, require employees with practical, technical, digital, interpersonal, and managerial competencies capable of meeting evolving service standards and customer expectations. The capacity of hospitality training institutions to produce such graduates is therefore dependent on the adequacy and relevance of their training resources and learning environments. Infrastructural facilities, including modern training kitchens, simulation laboratories, ICT resources, tools, and equipment, provide the practical environment through which learners translate theoretical knowledge into workplace competencies. However, evidence from Uganda and other African countries indicates persistent gaps in training infrastructure, contributing to mismatches between graduate competencies and industry expectations (Akunda et al., 2024; Kahiga et al., 2024; Commey, 2021).

These facilities provide learners with opportunities to translate theoretical knowledge into practical competencies. Istakri et al. (2024) emphasized that infrastructure management requires institutions to align facility needs with curriculum requirements and to ensure effective management and maintenance of tools and equipment. In hospitality education, this is particularly important because practical training requires facilities that closely

resemble the environments in which graduates are expected to work. Without adequate infrastructure, the cultivation of a competent workforce for the hospitality industry becomes considerably constrained.

The importance of infrastructure to skills development is supported by studies conducted in different contexts. Abd El Nagy et al. (2025), in a study of tourism and hospitality students in Egyptian technical universities, found that well-structured programmes and hands-on training facilities were necessary for developing students' technical skills. Their findings demonstrate that practical training infrastructure provides an important foundation through which learners acquire competencies relevant to hotel operations. Similarly, Kahiga et al. (2024) established that deficits in physical infrastructure, technology infrastructure, laboratories, computer laboratories, libraries, and learning materials hindered students from acquiring competitive skills in TVET institutions. The researchers consequently recommended investment in institutional infrastructure and up-to-date learning resources.

Kahuria (2012) also examined the relationship between infrastructure and graduate skills development at Kabete Technical Training Institute in Kenya. The study found that outdated equipment and weak facilities significantly reduced job-relevant skills and increased the need for graduate retraining. Students exposed to modern and well-maintained equipment were better positioned to acquire practical competencies and transition effectively into the workplace.

Singh and Hassan (2024), in their study of the Indian hospitality and tourism industry, identified emerging requirements for digital, operational, and interpersonal skills resulting from technological disruptions and changing consumer behaviour. Their findings emphasize the need for hospitality education to adapt continuously to changes within the industry. Similarly, Francis et al. (2020) identified a gap between graduate competencies and industry expectations in Kenya. However, the researchers found that TVET graduates performed better than university graduates in areas such as management, supervision, and technical skills, partly reflecting the practical orientation of vocational education. Francis et al. (2020) consequently advocated a shift from supply-driven to demand-driven training in order to produce graduates with practical, operational, digital, and interpersonal competencies.

The challenge of inadequate practical preparation is further demonstrated by Commey (2021), who investigated the alignment of hospitality graduates' competencies with industry expectations in Ghana. The study found that graduates frequently lacked competencies in leadership, teamwork, communication, problem-solving, and operational skills. Some graduates possessed adequate academic knowledge but were unable to demonstrate corresponding practical competencies. The study attributed this partly to inadequate curriculum alignment and limited experiential learning opportunities. These findings suggest that effective hospitality training requires not only classroom instruction but also adequate facilities through which students can repeatedly practice the skills required in the workplace.

Evidence from Tanzania further reinforces the importance of infrastructure and collaboration between training institutions and industry. Anderson and Sanga (2018) found that tourism education faced challenges including inadequate training facilities, shortages of qualified educators, poor curriculum implementation, language barriers, and limited internship opportunities. The researchers recommended stronger education-industry partnerships, improved infrastructure, and enhanced work-integrated learning. Such interventions are particularly relevant to hospitality education because interaction with industry stakeholders enables training institutions to establish whether the skills being taught correspond with those required in the workplace.

At the broader African level, inadequate infrastructure remains a persistent challenge affecting technical and vocational education and training. Oketch (2017), in a comparative analysis of TVET systems in Kenya, Ghana, Botswana, and Sub-Saharan Africa, found that inadequate infrastructure, weak delivery capacity, and insufficient institutional resources constrained youth skills development and employment outcomes. The study provides a useful basis for understanding the Ugandan context because hospitality training institutions operate within the broader TVET system and are similarly dependent on adequate institutional resources. However, the study was broad and did not specifically examine hospitality training institutions or the perspectives of hotel industry stakeholders in Uganda.

