Industrial Mentorship and Acquisition of Baking and Pastry Skills Among Trainees in Selected Hotels Within Lake Naivasha, Kenya

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ABSTRACT

Industrial mentorship is a key component of workplace-based learning in hospitality training, particularly in practical areas such as baking and pastry production. This study examined the relationship between industrial mentorship and the acquisition of baking and pastry skills among trainees in selected hotels within the Lake Naivasha hospitality circuit, Kenya. Guided by Experiential Learning Theory and Social Learning Theory, the study assessed mentorship structure and quality, mentor expertise, the frequency and duration of mentor–trainee interaction, and experiential learning practices. A descriptive cross-sectional mixed-methods design was adopted. From a target population of 120 trainees and 15 mentors, 92 trainees were selected through stratified random sampling, while all 15 mentors were included through census sampling. Data were collected using structured questionnaires and semi-structured interviews, and analysed using descriptive statistics, correlation, multiple linear regression, and thematic analysis. Trainees generally held positive perceptions of industrial mentorship and reported high levels of baking and pastry skills acquisition. The four predictor variables collectively explained 68.9% of the variation in baking and pastry skills acquisition, $R^2=.689$, $F(4,87)=48.57$, $p<.001$. Mentor expertise was the strongest predictor, followed by experiential learning, mentorship structure and quality, and the frequency and duration of mentor–trainee interaction. The study concludes that industrial mentorship and experiential learning are positively and significantly associated with baking and pastry skills acquisition. However, the findings represent associations rather than causal effects because of the cross-sectional design. The study recommends mentorship guidelines, qualified mentor assignment, structured supervision, increased hands-on practice, consistent mentor–trainee interaction, mentor capacity building, and stronger hotel–training-institution collaboration. Future longitudinal studies should examine the long-term effects of industrial mentorship on competency, retention, employability, workplace performance, and career progression.

Keywords: Industrial Mentorship; Baking and Pastry Skills; Experiential Learning; Trainee Competency; Hospitality Training; Skill Acquisition.

INTRODUCTION

Mentorship plays an important role in the acquisition of baking and pastry skills among trainees in hospitality and culinary arts education. In vocational training, mentorship is a structured process through which experienced practitioners guide learners to develop the technical competencies and professional attitudes required in the baking and pastry industry (Lester & Costley, 2020). Through demonstration, supervision, coaching, and continuous feedback, trainees translate theoretical knowledge into practical skills applied in bakery production, pastry decoration, and dessert innovation (Fuller & Unwin, 2021; Billett, 2022).

Effective mentorship enables learners to observe industry best practices, participate in hands-on activities, and receive corrective guidance that supports skill mastery and professional confidence (Jackson, 2021). The baking and pastry sector requires precision, creativity, consistency, hygiene compliance, and effective time management; these demands make practical training and mentorship essential for developing occupational competence. These demands make practical training and mentorship essential for developing occupational competence. Competency-based training models therefore emphasize workplace learning and mentorship as important contributors to employability in Technical and Vocational Education and Training (TVET) (UNESCO-UNEVOC, 2021).

Industrial mentorship refers to structured guidance, supervision, and coaching provided by experienced practitioners during workplace learning. In baking and pastry production, it is particularly important because of the technical demands of dough handling, fermentation control, temperature regulation, decoration, and quality assurance. Experiential learning theory emphasizes that competence develops through active participation, reflection, and application of knowledge in authentic work settings (Kolb, 1984). Mentor-supported experiential learning therefore allows trainees to apply theoretical knowledge in real production environments under expert supervision, potentially strengthening their competence and workplace readiness (Billett, 2022).

However, the effectiveness of mentorship is not always guaranteed. Many training institutions face inadequate industry exposure, shortages of skilled mentors, and weak collaboration with hospitality establishments. The International Labour Organization reports that many young people experience a mismatch between the skills acquired through training and those required in the labour market, partly because of insufficient workplace learning opportunities (ILO, 2022). In some hotels, trainees may be assigned routine duties rather than structured learning experiences, thereby limiting opportunities for guided skills development (Onyuna, 2025).

In Kenya, the hospitality and tourism sector contribute significantly to employment and economic development (Kenya National Bureau of Statistics [KNBS], 2024). Lake Naivasha is an important tourism destination with numerous hotels and lodges that require competent personnel in food production, baking, and pastry operations. Although industrial attachment and mentorship are intended to support skills acquisition, mentorship practices may vary across establishments. This study therefore examined the relationship between industrial mentorship and baking and pastry skills acquisition among trainees in selected hotels within the Lake Naivasha hospitality circuit, Kenya.

1.2 Statement of the Problem

Despite the hospitality industry's contribution to employment, tourism, and economic development in Kenya, a persistent mismatch remains between hospitality training and industry competency requirements (Kabii et al., 2020; ILO, 2022). This gap is particularly evident in baking and pastry production, where trainees are expected to demonstrate technical proficiency, precision, hygiene compliance, product consistency, and operational efficiency. Employers have reported that some hospitality graduates lack the practical competencies required in professional kitchens, particularly in portion control, kitchen organization, time management, food safety, and product finishing (Kabii et al., 2020; Onyuna, 2025).

Initiatives such as Dual Technical and Vocational Education and Training (Dual TVET) and increased industry collaboration have strengthened workplace-based learning. However, industrial attachment programmes remain inconsistently implemented. In some hotels, mentorship may be characterized by informal supervision, varying mentor commitment, limited structured guidance, and unequal trainee exposure to practical tasks. Consequently, trainees may receive different learning opportunities depending on the host hotel, mentor availability, and operational demands. This is particularly problematic in baking and pastry operations, where competence depends on continuous practice, expert demonstration, corrective feedback, and progressive exposure to increasingly complex tasks.

Existing studies have largely examined industrial attachment or mentorship in general hospitality contexts, with limited empirical attention to baking and pastry operations. In particular, there is insufficient evidence on the individual and combined relationships between mentorship structure and quality, mentor expertise, the frequency and duration of mentor–trainee interaction, experiential learning practices, and trainees' acquisition of baking

and pastry skills in hotel-based training environments. This gap is evident in Lake Naivasha, a key hospitality and tourism destination where hotels and resorts offer industrial attachments, yet limited research has assessed the effectiveness of mentorship in baking and pastry training.

