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The Impact of Teaching Factory and Industry Partnership on Work Readiness and Employability of Graduates from the Spa and Beauty Expertise Program at SMKN 2 Singaraja, Bali

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ABSTRACT

The Ministry of Education, Culture, Research, and Technology aims to improve Human Resources (HR) quality through the implementation of teaching factories. The teaching factory improves work readiness and increases graduate employment rates. This study aims to: 1) assess the impact of teaching factories on work readiness; 2) evaluate the effect of teaching factories on graduate absorption; 3) examine the influence of industry partnerships on job readiness; 4) explore the effect of industry partnerships on graduate absorption; 5) investigate the relationship between job readiness and graduate absorption; 6) determine the role of teaching factories in graduate absorption through job readiness; and 7) assess the influence of industry partnerships on graduate absorption via work readiness in the Spa and Beauty Expertise Program. Data was collected using a questionnaire distributed via Google Forms, and path analysis was employed for data analysis. The results indicate that: 1) teaching factories positively affect work readiness (significance value = 0.000, $p < 0.05$); 2) teaching factories positively influence graduate absorption; 3) industry partnerships positively impact work readiness; 4) industry partnerships positively affect graduate absorption; 5) job readiness contributes positively to graduate absorption; 6) teaching factories enhance graduate absorption through job readiness; and 7) industry partnerships support graduate absorption through student work readiness in the Spa and Beauty Expertise Program.

Introduction

Producing graduates from Vocational High Schools (SMK) who are capable of entering the workforce and have the capacity to start their own businesses is the primary goal of vocational education. The government has taken initiatives to ensure that vocational school graduates meet the demands of the industry and labor market. To achieve this, the government has developed a roadmap for vocational school development for the period 2010–2014, which includes the following aspects: (1) enhancing adaptive skills, such as applied science and mathematics; (2) improving entrepreneurial skills; (3) strengthening proficiency in national and international languages; (4) enhancing basic competencies in information and communication technology (ICT); and (5) establishing teaching factories (Directorate of Vocational School Development, 2010). Despite these efforts, there remains a significant skills gap between graduates and the expectations of employers, highlighting the need for continuous evaluation and curriculum adjustments to align vocational education with industry trends.

"Vocational education is a form of secondary education that prepares students primarily for employment in specific fields," according to Article 18 of Law No. 20 of 2003 on the National Education System of the Republic of Indonesia. After this law is put into effect, a systematic system of vocational education must be created. In particular, the Ministry of National Education (Depdiknas) states that the following are the goals of Vocational High Schools (SMK): (1) to build a professional mindset and prepare students for the workforce; (2) to give students the tools they need to select a career, compete for jobs, and pursue ongoing self-improvement; (3) to train autonomous mid-level skilled workers capable of fulfilling the demands of the commercial and industrial sectors both now and in the future; and (4) to train graduates to become citizens who are creative, adaptable, and productive. However, these objectives can only be fully realized if vocational education institutions continuously adapt their teaching methodologies to keep pace with technological advancements and evolving industry standards.

In the contemporary era, vocational education plays a crucial role in bridging the skills gap in various industries, particularly in fields like beauty and wellness, which demand specialized knowledge and practical skills (Direktorat Pembinaan SMK, 2010). The beauty industry has witnessed rapid growth globally, leading to a high demand for qualified professionals who can meet the industry's diverse needs (Mufidah, Lina & Rachmawati, 2021). As a result, educational institutions offering programs in beauty and wellness, such as the SPA and Beauty Expertise Program at SMKN 2 Singaraja, are pivotal in preparing students to enter this competitive job market.

However, aligning educational outcomes with industry expectations remains a significant challenge, despite substantial efforts by vocational schools to equip students with necessary competencies. One of the main challenges is the dynamic nature of the beauty and wellness industry, where new trends, techniques, and consumer preferences constantly evolve. Without continuous updates in training and curriculum, vocational graduates risk falling behind in terms of industry relevance (Alfaridh et al., 2019).