Mncube (2023) similarly found that inadequate infrastructure negatively affected education quality and skills development in South Africa. The study emphasized that Governments' failure to provide critical infrastructure could hinder effective learning and skills transfer. In the hospitality context, where practical training is central to competence development, inadequate facilities can therefore have direct implications for graduate employability. This position is consistent with Akunda et al. (2024), who examined skills development among trainees in Ugandan TVET institutions and found that training facilities significantly influenced skills acquisition. Their study further identified limited infrastructure and financial constraints as important challenges affecting the effectiveness of training.

The Ugandan hospitality training context therefore requires particular attention because star-rated hotels operate within environments characterized by increasingly sophisticated technologies, service standards, and customer expectations. Graduates entering such establishments must be able to operate modern kitchen

equipment, housekeeping systems, ICT applications, food and beverage technologies, and other hotel-specific systems. Where training institutions lack facilities that mirror these workplace conditions, graduates may require additional workplace training before achieving the expected level of competence. Kahuria (2012) and Commey (2021) provide evidence of this broader concern, showing that inadequate practical exposure can contribute to deficiencies in job-relevant competencies.

The relevance of infrastructural facilities can also be explained through Systems Theory developed by Ludwig von Bertalanffy (1937). The theory conceptualizes organizations as interconnected systems comprising inputs, processes, outputs, and feedback mechanisms. In relation to hospitality education, training institutions can be viewed as systems in which financial resources, infrastructure, curriculum, human resources, and institutional-industry collaborations constitute important inputs. These inputs are transformed through classroom instruction, practical lessons, internships, and industrial training into outputs in the form of skilled and competent hospitality graduates. Kahiga et al. (2024) similarly emphasized institutional capacity, including infrastructure, technology, laboratories, libraries, learning materials, and staff development, as important to the competitiveness of TVET institutions.

The systems perspective further emphasizes the importance of feedback from the world of work. Hotel managers, supervisors, employers, and other industry stakeholders can provide feedback concerning graduates' skills and competencies, enabling training institutions to review curricula, improve training capacity, and modify infrastructure where necessary. Anderson and Sanga (2018) demonstrated the importance of structured collaboration between education institutions and industry in ensuring that graduates acquire the practical and soft skills required by the hospitality sector. Thus, infrastructure should not be considered independently from curriculum, teaching processes, industrial training, and industry feedback; rather, these elements interact to produce the desired skilled labor force.

### **1.1 Statement of the Problem**

The hospitality industry in Uganda continues to play an important role in employment creation, tourism development, and economic growth, increasing the demand for a skilled and industry-ready labor force in star-rated hotels. However, there remains a persistent mismatch between the competencies acquired by hospitality graduates and the practical skills required in star-rated hotel operations. This mismatch is partly associated with inadequate and inappropriate infrastructural facilities in hospitality training institutions, including modern training kitchens, housekeeping laboratories, simulation facilities, ICT resources, and adequate training equipment. Evidence from previous studies indicates that inadequate infrastructure limits students' opportunities to acquire practical, technical, operational, and digital competencies required by the hospitality industry (Akunda et al., 2024; Kahiga et al., 2024; Commey, 2021). Consequently, graduates may enter the labor market with theoretical knowledge but insufficient practical competence, increasing the need for additional workplace training and affecting their readiness to work effectively in star-rated hotels. Despite the recognized importance of infrastructure in skills development, limited empirical evidence exists on the extent to which infrastructural facilities in Ugandan hospitality training institutions influence the development of skilled labor specifically for star-rated hotels. The current study therefore sought to address this gap by examining the relationship between infrastructural facilities and the development of a skilled labor force for star-rated hotels in Uganda. Understanding this relationship is important because adequate, modern, accessible, and industry-relevant infrastructure provides learners with opportunities to repeatedly practice skills in environments that closely resemble the workplace. Establishing the influence of these facilities can guide hospitality training institutions, policymakers, and industry stakeholders in strengthening training capacity and improving the readiness and competence of graduates entering Uganda's star-rated hotel sector.

### **1.2 Objective**

To determine the relationship between infrastructural facilities and development of skilled labor force for star rated hotels in Uganda.