Therefore, this study examined the relationship between industrial mentorship and baking and pastry skills acquisition among trainees in selected hotels within the Lake Naivasha hospitality circuit, Kenya. Specifically, the study focused on mentorship structure and quality, mentor expertise, the frequency and duration of mentor–trainee interaction, and experiential learning as associated factors of baking and pastry skills acquisition.

1.3 Specific Objectives of the Study

The study was guided by the following specific objectives:

i. To determine the relationship between industrial mentorship structure and quality and trainees' acquisition of baking and pastry skills in selected hotels within the Lake Naivasha hospitality circuit, Kenya.

ii. To assess the relationship between mentor expertise and trainees' acquisition of baking and pastry skills in selected hotels within the Lake Naivasha hospitality circuit, Kenya.

iii. To establish the relationship between the frequency and duration of mentor-trainee interaction and trainees' acquisition of baking and pastry skills in selected hotels within the Lake Naivasha hospitality circuit, Kenya.

iv. To evaluate the relationship between experiential learning practices during industrial mentorship and trainees' acquisition of baking and pastry skills in selected hotels within the Lake Naivasha hospitality circuit, Kenya.

1.4 Hypotheses of the Study

The following null hypotheses were tested:

H_{01}: Industrial mentorship structure and quality have no statistically significant relationship with trainees' acquisition of baking and pastry skills in selected hotels within the Lake Naivasha hospitality circuit, Kenya.

H_{02}: Mentor expertise has no statistically significant relationship with trainees' acquisition of baking and pastry skills in selected hotels within the Lake Naivasha hospitality circuit, Kenya.

H_{03}: The frequency and duration of mentor–trainee interaction has no statistically significant relationship with trainees' acquisition of baking and pastry skills in selected hotels within the Lake Naivasha hospitality circuit, Kenya.

H_{04}: Experiential learning practices during industrial mentorship have no statistically significant relationship with trainees' acquisition of baking and pastry skills in selected hotels within the Lake Naivasha hospitality circuit, Kenya.

1.5 Significance and Justification of the Study

This study addresses the gap between hospitality education and industry practice, particularly in developing practical competencies in baking and pastry operations through industrial mentorship among trainees in selected hotels in Lake Naivasha, Kenya. Its significance is fivefold, extending to policymakers, hotel management, training institutions, trainees, and academia.

To policymakers, the findings may inform guidelines on mentor selection, trainee supervision, feedback mechanisms, and industry-institution collaboration. This points to where support is needed, and such guidelines can strengthen workplace-based learning and improve graduate employability.

To hotel management, the study highlights the need to assign qualified mentors, provide structured mentorship programmes, and ensure meaningful hands-on exposure for trainees. These measures can guide investment in mentor development and improve the quality of skills transfer within hotel kitchens.

To training institutions, the study provides evidence that can support aligning industrial attachment with curriculum outcomes and competency requirements. This evidence can guide the use of supervised practical sessions, reflective learning, and joint progress reviews with hotels, allowing classroom learning and workplace practice to reinforce each other.

To trainees, the study emphasizes that active participation, reflection, and responsiveness to mentor feedback are key to developing technical proficiency, operational efficiency, and confidence. These findings can help trainees make better use of their attachment period.

To academia, the study adds empirical evidence from the Kenyan hotel sector, where research on industrial mentorship and baking and pastry skills acquisition remains limited. Grounded in Kolb's Experiential Learning Theory and Bandura's Social Learning Theory, it shows how mentorship supports skills acquisition in practice. These findings provide a foundation for future research and for context-specific frameworks that strengthen industrial attachment and skills development in hospitality training.

1.6 Scope of the Study

This study focused on the relationship between industrial mentorship and the acquisition of baking and pastry skills among trainees in selected hotels within Lake Naivasha, hospitality circuit, Kenya. It examined mentorship structure and quality, mentor expertise, mentorship duration and frequency, and experiential learning as associated factors of skills acquisition.

Experiential learning included hands-on practice, reflective observation, and application of mentor feedback. Social learning mechanisms, such as mentor modelling, observation, feedback, and trainee motivation, were treated as contextual factors supporting interpretation of the findings. Trainee-related factors, including prior experience, learning attitude, and adaptability, were also considered contextual influences but were not statistically tested.

The dependent variable was baking and pastry skills acquisition, measured through technical proficiency, operational efficiency, and confidence. The study did not test mediation or moderation models; therefore, no causal or mechanistic claims are made.

The study was limited to selected hotels and resorts within Lake Naivasha hospitality circuit and to trainees in baking and pastry operations. It did not cover other hospitality departments or non-technical competencies such as customer service and supervisory skills.

THEORETICAL FRAMEWORK

This study was guided by Experiential Learning Theory (Kolb, 1984) and Social Learning Theory (Bandura, 1977). The two theories provide a complementary explanation of how industrial mentorship supports the acquisition of baking and pastry skills among trainees in hotel-based training environments.

1.7.1 Experiential Learning Theory

Experiential Learning Theory (ELT), developed by Kolb (1984), conceptualizes learning as an active process in which knowledge and skills are created through the transformation of experience. The theory proposes a cyclical learning process involving concrete experience, reflective observation, abstract conceptualization, and active experimentation. In baking and pastry training, trainees gain concrete experience through practical tasks such as dough preparation, fermentation, baking, icing, plating, and dessert decoration. They reflect on mentor feedback, understand the principles behind correct procedures, and apply improved techniques in subsequent production activities.

ELT was relevant to this study because it explains how hands-on practice, reflection, and application of feedback under mentorship may enhance trainees' technical proficiency, operational efficiency, and confidence. However, meaningful learning depends on trainees' access to structured and progressively challenging experiences. In hotel kitchens, trainees may be assigned repetitive tasks, while production pressure may limit opportunities for reflection and feedback. These conditions justify the examination of mentorship structure and quality, mentor expertise, and the duration and frequency of mentor–trainee interaction.

1.7.2 Social Learning Theory

Social Learning Theory (SLT), developed by Bandura (1977), posits that individuals learn through observation, imitation, modelling, and reinforcement. Bandura identified attention, retention, reproduction, and motivation as essential processes in observational learning. In industrial mentorship, trainees observe experienced pastry chefs demonstrating technical procedures such as dough handling, lamination, portioning, baking control, icing, piping, and decoration. Trainees then reproduce these skills during supervised practice, while mentors provide correction, encouragement, and professional feedback.