The SPA and Beauty Expertise Program at SMKN 2 Singaraja is designed to provide students with hands-on training in skin and hair care, makeup artistry, and other beauty-related services. As part of the program's efforts to ensure that students are well-prepared for employment in the beauty and wellness industry, SMKN 2 Singaraja has implemented a "teaching factory" model. This model is designed to simulate real-world industry settings and provide students with practical, on-the-job experience. By integrating practical training within a controlled learning environment, students gain firsthand exposure to industry demands while being guided by instructors who bridge the gap between theory and practice (Anwar et al., 2023). Despite these efforts, the tracer study conducted between 2021 and 2023 has revealed mixed outcomes in terms of graduate employment rates and their alignment with the beauty industry's needs.

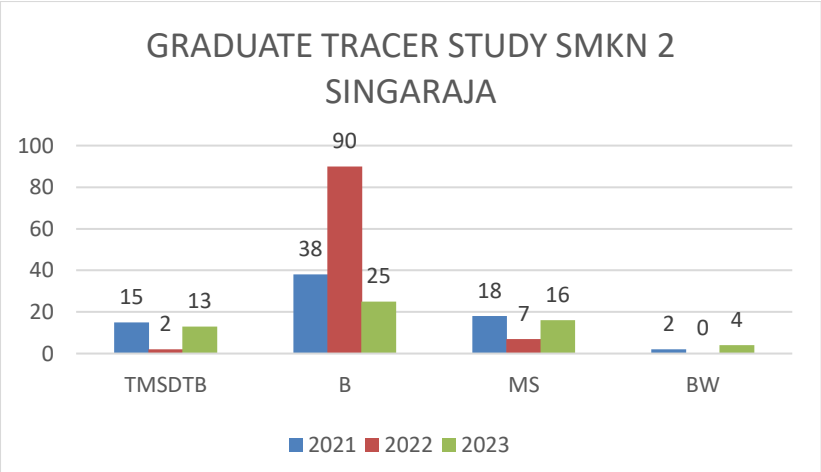

Fig 1: Tracer Study

The tracer study data from 2021-2023 provides valuable insights into the post-graduation paths of students enrolled in the SPA and Beauty Expertise Program at SMKN 2 Singaraja. In 2021, of the 73 graduates, 38 found employment, 18 pursued further studies, 2 started their own businesses, and 15 did not engage in either further study or employment. The data for 2022 shows that the number of graduates securing employment rose significantly to 90, with 7 opting for further education. However, there were no graduates who started businesses that year. In 2023,

employment numbers dropped to 25, with 16 continuing their studies and 4 becoming entrepreneurs, while 13 did not pursue further education or work. These variations in employment outcomes highlight the fluctuating nature of job opportunities in the beauty industry and suggest that additional strategies may be needed to improve job placement and career readiness among graduates.

While the data suggests that a significant portion of graduates find employment, it also highlights that many students are not entering jobs directly related to their field of study. This discrepancy raises concerns about the effectiveness of the curriculum, the role of teaching factories, and the overall preparation of students for the job market (Sani, R. A., Dwiyono. G. & Santosa, 2020). The high number of students not continuing in the industry or their field of expertise indicates a possible misalignment between the skills taught in the program and those demanded by employers in the beauty and wellness sector (K et al., 2007). Moreover, the growing competitiveness of the job market means that vocational graduates must not only master technical skills but also develop strong interpersonal, entrepreneurial, and digital literacy skills to secure sustainable employment (Kyriacou, 2011).

Despite the significant effort invested in preparing students for the workforce, the tracer study results indicate that the beauty industry has not fully absorbed the graduates of the SPA and Beauty Expertise Program (Purnamawati & Yahya, 2019). There are multiple factors at play, including industry employers' lack of confidence in the practical skills of graduates (Caballero et al., 2011). Observations from various stakeholders suggest that many salon owners are highly selective in hiring new employees, despite the fact that not all workers in the industry possess the necessary skills (Sagita et al., 2020). This selective hiring process has led to concerns that SMK graduates, despite their training, are not always viewed as fully competent by industry players. This underscores the importance of structured internships, mentorship programs, and direct industry engagement to provide students with real-world exposure before graduation.

One of the key issues contributing to this lack of industry absorption is the gap in expectations between the competencies taught at SMK and the standards required by the industry (Purnawan et al., 2020). Many graduates from SMKN 2 Singaraja are not finding work in the areas they have been trained in, especially in jobs that require specialized beauty skills. This misalignment between the curriculum and industry needs is a critical concern that requires further attention (Maigida et al., 2013).

