

Teaching Factory Model as an Innovative Educational Approach to Enhance Competence Development in Hospitality: A Case Study at de Balen Soutan Hotel

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Abstract

This study investigates the impact of the Teaching Factory model on the development of student competencies in the hospitality sector at de Balen Soutan Hotel. Despite the growing importance of practical skills in the industry, gaps remain in the effectiveness of current educational approaches. To address this issue, the research employs a quantitative method using Multiple Linear Regression analysis via IBM SPSS 25 software to evaluate the relationship between the implementation of the Teaching Factory model (independent variable) and waiter competencies (dependent variable). Data were collected from 74 students enrolled in the Lombok Tourism Polytechnic catering program, utilizing a purposive sampling technique. The findings reveal a strong positive correlation (0.850) between the Teaching Factory model and student competencies, indicating that the model significantly enhances students' preparedness for industry demands. The study concludes that implementing the Teaching Factory model is crucial for equipping students with essential skills, thereby fostering their success in the hospitality sector. It recommends further integration of industry practices into vocational training programs to improve student outcomes and enhance their employability.

Keywords: Teaching Factory, Competence, Hospitality Education, de Balen Soutan.

1. Introduction

The influence of employee competence and work motivation on performance is pivotal for organizational success, especially within the realm of vocational education, which plays a crucial role in shaping the skills and competencies required for the global workforce. As highlighted (Gumilar & Afrijal, 2022; Siraj et al., 2022), organizations cannot achieve optimal results without adequately supporting their human resources to enhance employee performance. This aligns with the findings of (Charles et al., 2023; Song & Chea, 2023), who emphasize that vocational education equips individuals with applied knowledge and technical expertise, preparing them to meet industry demands. E-learning platforms and blended learning approaches, as discussed (Singh et al., 2023), offer innovative solutions in delivering vocational education effectively, while collaborative online learning environments enhance the alignment between competencies and organizational needs (Gupta, 2022; Zhong et al., 2022). By integrating such educational technologies, vocational institutions can significantly boost the competence and work motivation of students, which in turn, improves their preparedness and performance in the workplace (Gong et al., 2023).

The success of an organization significantly depends on various factors, including employee performance. (Prasetyo et al., 2022) assert that effective employee performance reflects an individual's ability to execute tasks proficiently. This is particularly relevant in the context of vocational institutions, such as Lombok Tourism Polytechnic, where the effectiveness of programs like the *de Balen Soutan* Hotel Teaching Factory Program directly influences student competencies. Research indicates that motivational support from leadership, a positive work environment, and employees' competencies play vital roles in enhancing performance. In the case of the Labuhanbatu District's Transportation Department, both a conducive work environment and employee competence positively affect performance, demonstrating the importance of these factors in educational settings.

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In the hospitality sector, the implementation of upselling techniques among waitstaff underscores the importance of competence in delivering high-quality service. (Riska Veronika et al., 2024) found that, while waitstaff at Ticket's Café successfully employed upselling strategies, their performance was hindered by a shortage of personnel. To maximize results, comprehensive training that extends beyond upselling techniques is essential. This need for effective training and support is echoed in (Tukunang, 2020), who emphasizes that skills, knowledge, and attitudes are crucial for determining the service quality provided by waitstaff, revealing a strong correlation between waitstaff competencies and service quality. Consequently, this underscores the necessity for restaurant supervisors to enhance employees' capabilities and professional development through targeted training.

Furthermore, (Ramírez Velásquez et al., 2019) investigate the socio-emotional competencies of food service workers, highlighting differences in emotional expression between genders. This differentiation emphasizes the need for tailored development strategies within the industry, which can also apply to the hospitality education sector. The teaching factory model, as explored (Wahjusaputri & Bunyamin, 2022), has emerged as an effective strategy for improving competencies relevant to the industrial revolution 4.0. This model not only enhances management and industry relationships but also prepares students for the evolving demands of the workforce.

Despite extensive literature on vocational education, there remains a gap in understanding the specific impact of teaching factory programs on student competencies in tourism and hospitality. Teaching factories integrate real-world industry practices into education, enhancing learning and preparing students for the workforce. This study examines the de Balen Soutan Hotel Teaching Factory Program at Lombok Tourism Polytechnic and its effect on food and beverage program students. By leveraging blended learning strategies and incorporating digital classrooms alongside traditional training, the program offers a more holistic approach to vocational education. The research analyzes factors such as facilities, curriculum alignment, lecturer competence, and e-learning integration, which have been shown to improve outcomes and engagement in vocational settings. This study provides insights into how innovative pedagogical approaches contribute to the teaching factory's effectiveness in preparing students for successful careers, addressing the need for skilled professionals in tourism and hospitality (Kasa et al., 2020; Ogbeide et al., 2021).