SLT was relevant to this study because it explains the importance of mentor expertise in baking and pastry training. Competent mentors provide accurate demonstrations, model professional standards, reinforce hygiene and safety practices, and correct errors promptly. Such guided observation and imitation may improve technical accuracy, product consistency, adherence to workplace standards, and trainee confidence. However, observation alone does not guarantee learning without structured practice, adequate interaction time, and responsive feedback. This supports the inclusion of mentorship structure and quality, mentorship duration and frequency, and experiential learning practices in the study.

ELT and SLT jointly informed the conceptualization of industrial mentorship in this study. ELT emphasizes learning through active participation, reflection, and application of feedback, while SLT emphasizes learning through observation of skilled mentors, imitation of professional practices, and reinforcement. Together, the theories suggest that effective mentorship requires both guided demonstration and meaningful hands-on practice.

Accordingly, the study examined industrial mentorship structure and quality, mentor expertise, mentorship duration and frequency, and experiential learning practices as independent variables, while baking and pastry skills acquisition was the dependent variable.

CONCEPTUAL FRAMEWORK

The conceptual framework identified industrial mentorship structure and quality, mentor expertise, mentorship duration and frequency, and experiential learning practices as independent variables, while trainees' acquisition of baking and pastry skills was the dependent variable. The dependent variable was measured through technical proficiency, operational efficiency, and confidence in performing baking and pastry tasks.

The framework was anchored on Experiential Learning Theory by Kolb (1984) and Social Learning Theory by Bandura (1977). Kolb's theory justified experiential learning as an independent variable because it emphasizes learning through hands-on practice, reflective observation, and application of feedback. Bandura's theory justified the mentorship variables as it explains that individuals learn by observing competent role models, imitating professional practices, receiving feedback, and gaining motivation. The overall relationship between the study variables is conceptually and diagrammatically represented in **Figure 1.1**.

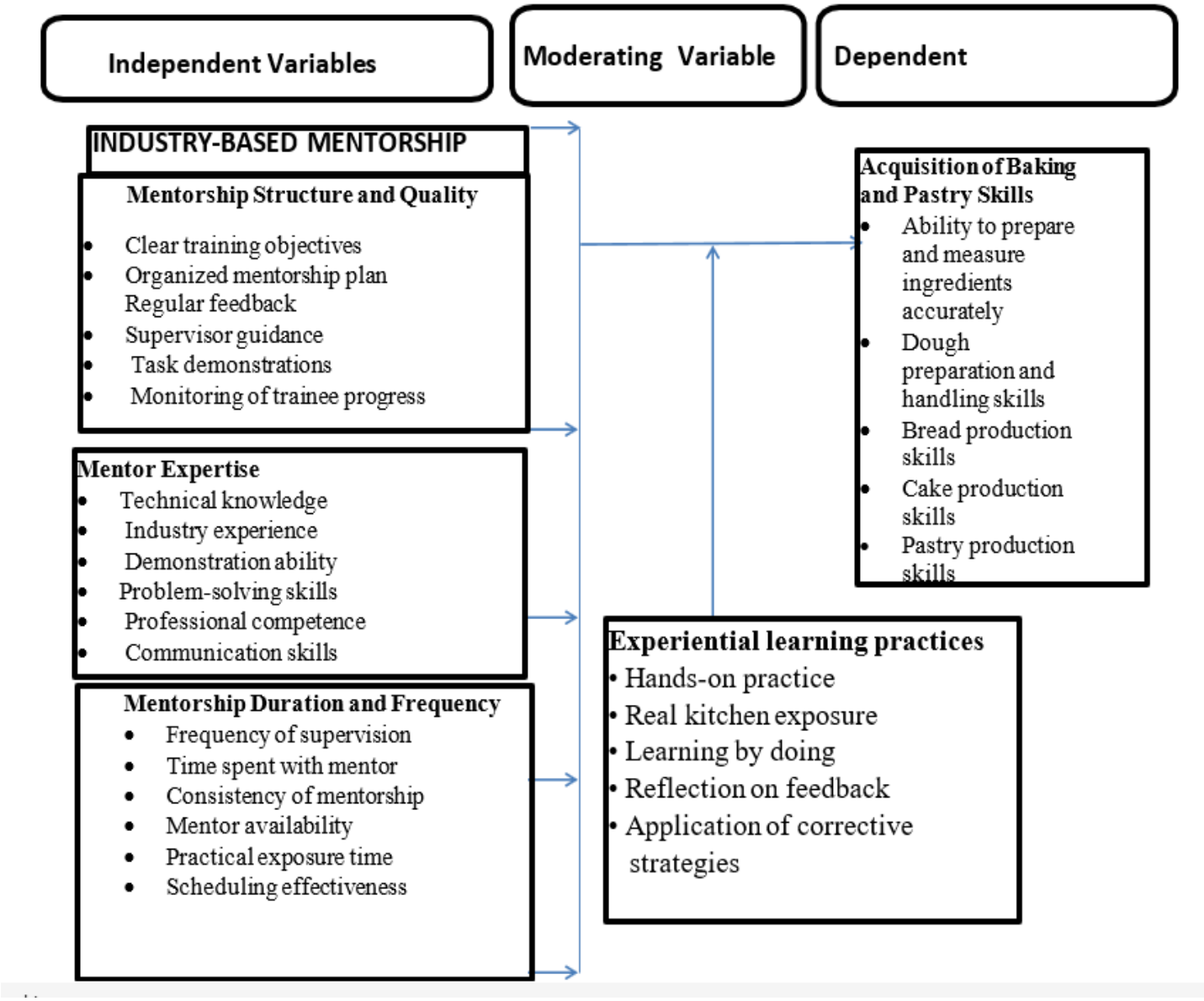


Figure 1.1: Conceptual Framework Industrial Mentorship and Acquisition of Baking and Pastry Skills in Selected hotels

LITERATURE REVIEW

2.1 Industrial Mentorship and Skill Acquisition

Industrial mentorship provides trainees with opportunities to learn in authentic workplace environments where theoretical knowledge is applied to real production tasks. Mentors support skill development through demonstration, supervision, error correction, modelling of professional standards, and feedback (Billett, 2022; Fuller & Unwin, 2021). Empirical evidence from hospitality and TVET contexts indicates that mentorship and supportive work environments are associated with improved trainee engagement, practical competence, and career intentions (Ismail et al., 2024; Rahmawati, 2024). However, limited research has examined these relationships specifically among baking and pastry trainees in hotel-based industrial attachment programmes.