### **1.3 Hypothesis of the study**

H<sub>03</sub> : There is no statistically significant relationship between infrastructural facilities and development of skilled labor force for star rated hotels in Uganda.

### **1.4 Descriptive Conceptual Framework**

The conceptual framework for this study explains the relationship between infrastructural facilities and the development of a skilled labor force for star-rated hotels in Uganda. The framework is anchored in Systems Theory, which views training institutions as interconnected systems where inputs are transformed through educational and practical processes into outputs. In this study, infrastructural facilities represent the independent variable, while the development of a skilled labor force represents the dependent variable.

The independent variable, infrastructural facilities, encompasses the availability of internet and digital resources, practical facilities that reflect real-world star-rated hotel environments, favourable student-equipment ratios, accessible simulation laboratories such as training kitchens and investment in hospitality-specific infrastructure. These facilities provide learners with opportunities to acquire, practice, and develop practical competencies in environments that closely resemble those of the hotel industry. Adequate, modern, accessible, and industry-relevant facilities are therefore expected to enhance the effectiveness of practical training and improve learners' readiness for employment.

The dependent variable, development of a skilled labor force, refers to the acquisition of competencies required for effective performance in star-rated hotels. These competencies include technical and practical skills, operational competence, digital skills, communication, teamwork, problem-solving, and management and supervisory skills. The framework assumes that improved infrastructural facilities positively contribute to the development of these competencies.

The relationship is also supported by educational processes and industry feedback, including classroom instruction, practical training, internships, industrial exposure, curriculum relevance, and collaboration between training institutions and star-rated hotels. Thus, the framework proposes that adequate infrastructural facilities, when effectively integrated with relevant training processes and industry engagement, contribute to the development of a competent, employable, and industry-ready skilled labor force for star-rated hotels in Uganda.

## **1.5 Literature Review**

### **1.5.1 Infrastructural Facilities and Development of Skilled Labor Force**

Infrastructural facilities play a critical role in the development of a skilled labor force, particularly within hospitality training institutions, which are mandated to equip learners with hands-on competencies essential for the hotel industry. Without adequate infrastructure, the cultivation of a competent workforce for the hospitality sector remains virtually unattainable. Such facilities encompass training kitchens, simulation laboratories, tools and equipment, as well as information and communication technology (ICT) resources that mirror the operational environments learners will encounter in real-world hotel settings (Istakri et al., 2024).

Singh and Hassan (2024) used a descriptive and analytical approach to study skill gaps in the Indian hospitality and tourism industry. They highlighted emerging needs in digital, operational, and interpersonal skills due to technology disruptions and changing consumer behavior. Their findings mirror those of Francis et al. (2020) in Kenya, which established that graduates lacked industry-ready skills. Both studies confirm a persistent gap between academic training and industry expectations.

Infrastructure prepares the graduates for their operational roles in the hotels and it is hence important for hospitality training institutions to invest in provision of infrastructure as it is the foundation in skills development for the labor force that will meet the demands of the hotel industry as emphasized by (Abd El Nagy et al., 2025) in a study on assessing the impact of practical training infrastructure and educational programs on technical skill development among tourism and hospitality students in Egyptian technical Universities. Data for the study was collected by use of a questionnaire administered to 175 students. Study findings identified the need to have well-structured programs and hand on training facilities that aid in imparting skills to learners. The study did not involve stake holders at the place of work to see if the skills imparted are the ones needed at the place of work and also the study was limited to University students in Egypt which created a need for the current exclusive study.

Istakri et al. (2024), examined infrastructure management for improved learning outcomes, drawing insights from junior high schools in southwest Aceh, Indonesia. Employing interviews and observations, the researchers collected data from principals, deputy principals, and teachers, revealing that aligning facility needs with the curriculum, alongside efficient storage and handling practices, is essential for prolonging the lifespan of tools and equipment. Consequently, school management is encouraged to engage in continuous planning and well management of infrastructure so as to align it with educational requirements. The study also highlights that it is not sometimes lack of infrastructure that is a challenge but how it's managed.