2. Research Methods

This research employs a combination of descriptive and verification methods within a quantitative framework to analyze the impact of the teaching factory *de Balen Soutan* Hotel on the competencies of waiters among students of the Lombok Tourism Polytechnic in the Tata Hidang study program. According to (Ghafar, 2023), quantitative research focuses on analyzing data in numerical form, enabling the testing of predefined hypotheses and the interpretation of results to draw conclusions. The descriptive method serves to explore the implementation of the teaching factory model at *de Balen Soutan* Hotel, aiming to provide a comprehensive understanding of its operational processes and how these experiences contribute to the competencies developed among the students. The research was conducted from March to July 2024, allowing for a thorough investigation of the implementation over a significant period.

To determine the impact of the teaching factory model on student competencies, this study utilizes a verification method through Multiple Linear Regression analysis conducted via IBM SPSS 25 software (Ghozali, 2018; Li et al., 2021; Lv et al., 2023). This analytical approach facilitates the evaluation of the relationships and quantifies the effects between the independent variable, which is the implementation of the teaching factory, and the dependent variable, representing the competencies of waiters. The research sample comprises 74 students from the Lombok Tourism Polytechnic's inlay study program, selected using a purposive non-probability sampling technique. This method of sampling is designed to ensure that participants have the relevant characteristics needed for the study, thereby enhancing the validity of the results (Sugiyono, 2020).

3. Results and Discussion

3.1. Result

3.1.1. Descriptive Analysis

The data described is the *independent* variable, namely Teaching Factory which consists of 3 aspects, namely facilities and infrastructure, curriculum and lecturer competence and *the dependent* variable, namely the Competence of Waiters students of the Lombok Tourism Polytechnic inlay study program based on the responses of respondents in the questionnaire distributed to 74 students of the Lombok Tourism Polytechnic inlay study program. Data

processing used in this study is to use average calculations in the total average score of respondents' answers, the results of this descriptive analysis are described as follows:

3.1.1.1. Overview of the Teaching Factory

From 74 respondents who have filled out the questionnaire, the answers regarding the teaching factory consisting of 3 aspects with a total of 15 indicators will be described as follows:

(1) Aspects of equipment (Facilities)

Practical equipment and equipment that support *teaching factory* activities must be adequate and meet the provisions of the standards set both according to national standards and the minimum world of work standards set, and supported by a supportive and effective learning system. Based on the data from the distribution of questionnaires consisting of 3 indicators of facilities and infrastructure in the *teaching factory* program as follows:

Table 1. Analysis Implementation Instrument on the Aspects of Facilities and Infrastructure

No.	Indicator	Total Score	Average	Criteria
1	Practicum Room Standard	270	3.65	Good
2	Equipment in accordance with industry or workplace standards	159	3.57	Good
3	Complete facilities	268	3.62	Good
Total		697	3,61	Good

Source: Researcher's Data, 2024

Table 1 presents the distribution of respondents' answers regarding the facilities and infrastructure of the *teaching factory* program for students of the Lombok Tourism Polytechnic catering study program. The total number of respondent response scores was 697 which was included in the good category. The indicator that has the lowest average value is the Equipment indicator in accordance with the standards of the industrial world or the world of work including the good category and the one with the highest indicator is the Practicum Room Standard which has a good category.

(2) Curriculum

Based on the data from the distribution of questionnaires consisting of 3 System Quality statement items as follows:

Table 2. Analysis Implementation Instrument on Curriculum Aspects

No.	Indicator				Total Score	Average	Criteria
1	Graduate skills, attitudes)	Competency Standards	(Knowledge,		244	3.3	Simply
2	Content standards (teaching materials, syllabus, lesson plans, learning load, curriculum structure)				252	3.41	Good
3	Skills required by the World of Work				254	3.43	Good
4	Ability to analyze / solve problems				253	3.42	Good
Total					1003	3.39	Simply

Source: Researcher's Data, 2024

Table 2 presents the distribution of respondents' answers regarding the curriculum in the Lombok Tourism Polytechnic inlay study program. The total number of respondent response scores was 1003 with an average value of 3.39 which is in the Good enough category, meaning that there still needs to be an increase. The indicator that has the lowest average value is the Graduate Competency Standards indicator (Knowledge, skills, attitudes) including the sufficient category and the one with the highest indicator is the *Skill / skills* required by the World of Work which has a good category.

(3) Lecturer Competency

Based on the data from the distribution of questionnaires consisting of 8 statements of Lecturer Competence as follows:

Table 3. Analysis Implementation Instrument on Lecturer Competency Aspect

No.	Indicator	Total Score	Average	Criteria
1	Classroom Management Skills	277	3.74	Good
2	Briefing on how to work or work steps	182	3.89	Good
3	Ability to deliver teaching materials clearly oriented to real conditions	152	3.38	Simply
4	using the right learning strategies to support higher order thinking skills	152	3.31	Simply
5	Ability to use appropriate learning resources and media	168	3.54	Good
6	Ability to trigger learner engagement	143	3.24	Simply
7	Ability to engage students in project/product-based learning	141	3.31	Simply
8	Ability to evaluate learning	146	3.28	Simply
Total		1361	3.46	Good

Source: Researcher's Data, 2024

Table 3 presents the distribution of respondents' answers regarding the competence of lecturers in the *teaching factory* program for students of the Lombok Tourism Polytechnic catering study program. The total number of respondent response scores was 1361 and an average value of 3.46 which is included in the Good category. The indicator that has the lowest average value is the indicator of the ability to trigger learner involvement, including the sufficient category and the highest indicator is the *direction of how to work or work steps* which has a good category.