In baking and pastry operations, mentorship exposes trainees to ingredient measurement, dough preparation, fermentation control, baking procedures, pastry finishing, decoration, hygiene practices, and product quality control. Because practical competence cannot be developed through classroom instruction alone, work-integrated learning enables trainees to apply theoretical knowledge in production settings, interact with experienced professionals, and learn workplace routines, standards, and expectations (Lester & Costley, 2020). Effective mentorship therefore bridges the gap between formal instruction and industry practice.

2.2 Mentorship Structure and Quality

Mentorship structure and quality refer to the organization, planning, supervision, and feedback mechanisms associated with workplace training. A structured programme includes clear learning objectives, organized practical activities, task demonstrations, regular supervision, feedback, and monitoring of trainee progress.

Workplace-learning models that incorporate planned practical activities, supervisor guidance, and reflective review have been found to improve vocational students' skills competency (Rahmawati, 2024). In hotel-based training, structured mentorship may also reduce the tendency to assign trainees routine duties without deliberate learning value.

Clear objectives help trainees understand expected learning outcomes and performance standards. Organized mentorship plans allow trainees to progress systematically from basic tasks, such as ingredient preparation and dough handling, to complex activities, including fermentation control, lamination, baking, finishing, and decoration. Regular feedback enables trainees to identify strengths, correct mistakes, and improve performance over time (Lester & Costley, 2020).

Supervisor guidance and demonstrations are important because baking and pastry work requires precision in measurement, mixing, fermentation, temperature control, timing, and presentation. Mentors who demonstrate techniques and supervise practice help trainees learn correct procedures and professional standards, thereby enhancing technical proficiency, operational efficiency, and confidence.

2.3 Mentor Expertise

Mentor expertise refers to mentors' technical knowledge, industry experience, demonstration ability, problem-solving skills, professional competence, and communication skills. In baking and pastry operations, expertise is particularly important because minor errors in ingredient measurement, dough handling, proofing, oven temperature, baking time, or finishing can compromise product quality. Experienced mentors can identify errors early, explain their causes, and demonstrate corrective techniques.

Mentor expertise also supports social learning. Skilled mentors provide professional models that trainees can observe and imitate. Through demonstration, correction, and reinforcement, experienced mentors may enhance technical accuracy, professional confidence, and adherence to workplace standards (Bandura, 1977; Schunk & DiBenedetto, 2023).

2.4 Mentorship Duration and Frequency

Mentorship duration and frequency refer to the time trainees spend with mentors and the regularity of mentor–trainee interaction. Baking and pastry competence develops through repeated practice, timely correction, and progressive exposure to complex tasks.

Adequate practical exposure allows trainees to participate repeatedly in tasks, while consistent interaction supports learning continuity. Regular access to competent mentors increases opportunities for feedback, reinforcement of correct practices, skill retention, and progression from supervised participation to independent performance. However, hotel production pressures may reduce close supervision during peak periods, with trainees sometimes assigned routine duties rather than complex learning tasks (ILO, 2022; Ismail et al., 2024).

2. 5 Experiential Learning

Experiential learning refers to learning through direct participation in practical activities, reflection on performance, and application of feedback. In baking and pastry training, it occurs when trainees actively prepare dough, bake products, control temperatures, decorate pastries, and receive feedback on their performance.

Hands-on practice allows trainees to apply theoretical knowledge in real workplace settings. Reflective observation enables trainees to analyse performance, identify errors, and understand how to improve. Active experimentation occurs when trainees apply corrective strategies in subsequent tasks (Kolb, 1984). For example,

a trainee who receives feedback on inconsistent dough texture may adjust hydration, mixing time, or proofing duration in the next production cycle.

Experiential learning is therefore central to practical competence. Trainees who participate actively, reflect on feedback, and repeat tasks under supervision are more likely to develop technical proficiency, operational efficiency, and confidence than those who mainly observe.

Although experiential learning is widely recognized as central to vocational competence, limited empirical evidence has examined how experiential learning practices during hotel-based industrial mentorship relate specifically to baking and pastry skills acquisition.

2.6: Research gap

Existing literature establishes that mentorship, mentor expertise, workplace exposure, and experiential learning contribute to vocational skills development (Billett, 2022; Ismail et al., 2024; Rahmawati, 2024). However, most studies examine industrial attachment or hospitality training broadly, with limited empirical attention to baking and pastry operations. In particular, little is known about the combined and relative associations of mentorship structure and quality, mentor expertise, the frequency and duration of mentor-trainee interaction, and experiential learning with baking and pastry skills acquisition in hotel-based training environments. This study addresses this gap in the Lake Naivasha hospitality circuit, Kenya.

METHODOLOGY

The study adopted a descriptive cross-sectional design within a convergent parallel mixed-methods approach. Quantitative data were collected from trainees using structured questionnaires, while qualitative data were collected from mentors and culinary supervisors through semi-structured interviews. Both data sets were collected during the same period, analysed separately, and integrated at the interpretation stage through a joint display. The quantitative strand tested relationships between the mentorship variables and baking and pastry skills acquisition, while the qualitative strand provided contextual explanation of mentorship practices and competency development (Creswell & Plano Clark, 2023).

The cross-sectional design was appropriate for examining existing conditions and associations without manipulating the study environment. Because all variables were measured at the same time, the design does not establish temporal precedence, exclude reverse causation, or control for all potential confounders. The findings are therefore interpreted as associations rather than causal effect.

3.2 Target Population

The target population comprised 120 trainees undertaking industrial mentorship in baking and pastry operations, 15 mentors, and culinary supervisors directly involved in trainee supervision in selected hotels within the Lake Naivasha hospitality circuit. Trainees were eligible if they had completed or were undertaking an industrial attachment or mentorship programme involving baking and pastry operations. Mentors and culinary supervisors were eligible if they had direct responsibility for supervising, training, or assessing trainees in food production, baking, or pastry units.