Another factor contributing to the gap in industry absorption is the issue of self-confidence

among graduates (Alimudin et al., 2019). Many students who successfully complete the SPA and Beauty Expertise Program struggle with confidence in their abilities, which can hinder their chances of securing employment. The lack of self-assurance can be a significant barrier in the beauty industry, where employees must demonstrate strong interpersonal skills, creativity, and the ability to perform under pressure (Prianto et al., 2020). This self-confidence crisis highlights the need for schools to not only teach technical skills but also instill professional attitudes and interpersonal competencies in their students (Azizah et al., 2021).

The concept of the teaching factory has been introduced at SMKN 2 Singaraja as a solution to address these challenges. A teaching factory is designed to replicate a real-world industrial environment within the school setting, offering students hands-on training that mirrors industry practices (Sutiono & Tarmana, 2021). The goal is to expose students to the realities of the workplace and help them develop the practical skills and professional behavior required in the beauty and wellness sector. However, for teaching factories to reach their full potential, a strong synergy between vocational schools and industry stakeholders is required, ensuring that training remains up-to-date with evolving industry standards.

By using the teaching factory model, SMKN 2 Singaraja aims to create an immersive learning environment where students can practice their technical skills in a simulated industry context. This approach not only provides students with the technical expertise required in beauty treatments but also helps them develop other critical skills such as communication, customer service, and problem-solving (Mutaqin et al., 2016). The salon environment offers students the opportunity to interact with real clients, further preparing them for the demands of working in the beauty industry.

However, while the teaching factory provides valuable experience, it is essential to recognize that the lack of a systematic evaluation framework for assessing its effectiveness has limited the ability of the school to measure its impact comprehensively. There is a need for a more structured assessment of how the teaching factory model contributes to graduates' readiness for employment and their absorption into the workforce. Without such evaluations, it is difficult to identify areas for improvement or adjust the teaching factory's operations to better align with industry needs.

Furthermore, the success of the teaching factory is closely tied to the strength of industry partnerships. SMKN 2 Singaraja must collaborate with industry stakeholders to ensure that the skills taught in the teaching factory align with the most current industry practices and standards. Industry partnerships provide a platform for feedback and collaboration, ensuring that the training provided is relevant to the evolving needs of the beauty sector. Strong partnerships also create

opportunities for internships, mentorships, and job placements, which can improve the employment outcomes for graduates.

Despite the challenges faced in fully integrating students into the workforce, the teaching factory model offers great promise in improving both the quality of education and the employability of graduates (Riyanto et al., 2021). Through a more systematic evaluation of teaching factory operations, an enhanced focus on industry partnerships, and an emphasis on student confidence-building, SMKN 2 Singaraja can better prepare its graduates to meet the demands of the beauty and wellness industry. This study aims to explore the impact of teaching factories and industry collaborations on the readiness of graduates for employment, as well as their successful absorption into the workforce. By identifying gaps and potential improvements in the vocational education system, this research seeks to contribute to more effective and industry-relevant training models, ultimately enhancing the employability of vocational school graduates.

This research will investigate the specific influence of teaching factory experiences on graduates' work readiness, confidence, and industry acceptance. Additionally, the study will explore how industry partnerships can enhance the effectiveness of vocational training and improve employment outcomes for graduates. By focusing on these aspects, this study seeks to contribute to a broader understanding of how vocational education can be improved to better serve both students and the industries they are trained to work in.

The primary objective of this study is to analyze how teaching factories and industry collaborations affect the readiness of SPA and Beauty Expertise Program graduates from SMKN 2 Singaraja to enter the workforce. By examining these factors, the research aims to provide actionable insights into how vocational education can be enhanced to better meet industry demands and improve graduate employment outcomes. Ultimately, this study will contribute to the broader field of vocational education by providing evidence-based recommendations for improving curriculum design, teaching methodologies, and industry engagement strategies.

In conclusion, while SMKN 2 Singaraja has made significant strides in developing a teaching factory and fostering industry partnerships, there is still much to be done to ensure that the SPA and Beauty Expertise Program adequately prepares students for success in the beauty and wellness sector. By systematically evaluating the impact of teaching factories and strengthening industry collaboration, this study aims to provide valuable insights into how vocational schools can improve their offerings and increase the employability of their graduates.