3.1.1.2. Competence of waiters in the Lombok Tourism Polytechnic inlay study program students

Of the 74 respondents who have filled out the questionnaire, the answers regarding the Competence of Waiters as measured by 6 questions will be described as follows:

Table 4. Analysis Implementation Instrument on the Competency Aspects of Waiters

No.	Indicator	Actual Score	Average	Ref
1	perform creative and entertaining ways that are technically related to their job when serving guests.	143	3.34	Simply
2	have communication skills when talking to customers	141	3.34	Simply
3	have knowledge of the products or menus offered by the hotel	144	3.34	Simply
4	have a good knowledge of table service (Table Settings)	141	3.27	Simply
5	multitasking in one job	147	3.26	Simply
6	controlling certain circumstances while working	151	3.12	Simply
	Total	867	3.28	Simply

Source: Researcher's Data, 2024

Table 4 presents the distribution of respondents' answers regarding the competence of waiters in the teaching factory program for students of the Lombok Tourism Polytechnic catering study program. The total number of respondent response scores was 867 and an average value of 3.28 which is included in the Fair category. The indicator that has the lowest average value is the indicator of controlling certain conditions while working including the sufficient category and the highest indicator is having knowledge of the products or menus offered by the hotel *which* has a sufficient category.

(1) Multiple Linear Regression Analysis

This analysis aims to determine whether *Teaching Factory* has an influence on Student Stewardship Competencies in Lombok Tourism Polytechnic inlay study program students, so a series of data analysis processes will be carried out using simple linear regression analysis including regression models, hypothesis testing (t-test) and correlation analysis and the coefficient of determination. But before doing regression analysis some assumptions must be met,

namely the Normality Test. Classical assumption testing is carried out first before the formation of the regression model, so that the regression model formed produces estimates that meet the BLUE (*best linear unbiased estimated*) criteria.

Classical Assumption Testing

a. Normality Test

The normality test can be done with a statistical test, namely the *Kolmogorov-Smirnov* test, where if the *p-value* > 0.05 then the data is normally distributed. By using the IBM SPSS version 23 program, the one-sample *Kolmogorov-Smirnov* (K-S) test results were obtained as follows:

Table 5. Data Normality Test with One-Sample Kolmogorov-Smirnov Test

One-Sample Kolmogorov-Smirnov Test		Unstandardized Residual
N		74
Normal Parameters ^{a,b}	Mean	.0000000
	Std. Deviation	2.23149021
Most Extreme Differences	Absolute	.063
	Positive	.055
	Negative	-.063
Test Statistic		.063
Asymp. Sig. (2-tailed)		.200 ^{c,d}

- a. Test distribution is Normal.
- b. Calculated from data.
- c. Lilliefors Significance Correction.
- d. This is a lower bound of the true significance.

Source: SPSS 25, 2024

Based on the calculation results in Table 5 using SPSS, it can be seen that the significance value of the *Kolmogorov Smirnov* test is 0.196 greater than 0.05. So it can be concluded that the data is normally distributed, so that simple regression tests can be carried out.

b. Heteroskedasticity Test

A good model requires being free from heteroscedasticity problems. The basis for deciding whether or not there is a heteroscedasticity problem is by graphical analysis with a *scatter plot*. By using SPSS 25, the *scatter plot* graph is used to detect the presence or absence of heteroscedasticity symptoms, as follows:

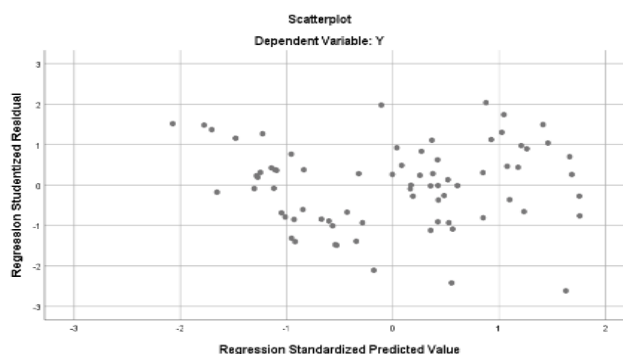


Figure 1. Heteroscedasticity Test with *Scatterplot*

Source: Data Processing with SPSS 25, 2024

Based on Figure 1, the absence of heteroscedasticity is apparent, as the plot displays no discernible pattern. The points are scattered randomly both above and below the zero line on the Y-axis, indicating that the residuals exhibit

constant variance across observations. This consistency suggests that the assumption of homoscedasticity holds true for this model.