3.3 Sampling Techniques and Sample Size

Purposive sampling was used to select hotels that offered industrial attachment or mentorship in baking and pastry operations. The inclusion criteria were: (a) operation of a food production or pastry section; (b) hosting of trainees on industrial attachment; and (c) availability of designated mentors or culinary supervisors. Within the selected hotels, stratified random sampling was used to select trainees , with proportional allocation across strata. The trainee sample size was determined using Yamane's (1967) formula:

$$n=\frac{N}{1+N(e)2}$$

where n is the sample size, N is the population size, and e is the margin of error. With N = 120 and e = 0.05, the computed sample size was 92 trainees. All 15 mentors and culinary supervisors were included as key informants through purposive sampling because of their small number and central role in mentorship. All 92 questionnaires were returned and complete, giving a response rate of 100%.

3.4 Data Collection Instruments

Data were collected using structured questionnaires and semi-structured interviews. Questionnaires collected quantitative data from trainees on mentorship structure and quality, mentor expertise, mentorship duration and frequency, experiential learning, and baking and pastry skills acquisition. Interviews collected qualitative data from mentors and culinary supervisors on mentorship practices, trainee engagement, challenges, feedback processes, and observed competency development. Interviews were conducted with mentors and with supervisors, guided by an interview schedule, and continued until no new themes emerged. Using two instruments supported methodological triangulation and allowed trainees' perceptions to be compared with the accounts of mentors and supervisors (Creswell & Plano Clark, 2023).

All quantitative constructs were measured using five-point Likert-type items (1 = strongly disagree to 5 = strongly agree). Mentorship structure and quality, mentor expertise, and mentorship duration and frequency each comprised six items; experiential learning comprised three items; and baking and pastry skills acquisition comprised eight items covering technical proficiency, operational efficiency, and confidence. Scores were computed by averaging item responses, with higher scores indicating more favourable perceptions or higher reported skills acquisition.

3.5 Pilot Testing

A pilot study was conducted in one hotel excluded from the main study, involving 10 trainees and two mentors. The pilot assessed item clarity, administration procedures, and preliminary reliability. Feedback was used to revise ambiguous items and improve the sequencing of questionnaire sections. Pilot participants were not included in the main study.

3.6 Validity and Reliability

Content validity was established through expert review by two hospitality education specialists and one research-methodology lecturer, who assessed the relevance, clarity, and coverage of the items. Their recommendations were used to refine item wording and remove redundant items. Internal consistency was assessed using Cronbach's alpha, with coefficients of 0.70 or above considered acceptable (Taber, 2018). Pilot reliability coefficients ranged from 0.79 to 0.89 is as expressed in **Table 3.1.**

Table 3.1: Reliability of Study Constructs

Construct	Number of items	Cronbach's alpha	Decision
Mentorship structure and quality	6	0.82	Acceptable
Mentor expertise	6	0.88	Acceptable
Mentorship duration and frequency	6	0.79	Acceptable
Experiential learning	3	0.84	Acceptable
Baking and pastry skills acquisition	8	0.89	Acceptable

The internal consistency of the questionnaire constructs was assessed using Cronbach's alpha, with coefficients of 0.70 or above considered acceptable (Taber, 2024).

3.7 Data Collection Procedure

Questionnaires were administered to trainees, followed by scheduled interviews with mentors and culinary supervisors. Data collection took place over six weeks.

3.8 Data Analysis

Quantitative data were coded and analysed using SPSS Version 28. Descriptive statistics (frequencies, percentages, means, and standard deviations) summarised participant characteristics and study variables. Pearson correlation analysis was used to examine bivariate associations among the study variables. Multiple linear regression was used to assess the combined and relative associations of the four independent variables with baking and pastry skills acquisition. Statistical significance was set at $p<.05$. Results were reported using unstandardised coefficients (B), standardised coefficients (β), standard errors, 95% confidence intervals, R^2, adjusted R^2, and the overall F-statistic(Saunders, Lewis, & Thornhill 2023).

Before the regression, the assumptions of normality, linearity, homoscedasticity, and multicollinearity were checked; multicollinearity was evaluated using tolerance and variance inflation factor values. Because trainees were drawn from selected hotels, residuals may be correlated within hotels; this is acknowledged as a limitation.

Qualitative data from the interviews were analysed thematically. Transcripts were read repeatedly, coded inductively and deductively, and grouped into themes on mentorship practices, trainee engagement, feedback processes, challenges, and competency development. Trustworthiness was enhanced through peer debriefing, audit trailing, and triangulation across trainee, mentor, and supervisor accounts. Quantitative and qualitative findings were integrated through a joint display to identify convergence, complementarity, and divergence (Creswell & Plano Clark, 2023).

3.9 Ethical Considerations

Ethical approval was obtained from institution. Permission was granted by the management of each participating hotel. Participation was voluntary, written informed consent was obtained from all participants, and they could withdraw at any time. Questionnaire responses were anonymised, and interview data were stored securely and used only for academic purposes

FINDINGS, ANALYSIS AND INTERPRETATION

4.1 Introduction

The study examined the relationships between mentorship structure and quality, mentor expertise, mentorship duration and frequency, experiential learning, and baking and pastry skills acquisition among trainees in selected hotels in Lake Naivasha, Kenya. All 92 sampled trainees completed the structured questionnaire, a response rate of 100%. Of the 120 eligible trainees, 92 completed the structured questionnaire, a response rate of 76.7% Quantitative data were analysed using descriptive statistics, Pearson correlation, and multiple linear regression. Qualitative data were collected through semi-structured interviews with 15 mentors and culinary supervisors and analysed thematically. The two strands were integrated through a joint display.

4.2 Demographic Characteristics of Respondents

4.2.1 Gender

Of the 92 trainees, 54 (58.7%) were female and 38 (41.3%) were male.

4.2.2 Age

The largest age group was 21–25 years (44 trainees, 47.8%), followed by 26–30 years (20, 21.7%), below 20 years (18, 19.6%), and above 30 years (10, 10.9%).