Mncube (2023) conducted a qualitative study using a systematic literature review and multiple case approach to assess infrastructure provision and its impact on education quality in South Africa. The study revealed that Governments often neglected critical infrastructure which hindered effective learning and skill development. This finding aligns with Akunda et al. (2024) who reported infrastructure gaps in Ugandan TVET institutions affecting trainees' practical skills. It was observed that quality infrastructure is essential for development of skilled labor force as it enables effective skill transfer, particularly in hospitality education, where practical training is central. Regular investment in facilities and hands-on resources is required to enhance students' employability and ensure alignment with the demands of star-rated hotels

Booyens (2020) examined tourism education and youth employment in South Africa using a quantitative survey with non-random quota sampling across 136 firms. The study revealed that youth in tourism faced precarious employment, low skills levels, and limited career progression due to a mismatch between training and

industry needs. This observation aligns with findings by Francis et al. (2020) and Commey (2021), where graduates lacked essential competencies despite completing hospitality programs.

Enhancing skill development and creating pathways to employment are critical. Contradictions emerged regarding emphasis on formal education versus on-the-job training. The study recommended stronger skills development programs, improved practical training, and integration of work-based learning to prepare graduates for the demands of star-rated hotels.

Oketch (2017) conducted a cross-country comparative analysis of TVET systems in Kenya, Ghana, Botswana, and broader Sub-Saharan Africa, examining how system conditions affect youth skills development and employment outcomes. The study employed a comparative policy analysis design, drawing on existing literature, policy documents, and system-level data from the selected countries. The findings provided a useful framework for understanding how TVET system works, including infrastructure, delivery capacity, and institutional resources and how they affect youth skills development and employment outcomes. The study highlighted that inadequate infrastructure and weak delivery capacity are persistent challenges across Sub-Saharan African TVET systems, undermining the quality of training and graduate employability.

Commey (2021) in Ghana employed mixed methods to assess how well hospitality graduates' competencies matched industry expectations. Quantitative questionnaires and qualitative focus group interviews were conducted with graduates, employers, and faculty. Results revealed that critical competencies such as leadership, teamwork, communication, problem-solving, and operational skills were often lacking among graduates. These findings align with Olowoyo et al. (2020) in South Africa, who reported similar gaps in graduate preparedness for hospitality roles. It was observed that the current curricula were insufficiently aligned with industry needs, and experiential learning opportunities were limited.

Anderson and Sanga (2018) investigated tourism education partnerships in Tanzania using a qualitative approach and focus group discussions grounded in theory. They found challenges including language barriers, inadequate training facilities, shortage of qualified educators, poor curriculum enforcement, and limited internship opportunities. It was found that structured collaboration between industry and education institutions is necessary to develop a skilled labor force of competent graduates ready to be absorbed in the hospitality industry. Recommendations included, putting up infrastructural facilities, creating frameworks for industry-academia partnerships and enhancing work-integrated learning. Such approaches ensure that graduates acquire both practical and soft skills needed in star-rated hotels in Uganda.

Kahiga et al. (2024) examined the influence of institutional capacity on competitiveness of TVET institutions in Nyeri County, Kenya. The findings of the study showed the need to invest in the infrastructure of training institutions such as physical infrastructure, technology infrastructure, laboratories, computer labs and libraries. Furthermore, there was need to have up-to-date learning materials and engage in staff training and professional development program in TVET institutions. The study exposed that significant deficits in TVET learning facilities hinders students from gaining competitive skills which make them competitive in the job market. The study however looked at minimal institutional capacities.

Francis et al. (2020) applied mixed methods study in Kenya to examine skill gaps between graduates and industry expectations. The study revealed that graduates from Technical and Vocational Education Training (TVET) institutions performed better in management, supervision, and technical skills than university graduates. Infrastructural facilities in most TVET training institutions are found to be better than those in most Universities and hence support the development of skilled labor force, this is because vocational institutions are found to be more skill based than their counterparts. Furthermore, the researcher noted the need to discourage supply-driven training, and adopt demand-driven approaches in hospitality training institutions. Emphasis needs to be drawn on a graduate possessing practical, operational, digital, and interpersonal skills integration (Singh & Hassan, 2024).