(2) Simple Linear Regression Model

Multiple linear regression models are used to determine the equation model of the facilities and infrastructure variables, curriculum and lecturer competence on waiter competence, so the results of multiple linear regression calculations are obtained as follows:

Table 6. Regression Analysis Results

Coefficients ^a					
Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
1 (Constant)	-2.580	1.650		-1.563	.122
X1	.502	.177	.249	2.840	.006
X2	.326	.136	.207	2.400	.019
X3	.463	.080	.510	5.766	.000

a. Dependent Variable: Y

Source: Data Processing with SPSS 25, 2024

In table 6, the beta coefficient is obtained for each variable so that a multiple linear regression equation can be formed as follows:

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + e$$

$$Y = -2.580 + 0.502 (X_1) + 0.326 (X_2) + 0.463 (X_3)$$

where:

In this study, the competence of waiters (Y) is modeled as a function of various independent variables, including facilities and infrastructure (X1), curriculum (X2), and lecturer competence (X3). The regression equation can be expressed as follows: $Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + e$, where β_0 represents the regression constant that indicates the baseline level of waiter competence when all independent variables are equal to zero. The coefficients $\beta_1, \beta_2, \beta_3$ reflect the magnitude and direction of the impact that each independent variable has on waiter competence, allowing for an understanding of how enhancements in facilities, curricular improvements, and lecturer qualifications contribute to the overall competencies of the students. Additionally, the term e accounts for any confounding factors that may influence waiter competence but are not explicitly included in the model, ensuring that the analysis captures the complexity of the educational environment.

(3) Hypothesis Test

- Simultaneous Test (F-test)

The hypotheses to be proposed and proven are as follows:

Hypothesis

- $H_0: \beta_1 = \beta_2 = \beta_3 = 0$

- $H_a: \beta_1 \neq \beta_2 \neq \beta_3 \neq 0$

Testing the hypothesis simultaneously using the F statistical test at the α (5%) level of significance and degree of freedom $df_1 = k = 3$ and $df_2 = n - (k + 1) = 100 - (3 + 1) = 96$ so that the F-Table = 2.699 is obtained. Where the criteria for simultaneous hypothesis test assessment are:

- $F_{count} > 2.699$ and the significance value is less than 0.05 then it is rejected.
- $F_{count} < 2.699$ and the significance value is more than 0.05, so it is accepted.

The F test results are obtained shown on Table 7.

Table 7. Simultaneous Test Results

		ANOVA ^a			
Model		Sum of Squares	df	Mean Square	F
1	Regression	946.891	3	315.630	60.780
	Residuals	363.507	70	5.193	
	Total	1310.398	73		

a. Dependent Variable: Y

b. Predictors: (Constant), X3, X2, X1

Source: Data Processing with SPSS 25, 2024

Referring to Table 7, the Fcount value of 60.780 exceeds the Ftable value of 2.699, and the significance level (0.00) is less than 5%. As a result, H0 is rejected, meaning that the regression model is valid. This indicates that there is a simultaneous significant effect of facilities and infrastructure, curriculum, and lecturer competence on the competency of waiters in the inlay study program at Lombok Tourism Polytechnic.

- *Partial Test (t-test)*

The hypotheses to be proposed and proven are as follows:

The research posits three primary hypotheses to assess the relationships between the independent variables and the competence of waiters. Hypothesis 1 examines the effect of facilities and infrastructure on waiter competence, formulated as $H_0: \beta_1 = 0$ and $H_a: \beta_1 \neq 0$ (indicating that there is no significant effect) and $H_a: \beta_1 \neq 0$ (suggesting a significant effect exists). Hypothesis 2 focuses on the curriculum's impact, stated as $H_0: \beta_2 = 0$ and $H_a: \beta_2 \neq 0$, similarly testing for significance. Finally, Hypothesis 3 investigates the influence of lecturer competence, represented by $H_0: \beta_3 = 0$ and $H_a: \beta_3 \neq 0$. By testing these hypotheses, the study aims to determine the extent to which each variable contributes to enhancing the competencies of students in the Lombok Tourism Polytechnic inlay study program.

Testing the meaning of the partial path coefficient used the t test at the significance level (5%) and the degree of freedom $df = n - (k + 1) = 100 - (3 + 1) = 96$ obtained the tTable value at the two-party t distribution value of 1.985. Where the decision-making criteria used are :

- T-count > 1.985 and the significance value is less than 0.05, so it is rejected.
- T-count < 1.985 and the significance value is more than 0.05, so it is accepted.

The path coefficient significance test is described as below:

Table 8. Partial Test Results

Coefficients ^a					
Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
1 (Constant)	-2.580	1.650		-1.563	.122
X1	.502	.177	.249	2.840	.006
X2	.326	.136	.207	2.400	.019
X3	.463	.080	.510	5.766	.000

a. Dependent Variable: Y

Source: Data Processing with SPSS 25, 2024

In the first hypothesis, it is found that the tcount value of 2.840 is greater than the ttable of 1.985 and sig. (0.006) is smaller than the significance level (5%) so that H0 is rejected, there is a significant influence between facilities and infrastructure in the teaching factory on waiter competence, with a positive regression coefficient indicating that the more controlled the *teaching factory* facilities and infrastructure in the Lombok Tourism Polytechnic inlay study program students, the higher the impact on waiter competence and vice versa if the *teaching factory* facilities and infrastructure in the Lombok Tourism Polytechnic inlay study program students are getting worse, it will have an impact on the lower waiter competence.