4.2.3 Level of Training of The Respondents

The distribution of respondents by level of training is presented in **Table 4.1.**

Table 4.1: Level of Training

Level of Training	Frequency	Percentage (%)
Certificate	28	30.4
Diploma	52	56.5
Degree	12	13.1
Total	92	100.0

Diploma trainees formed the majority (52; 56.5%), followed by certificate trainees (28; 30.4%) and degree trainees (12; 13.0%). This distribution reflects the composition of trainees undertaking industrial mentorship in the selected hotels during the study period.

4.2.4 Duration of Industrial Attachment

The distribution of respondents by duration of industrial attachment is presented in **Table 4.2.**

Table 4.2: Duration of Industrial Attachment

Duration	Frequency	Percentage (%)
Less than 3 months	20	21.7
3–6 months	58	63.0
More than 6 months	14	15.3
Total	92	100.0

Most trainees (69.6%) were aged 21–30 years, and 78.3% had undertaken attachment for three months or more. This suggests that most participants had enough workplace exposure to comment on mentorship and skills development, although 21.7% had been attached for under three months. Demographic characteristics were treated as background information and were not tested in the main model..

4.3 Descriptive Findings

4.3.1 Mentorship Structure and Quality

The mentorship structure and quality analysis is as expressed in **Table 4.3.**

Table 4.3: Mentorship Structure and Quality

Indicator	**Mean**	**SD**	**Agreement (%)**
Clear training objectives	4.34	0.71	83.0
Organized mentorship plan	4.30	0.72	81.5
Regular feedback	4.28	0.69	80.2
Supervisor guidance	4.32	0.70	82.1
Task demonstrations	4.25	0.73	79.4
Monitoring of progress	4.27	0.71	80.9
Overall mean	4.29		

Note: Scale: 1 = Strongly Disagree to 5 = Strongly Agree.

Trainees rated mentorship structure and quality highly (overall M = 4.29). Clear training objectives scored highest (M = 4.34, SD = 0.71), followed by supervisor guidance (M = 4.32) and an organized mentorship plan (M = 4.30). Item means were close together (4.25–4.34), indicating that trainees perceived mentorship as consistently well organized. strongest ratings for clear objectives, supervisor guidance, and an organized plan

are consistent with literature identifying explicit goals, regular structured meetings, and supportive supervisory relationships as central to effective mentorship and trainee satisfaction(Nimmons, Giny, & Rosenthal 2019).

4.3.2 Mentorship Duration and Frequency

Trainees' perceptions of mentorship duration and frequency are presented in **Table 4.4.**

Table 4.4: Mentorship Duration and Frequency

Indicator	Mean	SD	Agreement (%)
Frequency of supervision	3.95	0.88	72.4
Time spent with mentor	3.98	0.87	73.1
Consistency of mentorship	4.00	0.85	74.0
Availability of mentor	3.90	0.90	70.8
Practical exposure time	4.02	0.86	75.2
Scheduling effectiveness	3.97	0.89	73.5
Overall mean	3.97		

Note: Scale: 1 = Strongly Disagree to 5 = Strongly Agree.

Mentorship duration and frequency were rated moderately positively by trainees, with an overall mean of 3.97. Practical exposure time recorded the highest mean score (M = 4.02, SD = 0.86), followed by consistency of mentorship (M = 4.00, SD = 0.85) and time spent with mentor (M = 3.98, SD = 0.87). These findings suggest that although trainees generally valued the time available for practical exposure and mentor interaction, mentor availability, supervision frequency, and scheduling consistency were comparatively weaker.

4.3.3 Mentor Expertise

Trainees' perceptions of mentor expertise are presented in **Table 4.5.**

Table 4.5: Mentor Expertise

Indicator	Mean	SD	Agreement (%)
Technical knowledge	4.48	0.65	85.6
Industry experience	4.46	0.66	85.1
Demonstration ability	4.44	0.69	84.3
Problem-solving skills	4.42	0.70	83.8
Professional competence	4.45	0.68	84.7
Communication skills	4.40	0.71	83.2
Overall mean	4.44		

Note: Scale: 1 = Strongly Disagree to 5 = Strongly Agree.

Mentor expertise was the highest-rated mentorship dimension, with an overall mean of 4.44. Technical knowledge recorded the highest mean score (M = 4.48, SD = 0.65), followed by industry experience (M = 4.46, SD = 0.66) and professional competence (M = 4.45, SD = 0.68). These findings indicate that trainees highly valued mentors' technical knowledge, industry experience, professional competence, and ability to demonstrate baking and pastry techniques.

4.3.4 Experiential Learning Practices

Trainees' perceptions of experiential learning practices are presented in **Table 4.6.**

Table 4.6: Experiential Learning Practices

Indicator	Mean	SD	Agreement (%)
Hands-on practice	4.31	0.66	89.0
Real kitchen exposure	4.30	0.67	88.4
Learning by doing	4.29	0.68	87.7
Overall mean	4.28	0.67	88.4

Note: Scale: 1 = Strongly Disagree to 5 = Strongly Agree.

Experiential learning was highly rated by trainees, with an overall mean of 4.28 and an agreement level of 88.4%. Hands-on practice recorded the highest mean score (M = 4.31, SD = 0.66), followed by real kitchen exposure (M = 4.30, SD = 0.67) and learning by doing (M = 4.29, SD = 0.68). These findings indicate that trainees highly valued direct participation in baking and pastry production activities, exposure to real kitchen operations, and learning through practical task performance.

The relatively low standard deviations, ranging from 0.66 to 0.68, indicate that trainees' responses were relatively homogeneous across the experiential-learning items. Hands-on practice was perceived as the most important aspect of experiential learning, suggesting that trainees valued opportunities to personally prepare dough, bake products, decorate pastries, and perform other practical tasks under mentor guidance. Real kitchen exposure was also highly rated, indicating that trainees regarded the hotel kitchen as an important learning environment where they could apply theoretical knowledge, use professional equipment, observe production standards, and participate in routine baking and pastry operations. The high ratings for hands-on practice, real kitchen exposure, and learning by doing reflect the importance of concrete experience and active experimentation in experiential learning (Kolb, 1984). Similar findings in culinary education show that hands-on activities with industry professionals increase engagement, make learning more memorable, and strengthen students' readiness for real industry settings (Mills & Law, 2021).