Kahuria (2012) conducted a case study at Kabete Technical Training Institute in Kenya, employing a mixed qualitative and quantitative design to assess the impact of infrastructure and facilities on graduate skills development. The study drew on a diverse population sample that included the principal, registrar, heads of departments, teachers, technicians, final-year students, and local graduates from the institution. The findings revealed that outdated equipment and weak facilities significantly reduce job-relevant skills and increase the need for graduate retraining, as students are unable to acquire the practical competencies required by employers. The study highlighted that training institutions with modern, well-maintained equipment are better positioned to produce graduates who can seamlessly transition into the workplace.

The current study employed the systems theory conceptualized by Ludwig von Bertalanffy (1937), it suggests that organizations function as interconnected systems comprising of inputs, processes, outputs, and feedback mechanisms. In relation to educational institutions, the theory visions training institutes as a system with inputs which will have outputs in form of skilled labor force.

This theory underpinned multiple areas in this study which include financial resources, infrastructure facilities, curriculum relevance and collaborations with relevant institutions. The inputs are expected to be transformed through processes such as instructions given in classrooms, practical lessons given to students, as

well as internships and industrial training placements with the real world of work. The outputs of the system are highly skilled and competent hospitality graduates who are capable to meet the demands of the industry such as in star rated hotels (Kahiga et al., 2024). The systems theory highly regards putting up of feedback processes from the world of work, which can be given by stakeholders, supervisors or hotel managers in terms of skills and competence. The feedback can lead to curriculum review or improving training capacity.

### 1.6 Research Methodology

The study adopted a pragmatic research philosophy and a triangular research design to examine the relationship between infrastructural facilities and development of skilled labor force in star-rated hotels in Uganda. The target population comprised 5,341 respondents, including training institution managers and faculty, final-year students, hotel management, Uganda Tourism Board personnel, and hotel guests where a sample of 372 respondents determined using Yamane's formula were selected through purposive, simple random, and convenience sampling techniques while data was collected using a structured questionnaire.

Validity was established through expert review, while reliability was assessed using Cronbach's alpha coefficient where a coefficient of 0.748 was achieved, indicating acceptable internal consistency. Mean, percentage, and standard deviation were used to summarize responses, while Pearson correlation and linear regression models were used to determine the influence of infrastructural facilities on development of skilled labor force.

### 1.7 Results and Discussion

Infrastructural facilities were assessed through five indicators: availability of internet and digital resources, practical facilities mirroring star-rated hotel environments, favorable student-equipment ratio, accessible simulation labs like kitchens and housekeeping rooms, and investment in hospitality-specific infrastructure. The analysis focused on stakeholder perceptions regarding adequacy and accessibility of resources supporting practical skill development.

These descriptive statistics are presented in table 1 below.

**Table 1**  
*Infrastructural Facilities and Development of Skilled Labor Force*

| Statement                                                                                                       | SD (%)    | D (%)      | N (%)      | A (%)      | SA (%)     | Mean        | Std. Dev.   |
|-----------------------------------------------------------------------------------------------------------------|-----------|------------|------------|------------|------------|-------------|-------------|
| Internet and digital resources are available for teaching and learning.                                         | 21 (6.3)  | 24 (7.1)   | 102 (30.4) | 143 (42.6) | 46 (13.7)  | 3.50        | 1.02        |
| Practical facilities reflect real-world hotel environments such as star-rated hotels.                           | 34 (10.1) | 124 (36.9) | 57 (17.0)  | 82 (24.4)  | 39 (11.6)  | 2.91        | 1.21        |
| The student-equipment ratio is favorable for training.                                                          | 39 (11.6) | 112 (33.3) | 88 (26.2)  | 76 (22.6)  | 21 (6.3)   | 2.79        | 1.14        |
| Simulation labs (e.g., kitchens, housekeeping rooms) are available and easily accessible for personal training. | 39 (11.6) | 96 (28.6)  | 67 (19.9)  | 80 (23.8)  | 54 (16.1)  | 3.05        | 1.28        |
| Investment in hospitality-specific infrastructure improves graduate competence.                                 | 12 (3.6)  | 7 (2.1)    | 40 (11.9)  | 139 (41.4) | 138 (41.1) | 4.14        | 0.95        |
| <b>Average</b>                                                                                                  |           |            |            |            |            | <b>3.28</b> | <b>1.12</b> |

Source: Research Data (2026)

The findings presented in table 1 on the statement "Internet and digital resources are available for teaching and learning" recorded a mean of 3.50, with 42.6% agreeing and 13.7% strongly agreeing. This positive perception indicates that most institutions have made progress in providing digital infrastructure for teaching and learning. The standard deviation of 1.02 reflects moderate consensus among stakeholders.