In the second hypothesis, it is found that the tcount value of 2.400 is greater than the ttable of 1.985 and sig. (0.019) is smaller than the significance level (0.05) so that H0 is rejected, which means that there is a significant influence between the curriculum in the teaching factory on waiter competence, with a positive regression coefficient which indicates that the better the curriculum in the teaching factory provided by the Lombok Tourism Polytechnic inlay study program, the higher the impact on waiter competence, and vice versa, the less affordable the curriculum in the teaching factory provided by the Lombok Tourism Polytechnic inlay study program, the lower the impact on waiter competence.

In the third hypothesis, it is obtained that the tcount value of 3.719 is greater than the ttable of 1.985 and sig. (0.000) is smaller than the significance level (0.05) so that H0 is rejected, which means that there is a significant influence between lecturer competence on waiter competence, with a positive regression coefficient indicating that the better the competence of teaching factory program lecturers in Lombok Tourism Polytechnic inlay study program students, the higher the impact on waiter competence, and vice versa the worse the competence of lecturers, the lower the impact on waiter competence.

- Correlation Analysis

Correlation analysis examines the relationship between two variables—one acting as the independent variable and the other as the dependent variable. In this research, the Pearson Correlation Test is used to measure the strength and direction of these relationships. The correlation coefficient ranges from -1 to +1, with values near -1 or +1 indicating a strong relationship and values close to 0 signifying a weak relationship. The correlation results, processed using SPSS, are as follows

Table 9. Correlation Analysis

Model Summary^b				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.850 ^a	.723	.711	2.27881
	a. Predictors: (Constant), X3, X2, X1			
	b. b. Dependent Variable: Y			

Source: Data Processing with SPSS 25, 2024

The results of the above calculations obtained a value of R = 0.850 this value indicates a very strong relationship between facilities and infrastructure, curriculum, and lecturer competence with waiter competence. The correlation value is positive which indicates that the better the facilities and infrastructure, curriculum, and competence of lecturers, the competence of waiters will also increase and vice versa the worse the facilities and infrastructure, curriculum, and competence of lecturers, the competence of waiters will decrease.

- Coefficient of Determination Analysis

The coefficient of determination is used to assess the proportion of variance in the dependent variable that is explained by the independent variables in the model. As stated by Priyatno (2015: 156), this coefficient helps quantify the percentage of influence that the independent variables, collectively, exert on the dependent variable. The formula for the coefficient of determination is as follows:

$$Kd = r^2 \times 100\% = 0,850^2 \times 100\% = 0,723 \times 100\% = 72,3\%$$

This indicates that 72.3% of the variation in waiter competence can be attributed to factors such as facilities, infrastructure, curriculum, and lecturer competence, while the remaining 27.7% is influenced by other variables not included in the study.

3.2. Discussion

The Teaching Factory is an educational approach that takes place in actual work environments to address the disparity between academic knowledge and the practical demands of the industry and business sectors. Its purpose is to cultivate essential character traits and work ethics, including discipline, responsibility, honesty, cooperation, leadership, and integrity, while also enhancing the quality of learning outcomes that prepare students to effectively produce goods and services (Sunaryo et al., 2021; Yoto & Marsono, 2020). Based on the results of research on the facilities and infrastructure aspects of the *teaching factory* program for students of the Lombok Tourism Polytechnic

catering study program. The total number of respondent response scores was 697 which is included in the good category. The indicator that has the lowest average value is the indicator Equipment in accordance with the standards of the industrial world or the world of work including the good category and the one with the highest indicator is the Practicum Room Standard which has a good category. Aspects of the curriculum in the Lombok Tourism Polytechnic inlay study program. The total number of respondent response scores was 1003 with an average value of 3.39 which is in the Good enough category, meaning that there still needs to be an increase. The indicator that has the lowest average value is the Graduate Competency Standards indicator (Knowledge, skills, attitudes) including the sufficient category and the one with the highest indicator is the *Skill / skills* required by the World of Work which has a good category. Aspects of lecturer competence in the *teaching factory* program for students of the Lombok Tourism Poltechnic culinary study program. The total number of respondent response scores was 1361 and an average value of 3.46 which is included in the Good category. The indicator that has the lowest average value is the indicator of the ability to trigger learner involvement, including the sufficient category and the highest indicator is the *direction of how to work or work steps* which has a good category.