Method

This study employs a correlational research design, which aims to investigate the relationships between two or more variables without manipulating them (Ajat Rukajat, 2018). In correlational research, variables are considered correlated if changes in one variable consistently coincide with changes in another, either in the same direction (positive correlation) or opposite directions (negative correlation) (M Teguh Saefuddin1, Tia Norma Wulan2 & 1, 2, 3, 2023). The study utilizes a quantitative approach, which involves presenting data in numerical form to measure and predict social realities, such as human behavior (Syahrizal & Jailani, 2023). Specifically, path analysis is used to examine the causal relationships between several variables within a research model, allowing researchers to determine how certain factors directly or indirectly influence others (Sudaryono, 2011). Simple linear regression is also employed to test the hypotheses regarding these relationships. The research focuses on the implementation of the teaching factory program at SMKN 2 Singaraja, particularly within the Beauty and SPA program, to explore its effect on students' work readiness and employability.

The study was conducted at SMKN 2 Singaraja in Bali, from August 20, 2024, to October 24, 2024. The research population consists of 230 students from the XI and XII classes of the Beauty and SPA program, who have participated in the teaching factory learning model. From this population, a sample of 100 students was selected using simple random sampling. Data was collected through Google Forms questionnaires that assessed the implementation of the teaching factory, students' job readiness, industry partnerships, and graduate absorption. These variables were measured using specialized instruments, each focusing on different aspects of the students' learning and post-graduation outcomes. The validity and reliability of the instruments were tested using SPSS software, ensuring the consistency and accuracy of the data. Path analysis and simple linear regression were then used to examine the causal relationships between the variables and to test the study's hypotheses.

Result and Discussion

Data Description

1. Teaching Factory

Based on the SPSS analysis results for the teaching factory variable, the average value is 33.09, the median is 32, and the mode is 31. The lowest score for the teaching factory is 25, and the highest

score is 40, with a standard deviation of 3.76. The analysis results for the teaching factory variable are shown in the following Table 1.

Table 1. Description of the Industry Partnership Variable

Variabel	Mean	Median	Modus	Min	Max	Standar Deviation	Variance	Range
Teaching factory	33,09	32	31	25	40	3,76	14,14	15

Source: Processed SPSS Data, 2024

The teaching factory variable is divided into two categories: students with a teaching factory that is classified as "poor" and "good." There are 91 students (91.0%) who have a teaching factory classified as "good," and 9 students (9.0%) who have a teaching factory classified as "poor." The frequency distribution of the teaching factory variable is shown in the following Figure 2.

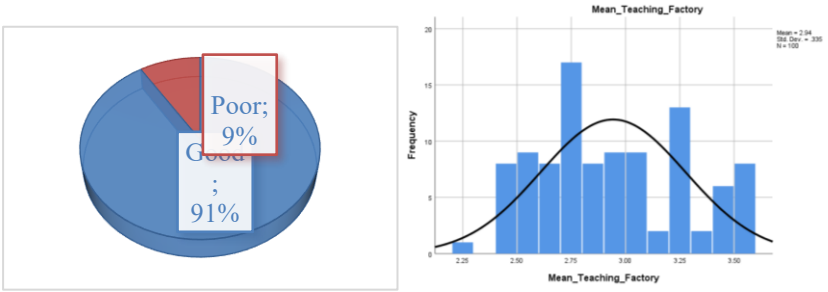

Fig 2: Diagram and Histogram of the Industry Partnership Variable

2. Industry Partnership

Based on the SPSS analysis results for the industry partnership variable, the average value is 30.97, the median is 31, and the mode is 32. The lowest score for the industry partnership is 22, and the highest score is 40, with a standard deviation of 4.59. The analysis results for the industry partnership variable are shown in Table 2.

Table 2. Description of the Industry Partnership Variable

Variabel	Mean	Median	Modus	Min	Max	Standar Deviation	Variance	Range
Industry Partnership	30,97	31	32	22	40	4,59	21,08	18

Source: Processed SPSS Data, 2024

The industry partnership variable is divided into two categories: students with a poor and good industry partnership. There are 84 students (84.0%) with a good industry partnership, and 16

students (16.0%) with a poor industry partnership. The frequency distribution of the industry partnership variable is shown in Figure 3.