The statement on "Practical facilities reflect real-world hotel environments such as star-rated hotels" recorded a mean of 2.91, with only 24.4% agreeing and 11.6% strongly agreeing. This relatively low perception suggests that many training institutions lack facilities that accurately mirror the operational environments of star-rated hotels. The standard deviation of 1.21 indicates moderate variability in stakeholder opinions.

The statement "The student-equipment ratio is favorable for training" recorded a mean of 2.79, with only 22.6% agreeing and 6.3% strongly agreeing. This low perception reveals that many institutions struggle with insufficient equipment for the number of students enrolled in hospitality programs. The standard deviation of 1.14 indicates moderate consensus on this limitation.

The statement on "Simulation labs (e.g., kitchens, housekeeping rooms) are available and easily accessible for personal training" recorded a mean of 3.05, with 23.8% agreeing and 16.1% strongly agreeing. This moderate perception indicates that while some institutions have simulation facilities, accessibility remains a challenge for many students. The standard deviation of 1.28 reflects considerable divergence in opinions, suggesting that institutional practices vary widely.

The statement on "Investment in hospitality-specific infrastructure improves graduate competence" recorded the highest mean of 4.14, with 41.4% agreeing and 41.1% strongly agreeing. This strong consensus reflects widespread stakeholder recognition that infrastructure investment directly enhances graduate competence. The low standard deviation of 0.95 indicates strong agreement across all respondent groups.

In summary, the average infrastructural facilities score (Mean = 3.28; SD = 1.12) reflected moderate perceptions, revealing a critical gap between stakeholder recognition of infrastructure's importance and its actual availability. While respondents widely acknowledged that investment in hospitality-specific infrastructure enhances graduate competence, the low scores for practical facilities, student-equipment ratios, and simulation labs exposed persistent deficiencies.

### Hypothesis.

*There is no statistically significant relationship between infrastructural facilities and development of skilled labor force for star rated hotels in Uganda.*

**Table 2**  
*Infrastructural Facilities and Development of Skilled Labor Force*

| Model Summary                   |  | R                   | R Square | Adjusted R Square |                  | Std. Error of the Estimate |                   |
|---------------------------------|--|---------------------|----------|-------------------|------------------|----------------------------|-------------------|
|                                 |  | .386 <sup>a</sup>   | .149     |                   |                  | .146                       | 6.11970           |
| ANOVA                           |  | Sum of Squares      |          | df                | Mean Square      | F                          | Sig.              |
| Regression                      |  | 2190.366            |          | 1                 | 2190.366         | 58.487                     | .000 <sup>b</sup> |
| Residual                        |  | 12508.560           |          | 334               | 37.451           |                            |                   |
| Total                           |  | 14698.926           |          | 335               |                  |                            |                   |
| Coefficients                    |  | Unstd. Coefficients |          | Std. Error        | Std Coefficients | T                          | Sig.              |
| Constant                        |  | 15.432              |          | 1.606             |                  | 9.611                      | .000              |
| Infrastructural Facilities (IF) |  | .743                |          | .097              | .386             | 7.648                      | .000              |

Source: Research data(2026)

Table 2 presents the findings on the relationship between Infrastructural Facilities and Development of Skilled Labor Force. The results demonstrated that Infrastructural Facilities also had a positive and significant relationship with the Development of Skilled Labor Force ( $R = 0.386$ ,  $p < 0.05$ ) which means that there was a low relationship between Infrastructural Facilities and Development of Skilled Labor Force indicating that every time the Star-Rated Hotels in Uganda made an investment in Infrastructural Facilities there was a low improvement on the Development of Skilled Labor Force.

The results of the regression further indicated that Infrastructural Facilities significantly predicted Development of Skilled Labor Force ( $\beta_1 = 0.743$ ,  $t = 7.648$ ;  $p < 0.05$ ), meaning a unit increase in Infrastructural Facilities produced a 0.743 variation in the Development Skilled Labor Force. The R squared value indicated that Infrastructural Facilities explained 14.9 percent of the change in Development of Skilled Labor Force ( $R^2 = 0.149$ ,  $F = 58.487$ ;  $p < 0.05$ ).