Figure 1. Students Serving Commercial Guests: "Practical Experience: Students Engaging in Hospitality Service for Commercial Guest

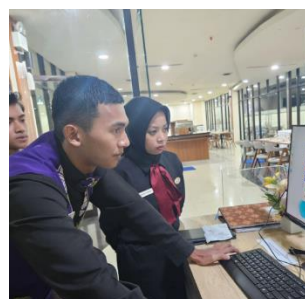


Figure 1 Peer Tutors Utilizing Hotel Reservation Systems: "Collaborative Learning: Peer Tutors Enhancing Proficiency in Hotel Reservation Systems"

To enhance the understanding of the importance of organizational support and its impact on employee performance, it's crucial to consider the practical context in which these theories are applied. For instance, the Figure 1 depicting students engaging in commercial guest service activities highlights the real-world application of skills acquired through the Teaching Factory model. This hands-on experience not only helps students develop their technical competencies but also cultivates essential soft skills, such as customer service and teamwork. Moreover, the illustration of peer tutoring in utilizing hotel reservation systems demonstrates an effective method for fostering a collaborative learning environment (Figure 1). This approach allows students to learn from one another, reinforcing their understanding of key processes while promoting leadership and communication skills.

The importance of organizational support in enhancing employee performance can be found in the work of (Ohunakin & Olugbade, 2022; Siraj et al., 2022). They emphasize that effective human resources depend significantly on the organization's ability to support its employees in maintaining work quality (Gumilar & Mandalia, 2023; Suardana et al., 2020). This support is crucial because it ensures that employees are not only equipped with the necessary competencies but also motivated to perform at their best. As they state, "Human resources owned by the organization will not provide maximum results if there is no support from the organization to maintain the quality of work or employee performance." Further reinforcing this idea, (Prasetyo et al., 2022) argue that an organization's success is largely influenced by its employees' performance, which is contingent upon several factors, including leadership motivation. This highlights a twofold relationship: while employees must be competent and motivated, organizations have a vital role in creating an environment that fosters these qualities.

Moreover, the hospitality sector exemplifies how specific skills, such as upselling techniques, are critical to improving service quality. (Riska Veronika et al., 2024) reveals that despite the effective implementation of these techniques at Ticket's Café, the employees' performance is constrained by inadequate staffing. Similarly, (Tukunang, 2020) emphasizes that "the competency of waitresses was very influential on the quality of restaurant services," underscoring the direct correlation between employee competencies and overall organizational success. This relationship illustrates the need for both individual skills and systemic support within organizations.

The teaching factory model represents an innovative educational strategy designed to bridge the gap between theoretical knowledge and practical skills required in the industry. One explanation for its significance in vocational education lies in its ability to cultivate essential soft skills—such as teamwork, leadership, and a strong work ethic—alongside technical competencies. By integrating real-world experiences into the curriculum, this model not only enhances student preparedness for the workforce but also fosters a culture of continuous learning and adaptability. As discussed (Wahjusaputri & Bunyamin, 2022), the teaching factory model actively aligns educational outcomes with industry needs, ensuring that graduates are not only knowledgeable but also equipped with the necessary skills to thrive in a rapidly evolving job market. This alignment is crucial, particularly in the context of emerging educational technologies and blended learning environments, which further enhance student engagement and learning effectiveness (Lu, 2021). Thus, the teaching factory model stands as a pivotal approach in advancing vocational education and preparing students for successful careers in various sectors.

Furthermore, the positive influence of teaching factories on students' entrepreneurial intentions, highlighted by (Sutiadiningsih & Mahfud, 2023) suggests that such educational frameworks not only equip students with practical skills but also foster an entrepreneurial mindset. The findings from the Lombok Tourism Polytechnic underscore the effectiveness of this model: a strong correlation (0.850) between the teaching factory model and waiter competence indicates that this educational approach significantly enhances student readiness for industry challenges, with the teaching factory accounting for 72.3% of their competencies.

The teaching factory program for catering students at Lombok Tourism Polytechnic received an overall score of 697, categorizing it as good. Although the facilities and equipment meet industry standards, there remains room for improvement in specific areas. The curriculum, which scored 1003, falls into a "good enough" category, indicating a need for enhancements in graduate competency standards. While the skill requirements align well with industry demands, continuous development is essential to ensure that students are adequately prepared for the workforce.

In terms of lecturer competence, an average score of 3.46 suggests that the instructors are rated as good; however, there is still potential for improvement in engaging students more effectively. The average competence rating among waiters was 3.28, categorized as fair, with knowledge of menu items being the highest-rated skill. Conversely, the ability to control work conditions needs significant enhancement, highlighting the areas where further development is crucial for optimizing student performance and preparedness in the hospitality sector.

The teaching factory model is an essential strategy that equips students with both the theoretical knowledge and practical skills necessary for their future careers, particularly in the hospitality sector. The evidence from the Lombok Tourism Polytechnic study clearly indicates a positive impact of this model on student competencies, which strongly correlates with their preparedness for industry demands. The integration of real-world conditions into the learning process not only enhances technical skills but also promotes crucial soft skills, preparing students to excel in their professional roles. Thus, the implementation of the teaching factory model can significantly improve student outcomes and enhance the overall effectiveness of vocational education, aligning it more closely with the evolving needs of the hospitality industry.