4.4 Qualitative Findings

Qualitative data were collected from 15 mentors and culinary supervisors. Thematic analysis generated four main themes: structured mentorship and guided practice, mentor competence and corrective feedback, constraints on mentorship time, and active participation in experiential learning. Direct quotations are presented to illustrate the themes, while pseudonyms or hotel codes are used to protect participant confidentiality.

The qualitative findings converged with the quantitative results for mentorship structure and quality, mentor expertise, and experiential learning. They also provided complementary insight into mentorship duration and frequency by explaining that production pressure, staffing limitations, and peak-period workloads reduced the consistency of supervision, even where trainees rated mentorship time moderately positively.

4.4.1 Mentorship Structure and Quality

Mentors and culinary supervisors reported that clear task allocation, demonstrations, and supervised practice helped trainees understand workplace expectations and progressively develop practical competence. One culinary supervisor stated:

"We usually start by showing the trainee what is expected, then allow them to try under close supervision. When they make a mistake, we correct it immediately so that they learn the right procedure from the beginning." - Culinary Supervisor, Hotel C

Observations showed that trainees who received step-by-step guidance demonstrated greater confidence when preparing dough, controlling baking temperatures, and finishing pastry products.

4.4.2 Mentor Expertise

Participants emphasized that experienced mentors were better able to demonstrate techniques, identify errors,

and provide immediate corrective feedback. One mentor noted:

"Experience helps you notice small things that a trainee may not see. You can tell when the dough has not proofed properly or when the oven temperature is wrong. You correct it before the product is spoiled." - Mentor, Hotel A

In one observed session, a mentor identified inconsistent pastry thickness, explained its likely effect on baking time and product quality, and demonstrated the correct rolling technique.

4.4.3 Mentorship Duration and Frequency

Some participants reported that production pressure, staffing limitations, and busy service periods reduced the time available for structured trainee supervision. One culinary supervisor stated:

"During peak periods, we do not always have enough time to supervise each trainee closely. Sometimes they assist with basic preparation while the team focuses on production." - Culinary Supervisor, Hotel B

Observations during busy service periods showed that some trainees spent more time on supporting tasks, such as ingredient preparation, cleaning, and arranging baking trays, than on complex baking or pastry finishing activities.

4.4.4 Experiential Learning Practices

Mentors and culinary supervisors indicated that trainees developed competence most effectively when they actively participated in production activities rather than merely observing. One mentor explained:

"A trainee may watch you decorate a cake ten times, but they will only learn when they do it themselves. After they try, we discuss what went well and what they need to improve." - Mentor, Hotel B

Observations also showed that trainees who actively prepared dough, portioned ingredients, controlled baking times, and decorated pastry products were more engaged in production activities than those who mainly observed.

4.5 Inferential Statistics

4.5.1 Correlation Analysis

Pearson correlation analysis was conducted to examine the relationships between mentorship structure and quality, mentor expertise, mentorship duration and frequency, experiential learning, and baking and pastry skills acquisition. The results are presented in **Table 4.7.**

Table 4.7: Pearson Correlation Matrix

Variable	1	2	3	4	5
1. Mentorship structure and quality	1				
2. Mentor expertise	0.52**	1			
3. Mentorship duration and frequency	0.47**	0.47**	1		
4. Experiential learning	0.55**	0.58**	0.49**	1	
5. Baking and pastry skills acquisition	0.58**	0.66**	0.42**	0.61**	1

Note: ** p* < .01 (two-tailed). *N* = 92. MSQ = Mentorship structure and quality; ME = Mentor expertise; MDF = Mentorship duration and frequency; EL = Experiential learning; BPSA = Baking and pastry skills acquisition.

All four mentorship dimensions had positive and statistically significant relationships with baking and pastry skills acquisition. Mentor expertise recorded the strongest relationship with baking and pastry skills acquisition,

$r = .66$, $p < .01$, followed by experiential learning, $r = .61$, $p < .01$; mentorship structure and quality, $r = .58$, $p < .01$; and mentorship duration and frequency, $r = .42$, $p < .01$.

4.5.2 Multiple Regression Analysis

Multiple linear regression was conducted to examine the combined effect of mentorship structure and quality, mentor expertise, mentorship duration and frequency, and experiential learning on baking and pastry skills acquisition. The model summary, ANOVA results, and regression coefficients are presented in **Tables 4.8, 4.9**, and **4.10**, respectively.

Table 4.8: Model Summary

Model	R	R^2	Adjusted R^2	Std. Error of the Estimate
1	0.830	0.689	0.676	0.420

The model showed a strong positive multiple correlation between the predictor variables and baking and pastry skills acquisition, $R = .830$. The independent variables collectively explained 68.9% of the variation in baking and pastry skills acquisition, $R^2 = .689$. The remaining variation was associated with factors not included in the model.

ANOVA Results

The ANOVA results is as expressed in **Table 4.9**.

Table 4.9: ANOVA Results

Source	Sum of Squares	Df	Mean Square	F	Sig.
Regression	62.48	4	15.62	48.57	< .001
Residual	27.98	87	0.32		
Total	90.46	91			

The regression model was statistically significant, $F(4, 87) = 48.57$, $p < .001$. This indicates that mentorship structure and quality, mentor expertise, mentorship duration and frequency, and experiential learning jointly predicted baking and pastry skills acquisition.

Regression Coefficients

The regression coefficient is as presented in **Table 4.10**.

Table 4.10: Multiple Linear Regression Coefficients

Predictor	B	SE	β	t	p
Constant	0.48	0.19		2.53	.013
Mentorship structure and quality	0.22	0.07	0.18	3.14	.002
Mentor expertise	0.41	0.08	0.34	5.12	< .001
Mentorship duration and frequency	0.11	0.056	0.10	1.98	.049
Experiential learning	0.29	0.07	0.27	4.18	< .001

Note: B = unstandardized coefficient; SE = standard error; β = standardized coefficient.

As shown in Table 4.10, mentor expertise had the largest unique association with baking and pastry skills acquisition, $B = 0.41$, $\beta = .34$, $t = 5.12$, $p < .001$. Experiential learning also had a significant positive association, $B = 0.29$, $\beta = .27$, $t = 4.18$, $p < .001$, followed by mentorship structure and quality, $B = 0.22$, $\beta = .18$, $t = 3.14$, p

= .002. Mentorship duration and frequency had a positive but comparatively smaller significant association, B = 0.11, β = .10, t = 1.98, p = .049.