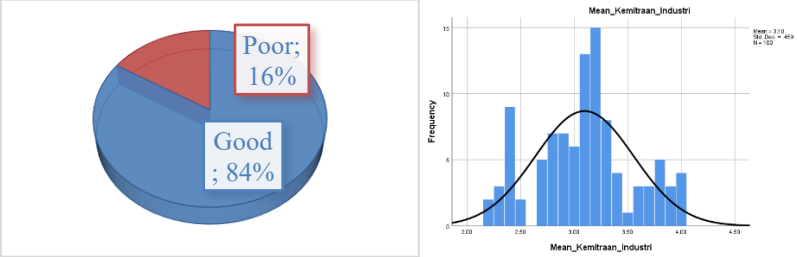

Fig 3: Diagram and Histogram of the Industry Partnership Variable

3. Work Readiness

Based on the SPSS analysis results for the work readiness variable, the average value is 111.69, the median is 113, and the mode is 121. The lowest score for work readiness is 77, and the highest score is 125, with a standard deviation of 10.38. The analysis results for the work readiness variable are shown in Table 3.

Table 3. Description of the Work Readiness Variable

Variabel	Mean	Median	Modus	Min	Max	Standar Deviation	Variance	Range
Work Readiness	111,69	113	121	77	125	10,38	107,79	48

Source: Processed SPSS Data, 2024

The work readiness variable is divided into two categories: students with poor and good work readiness. A total of 95 students (95.0%) fall into the good work readiness group, while 5 students (5.0%) fall into the poor category. The frequency distribution of the work readiness variable is shown in Figure 4.

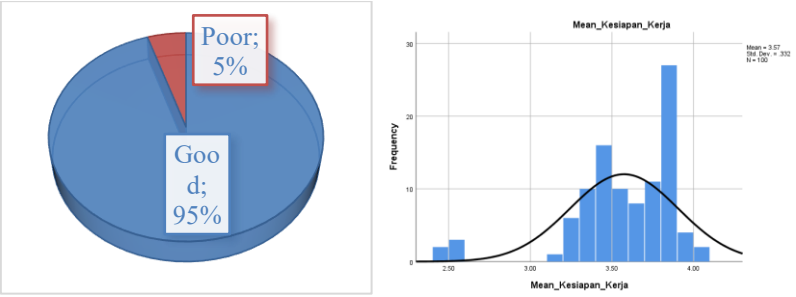

Fig 4: Diagram and Histogram of the Work Readiness Variable

4. Graduate Absorption

Based on the SPSS analysis results for the graduate absorption variable, the average value is 29.77, the median is 30, and the mode is 28. The lowest score for graduate absorption is 24, and the highest score is 34, with a standard deviation of 2.67. The analysis results for the graduate absorption variable are shown in Table 4.

Table 4. Description of the Graduate Absorption Variable

Variabel	Mean	Median	Modus	Min	Max	Standar Deviation	Variance	Range
Graduate Absorption	29,77	30	28	24	34	2,67	7,15	10

Source: Processed SPSS Data, 2024

The graduate absorption variable is divided into two categories: students with poor and good graduate absorption. There are 97 students (97.0%) with good graduate absorption, and 3 students (3.0%) with poor graduate absorption. The frequency distribution of the graduate absorption variable is shown in Figure 5.

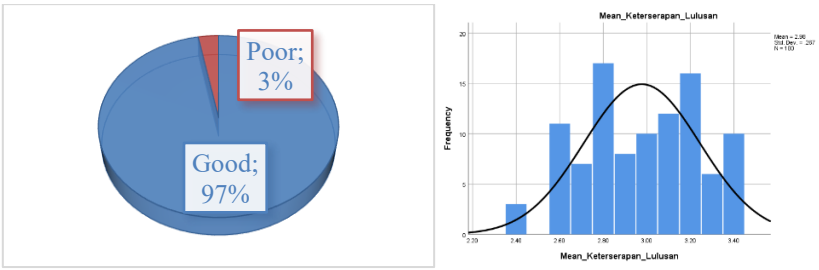

Fig 5: Diagram and Histogram of the Graduate Absorption Variable

Assumption Tests for Analysis

1. Model I (Effect of Teaching Factory on Work Readiness)

a. Normality Test

A normality test was conducted on the unstandardized residuals of the effect of the teaching factory on work readiness using the One Sample Kolmogorov-Smirnov Test. The results of the normality test for Model I are presented in Table 5.