Thus, the integration of technology into the Teaching Factory model is crucial for modern vocational education, particularly in the hospitality sector. The use of digital classrooms and e-learning platforms at Lombok Tourism Polytechnic has fostered a blended learning environment, allowing students to engage in both theoretical and practical learning experiences simultaneously. Field findings indicate that students feel more engaged and motivated when they have access to digital tools that support their learning. By incorporating multimedia resources and interactive tools, educators can enhance student engagement and facilitate deeper learning outcomes (Zhong et al., 2022). Research has shown that leveraging technology in vocational training not only improves students' understanding of complex concepts but also develops essential digital skills increasingly required in the hospitality industry. At Lombok Tourism Polytechnic, respondents noted that access to digital facilities contributed to their competency improvement, aligning with findings that effective implementation of e-learning strategies can significantly enhance vocational education quality. This ensures that graduates are well-prepared to face future career challenges and meet the evolving needs of the industry (Peng et al., 2023). This alignment is critical in the hospitality industry, where the demand for well-rounded professionals continues to rise. Consequently, the teaching factory model not only equips students with the technical skills necessary for employment but also fosters essential soft skills, preparing them to meet the challenges of the modern workforce effectively.

This study has several limitations that need to be considered. First, the primary focus of the research is on the teaching factory program at Lombok Tourism Polytechnic, which may limit the generalizability of the findings to other educational institutions with different contexts. Second, the measurement of competencies and assessments were

conducted subjectively, relying on individual perceptions, which may introduce bias into the results. Additionally, this research only covers specific aspects of competencies and facilities without taking into account external factors such as industry support and labor market conditions that could influence learning outcomes. These limitations should be acknowledged when interpreting the findings and in the development of future research.

4. Conclusion

In conclusion, the study highlights the significant positive impact of the teaching factory model on the competencies of students at Lombok Tourism Polytechnic, particularly in preparing them for the hospitality industry. Despite achieving good overall ratings in facilities, curriculum, and lecturer competence, there are areas for improvement, especially in enhancing waiter competencies and engaging students more effectively. To build on these findings, it is recommended that the institution invest in upgrading equipment and infrastructure to meet industry standards better and continuously update the curriculum to align with evolving industry demands. Additionally, fostering stronger collaboration with industry partners can provide students with valuable practical experiences, further enhancing their readiness for the workforce.

References

- Charles, K., Song, Z., Gottlieb Ndambo Djaya, H., & Author, C. (2023). TVET and Socio-economic Development in Uganda: Lessons from Chinese TVET. *North American Academic Research*, 2023(11).
- Ghafar, Z. N. (2023). Evaluation Research: A Comparative Analysis of Qualitative and Quantitative Research Methods. *Middle East Research Journal of Linguistics and Literature*, 3(02). <https://doi.org/10.36348/merjll.2023.v03i02.003>
- Ghozali, I. (2018). *Aplikasi analisis multivariate dengan program IBM SPSS 25*.
- Gong, X., Kannan, S., & Ramakrishnan, K. (2023). Impact of Mobile Technology on Collaborative Learning in Engineering Studies. *European Journal of Educational Research*, 12(1). <https://doi.org/10.12973/eujer.12.1.397>
- Gumilar, G., & Afrijal, A. (2022). Pengaruh Kualitas Pelayanan Terhadap Kepuasan Pelanggan Pada Kez's Bakery & Restaurant Batam. *Journal of Tourism Sciences, Technology and Industry*, 1(2), 50. <https://doi.org/10.26887/jtsti.v1i2.3306>
- Gumilar, G., & Mandalia, S. (2023). The Influence of Food Quality And Dinescape on Customer Satisfaction in Restaurants in Garut District West Java Province. *JURNAL PENDIDIKAN DAN KELUARGA*, 15(01). <https://doi.org/10.24036/jpk/vol15-iss01/1210>
- Gupta, K. (2022). A review on implementation of 5S for workplace management. *Journal of Applied Research on Industrial Engineering*, 9(3).
- Kasa, M., Kho, J., Yong, D., Hussain, K., & Lau, P. (2020). Competently skilled human capital through education for the hospitality and tourism industry. *Worldwide Hospitality and Tourism Themes*, 12(2). <https://doi.org/10.1108/WHATT-12-2019-0081>
- Li, D., Yu, X., Han, S., Zhu, H., Yuan, Y., Shen, J., Lin, J., Li, X., Gan, Y., & Liu, J. (2021). Data visualization of multiple linear regression analysis practiced by R Studio software. *Chinese Journal of Evidence-Based Medicine*, 21(4). <https://doi.org/10.7507/1672-2531.202008172>
- Lu, D. (2021). Students' Perceptions of a Blended Learning Environment to Promote Critical Thinking. *Frontiers in Psychology*, 12. <https://doi.org/10.3389/fpsyg.2021.696845>
- Lv, Z., Zhu, K., He, X., Zhang, L., He, J., Mu, Z., Wang, J., Zhang, X., & Hao, R. (2023). Phase Unwrapping Error Correction Based on Multiple Linear Regression Analysis. *Sensors*, 23(5). <https://doi.org/10.3390/s23052743>
- Ogbeide, G. C., Fu, Y. Y., & Cecil, A. K. (2021). Are hospitality/tourism curricula ready for big data? In *Journal of Hospitality and Tourism Technology* (Vol. 12, Issue 1). <https://doi.org/10.1108/JHTT-09-2017-0081>