This demonstrates that a bigger proportion of difference in Development of Skilled Labor Force (85.1%) is accounted for by other factors not captured by the study, therefore the study failed to accept the null hypothesis that there is no statistically significant relationship between infrastructural facilities and development of skilled labor force for star rated hotels in Uganda.

This finding is strongly supported by Abd El Nagy et al. (2025), who emphasized that infrastructure prepares graduates for their operational roles in hotels and is hence important for hospitality training institutions to invest in provision of infrastructure as it is the foundation in skills development for the labor force that will meet the demands of the hotel industry. Their study in Egyptian technical universities identified the need for well-structured programs and hands-on training facilities that aid in imparting skills to learners. The finding also aligns with Kahiga et al. (2024), who found that significant deficits in TVET learning facilities hinders students from gaining competitive skills which make them competitive in the job market.

The study findings further resonate with Akunda et al. (2024), who examined factors affecting skills development among trainees in Ugandan TVET institutions and found that training facilities significantly influenced skills acquisition. The study highlighted challenges such as limited infrastructure and financial constraints. The current study provides quantitative evidence supporting this, while also identifying that limited infrastructure persists as a challenge in Ugandan hospitality training institutions.

The finding is consistent with Mncube (2023), who observed that quality infrastructure is essential for development of skilled labor force as it enables effective skill transfer, particularly in hospitality education, where practical training is central. The study revealed that governments often neglected critical infrastructure, which hindered effective learning and skill development. The current study's findings confirm that infrastructure is a critical determinant of graduate competence, demonstrating the substantial role that infrastructure plays in shaping

graduate outcomes. Anderson and Sanga (2018) investigated tourism education partnerships in Tanzania and found challenges including inadequate training facilities, recommending the establishment of infrastructural facilities. The current study supports this recommendation, confirming that infrastructure investment is essential for developing competent graduates ready for the hospitality industry.

The findings also align with Booyens (2020), who recommended stronger skills development programs and improved practical training to better prepare graduates for industry demands. The current study provides evidence that improved infrastructure enhances practical training, which in turn improves graduate competence. The findings are supported by those of Oketch (2017) who provided a useful framework for understanding how TVET system works, including infrastructure, delivery capacity, and institutional resources and how they affect youth skills development and employment outcomes. Commey (2021) similarly revealed that critical competencies such as leadership, teamwork, communication, problem-solving, and operational skills were often lacking among graduates.

The findings are also consistent to those of Kahiga et al. (2024) who established that there was need to invest in the infrastructure of training institutions such as physical infrastructure, technology infrastructure, laboratories, computer labs and libraries. Furthermore, there was need to have up-to-date learning materials and engage in staff training and professional development program in TVET institutions similarly, Francis et al. (2020) in his study revealed that graduates from Technical and Vocational Education Training (TVET) institutions performed better in management, supervision, and technical skills than university graduates. Infrastructural facilities in most TVET training institutions are found to be better than those in most Universities and hence support the development of skilled labor force, this is because vocational institutions are found to be more skill based than their counterparts.

Lastly, Kahuria (2012) findings revealed that outdated equipment and weak facilities significantly reduce job-relevant skills and increase the need for graduate retraining, as students are unable to acquire the practical competencies required by employers also giving support to the findings of the current study.

## **1.8 Conclusion**

Infrastructural facilities significantly influence development of skilled labor force, sustained investment in adequate, modern, and accessible infrastructural facilities is essential for strengthening skills development and ensuring the availability of a skilled labor force and as supportive enablers must be complemented by other institutional capacity factors to achieve optimal outcomes.

## **1.9 Recommendation**

### **1.9.1 Recommendations of the study**

The study recommends modern infrastructural facilities that accurately replicate star-rated hotel environments, including training kitchens, housekeeping labs, mock hotel rooms, and ICT resources. Further, Institutions should improve the student-equipment ratio by acquiring sufficient equipment for practical training, ensuring that all students have adequate hands-on practice opportunities. Simulation labs should be made easily accessible for personal training, allowing students to practice and refine their skills beyond scheduled class hours.

### **1.9.2 Recommendations for Further Research**

Further research should examine the other institutional and industry-related factors that influence the development of skilled labor for star-rated hotels in Uganda.

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