Therefore, mentor expertise, experiential learning, mentorship structure and quality, and the frequency and duration of mentor–trainee interaction each had a positive and statistically significant association with baking and pastry skills acquisition. Accordingly, all four null hypotheses were rejected. The summary is as expressed in **Table 4.1** summary of Hypothesis Testing.

Table 4.11: Summary of Hypothesis Testing

Hypothesis	Statistical Result	Decision
*H*01: Mentorship structure and quality have no significant relationship with baking and pastry skills acquisition	B=0.22, β=0.18, p=.002	Reject *H*01
*H*02: Mentor expertise has no significant relationship with baking and pastry skills acquisition	B=0.41, β=0.34, p<.001	Reject *H*02
*H*03: Mentorship duration and frequency have no significant relationship with baking and pastry skills acquisition	B=0.11, β=0.10, p=.049	Reject *H*03
*H*04: Experiential learning has no significant relationship with baking and pastry skills acquisition	B=0.29, β=0.27, p<.001	Reject *H*04

4.6 Integration of Quantitative and Qualitative Findings

The integration of quantitative and qualitative findings is presented in **Table 4.12**.

Table 4.12 Integration of Quantitative and Qualitative Findings

Construct	Quantitative finding	Qualitative finding	Integrated interpretation
Mentorship structure and quality	M=4.29; B=0.22, β=0.18, p=.002	Structured task allocation, demonstrations, and supervised practice supported learning	Structured mentorship was associated with systematic skill development
Mentor expertise	M=4.44; B=0.41, β=0.34, p<.001	Experienced mentors provided clearer demonstrations and corrective feedback	Mentor competence was central to workplace learning
Duration and frequency	M=3.97; B=0.11, β=.10, p=.049	Production pressure and limited mentor availability reduced consistency	Mentorship time mattered, but consistency was constrained
Experiential learning	M=4.28; B=0.29, β=0.27, p<.001	Active participation, repetition, feedback, and reflection supported competence	Hands-on engagement was strongly associated with skill acquisition

The integrated findings indicated convergence for mentorship structure and quality, mentor expertise, and experiential learning. Both quantitative and qualitative findings showed that structured mentorship, competent mentors, corrective feedback, and hands-on practice were associated with baking and pastry skills acquisition.

The findings for the frequency and duration of mentor–trainee interaction were complementary. Although the quantitative results showed a positive and statistically significant association, the qualitative accounts explained that production pressure, staffing limitations, and peak-period workloads reduced the consistency of supervision. Because the study used a cross-sectional design, the integrated findings should be interpreted as associations rather than causal effects. The convergence between quantitative and qualitative results supports the

interpretation that structured mentorship, mentor expertise, corrective feedback, and hands-on practice are important correlates of baking and pastry skills acquisition (Creswell & Plano Clark, 2018; Fetters et al., 2013).

SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

5.1 Summary of Findings

The study examined the relationships between industrial mentorship dimensions and baking and pastry skills acquisition among 92 trainees in selected hotels in Lake Naivasha, Kenya, representing a response rate of 76.7%. Trainees generally reported positive perceptions of mentorship and baking and pastry skills acquisition.

Mentor expertise was the highest-rated mentorship dimension, $M = 4.44$, and the strongest correlate of baking and pastry skills acquisition, $r = .66$, $p < .01$. In the multiple regression model, mentor expertise, $B = 0.41$, $\beta = .34$, $p < .001$; experiential learning, $B = 0.29$, $\beta = .27$, $p < .001$; mentorship structure and quality, $B = 0.22$, $\beta = .18$, $p = .002$; and mentorship duration and frequency, $B = 0.11$, $\beta = .10$, $p = .049$, each had a positive and statistically significant association with baking and pastry skills acquisition. The model explained 68.9% of the variance in baking and pastry skills acquisition, $F(4, 87) = 48.57$, $p < .001$.

The findings suggest that effective workplace learning in baking and pastry operations may require competent mentors, structured mentorship processes, regular feedback, and meaningful hands-on practice. The relatively lower rating of the frequency and duration of mentor–trainee interaction, together with qualitative reports of operational pressures, indicates that consistency of mentor–trainee interaction remains an area requiring attention.

5.2 Conclusions

Industrial mentorship was positively and significantly associated with baking and pastry skills acquisition among hospitality trainees in selected hotels in Lake Naivasha, Kenya. Mentor expertise was the strongest associated factor, followed by experiential learning, mentorship structure and quality, and mentorship duration and frequency.

The findings suggest that effective workplace learning in baking and pastry operations requires competent mentors, structured mentorship processes, regular feedback, and meaningful hands-on practice. The relatively lower rating of mentorship duration and frequency, together with qualitative reports of operational pressures, indicates that consistency of mentor–trainee interaction remains an area requiring attention. Because the study used a cross-sectional design, the conclusions describe associations rather than causal effects.

5.3 Recommendations

5.3.1 Policy Recommendation

Policymakers in technical and vocational education should develop guidelines for industrial mentorship in hospitality training. The guidelines should address mentor selection, expected mentorship activities, supervision, feedback mechanisms, and structured opportunities for supervised practical practice. This recommendation is supported by the significant associations observed for mentorship structure and quality, mentor expertise, and experiential learning.

5.3.2 Hotel Recommendation

Hotel management should assign qualified and experienced mentors to trainees undertaking baking and pastry attachments. Mentor selection should consider technical competence, industry experience, communication skills, and the ability to provide constructive feedback. Hotels should also implement structured mentorship schedules, regular supervision, timely feedback, and adequate hands-on practice, particularly during peak production periods when mentor availability may be limited.

5.3.3 Training-Institution Recommendation

Training institutions should strengthen collaboration with hotels to align industrial mentorship with curriculum outcomes and industry competency requirements. Formal mentorship agreements, placement guidelines, skills checklists, reflective activities, and joint progress-review mechanisms may improve consistency across placement hotels.

5.3.4 Future Research Recommendation

Future studies should use longitudinal or quasi-experimental designs to examine whether industrial mentorship is associated with sustained improvements in baking and pastry competencies over time. Future research should also test mediation models using appropriate longitudinal or experimental designs and compare findings across hotel categories, regions, trainee levels, and hospitality departments to improve generalizability.

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