- Ohunakin, F., & Olugbade, O. A. (2022). Do employees' perceived compensation system influence turnover intentions and job performance? The role of communication satisfaction as a moderator. *Tourism Management Perspectives*, 42. <https://doi.org/10.1016/j.tmp.2022.100970>
- Peng, F., Wang, S., & Yan, T. (2023). Enhancing Vocational Education through Innovative Skills Competitions: Challenges and Solutions. *Journal of Contemporary Educational Research*, 7(7). <https://doi.org/10.26689/jcer.v7i7.5071>
- Prasetyo, D., Pitriyani, P., & Hanum, F. (2022). The Effect of Affiliated Motivation, Work Environment, Competency, and Affective Commitment on Performance of Transportation Service Officers, Labuhanbatu District. *Quantitative Economics and Management Studies*, 3(2). <https://doi.org/10.35877/454ri.qems894>
- Ramírez Velásquez, E., Vizcaino Escobar, A. E., & Ramis Palmer, M. C. D. (2019). Competencias socioemocionales en dependiente gastronómico del turismo. Su diferenciación en mujeres y hombres. *Katharsis: Revista de Ciencias Sociales*, ISSN-e 2500-5731, ISSN 0124-7816, N°. 27, 2019 (Ejemplar Dedicado a: Enero-Junio 2019), Págs. 86-101, 27.
- Riska Veronika, Nila Sartika Achmadi, & Dewi Andriani. (2024). The Implementation of Waiters And Waitresses' Upselling Techniques At Ticket's Cafe of Horison Ultima Makassar Hotel. *Pusaka : Journal of Tourism, Hospitality, Travel and Business Event*, 59–65. <https://doi.org/10.33649/pusaka.v2i1.41>
- Singh, V., Sharma, M. P., Jayapriya, K., Kiran Kumar, B., Raj, M. A., Chander, N., & Kumar, B. R. (2023). Service Quality, Customer Satisfaction And Customer Loyalty: A Comprehensive Literature Review. In *Journal of Survey in Fisheries Sciences* (Vol. 10, Issue 4S).
- Siraj, N., Hágen, I., Cahyadi, A., Tangl, A., & Desalegn, G. (2022). Linking Leadership to Employees Performance: The Mediating Role of Human Resource Management. *Economies*, 10(5). <https://doi.org/10.3390/economies10050111>
- Song, S., & Chea, P. (2023). *Vocational Education and Training in Cambodia*. https://doi.org/10.1007/978-981-16-8136-3_44-1
- Suardana, W., Suni, M., & Ridwan, M. (2020). The Influence of Room Prices and Promotion Costs on Hotel Room Occupancy Rates in Palopo City, South Sulawesi. *Jurnal Ad'ministrare*, 6(2). <https://doi.org/10.26858/ja.v6i2.12081>
- Sugiyono. (2020). *Metode Penelitian Kuantitatif, Kualitatif, dan Kombinasi (Mixed Methods)*.
- Sunaryo, A., Widiyanti, W., & Nurjannah, N. (2021). Evaluation of teaching factory in collaboration with PT. Telkom for the adaptability development of vocational school students ICT expertise program using CIPP. *Technium Social Sciences Journal*, 26. <https://doi.org/10.47577/tssj.v26i1.5264>
- Sutiadiningsih, A., & Mahfud, T. (2023). Can the teaching factory model improve the entrepreneurial intentions of vocational high school students? *International Journal of Evaluation and Research in Education*, 12(3). <https://doi.org/10.11591/ijere.v12i3.25652>
- Tukunang, M. M. (2020). PENGARUH KOMPETENSI PRAMUSAJI TERHADAP KUALITAS PELAYANAN RESTORAN DI KOTA TOMOHON. *Jurnal Hospitaliti Dan Pariwisata*, 3(2). <https://doi.org/10.35729/jhp.v3i2.48>
- Wahjusaputri, S., & Bunyamin, B. (2022). Development of teaching factory competency-based for vocational secondary education in Central Java, Indonesia. *International Journal of Evaluation and Research in Education*, 11(1). <https://doi.org/10.11591/ijere.v11i1.21709>
- Yoto, & Marsono. (2020). Implementation of Work-Based Learning at Teaching Factory in Vocational Education. *Jurnal Teknologi, Kejuruan, Dan Pengajaran*, 43(2).
- Zhong, T. C., Mat Saad, M. I., & Che Ahmad, C. N. (2022). Integrating technology-mediated learning in biology education (histology): A systematic literature review. *EDUCATUM Journal of Science, Mathematics and Technology*, 9(1). <https://doi.org/10.37134/ejsmt.vol9.1.5.2022>