Based on Table 5, the significance value (Sig.) is 0.061, which is greater than 0.05. If Sig. is greater than 0.05, the data is considered normally distributed according to the normality test requirement. This indicates that the data distribution for Model I is normal.

Table 5. Normality Test Results for Model I

One-Sample Kolmogorov-Smirnov Test		Unstandardized Residual
N		100
Normal Parameters[a,b]	Mean	.0000000
	Std. Deviation	8.13705449
Most Extreme Differences	Absolute	.087
	Positive	.061
	Negative	-.087
Test Statistic		.087
Asymp. Sig. (2-tailed)		.061[c]
a. Test distribution is Normal.		
b. Calculated from data.		
c. Lilliefors Significance Correction.		

Source: SPSS data processing results, 2024

2. Model II (Effect of Teaching Factory and Work Readiness on Graduate Absorption)

a. Normality Test

A normality test was conducted on the unstandardized residuals of the effect of teaching factory and work readiness on graduate absorption using the One Sample Kolmogorov-Smirnov Test. The results of the normality test for Model II are presented in Table 6.

Table 6. Normality Test Results for Model II

One-Sample Kolmogorov-Smirnov Test		Unstandardized Residual
N		100
Normal Parameters[a,b]	Mean	.0000000
	Std. Deviation	1.71513175
Most Extreme Differences	Absolute	.086
	Positive	.060
	Negative	-.086
Test Statistic		.086
Asymp. Sig. (2-tailed)		.064[c]
a. Test distribution is Normal.		
b. Calculated from data.		
c. Lilliefors Significance Correction.		

Source: SPSS data processing results, 2024

The significance value (Sig.) is 0.064, which is higher than 0.05, according to Table 6. If the Sig. value is higher than 0.05, the data is considered regularly distributed based on the normality test requirements. This suggests that the Model II data is distributed normally.

b. Multicollinearity Test

Making sure there isn't a strong correlation between independent variables is the goal of the multicollinearity test. High correlations between independent variables are undesirable in a regression model. Multicollinearity can be tested using the Variance Inflation Factor (VIF). Table 7 displays the findings of the multicollinearity test.

Table 7. Multicollinearity Test Results

Coefficients[a]			
Model		Collinearity Statistics	
		Tolerance	VIF
1	Teaching_Factory	.614	1.628
	Graduate Absorption	.614	1.628

a. Dependent Variable: Graduate Absorption

Source: SPSS data processing results, 2024

Table 7 shows that the tolerance values are larger than 0.10 and the VIF values for each independent variable are fewer than 10. This suggests that the independent variables have a poor association with one another. Thus, it can be said that there is no multicollinearity.

c. Heteroscedasticity Test

The purpose of the heteroscedasticity test is to determine whether the residual variance of one observation differs from that of other observations in the regression model. A regression model is considered valid if heteroscedasticity is not present. Heteroscedasticity is tested using the Glejser test. A summary of the heteroscedasticity test results is presented in Table 8.

Table 8. Heteroscedasticity Test Results

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	1.071	1.026		1.044	.299
	Teaching_Factory	-.036	.031	-.146	-1.138	.258
	Work Readiness	.014	.011	.157	1.226	.223

a. Dependent Variable: ABS_Res

Source: SPSS data processing results, 2024

Table 8 shows that the absolute residual (ABS) and the independent variables have significance values larger than 0.05. Thus, it may be said that the regression model shows no indications of heteroscedasticity.

3. Model III (Effect of Industry Partnership on Work Readiness)

a. Normality Test

Using the One Sample Kolmogorov-Smirnov Test, a normality test was performed on the unstandardized residuals of the impact of industry cooperation on work readiness. Table 9 displays the findings of the Model III normalcy test.

Table 9. Normality Test Results for Model III

One-Sample Kolmogorov-Smirnov Test		Unstandardized Residual
N		100
Normal Parameters[a,b]	Mean	.0000000
	Std. Deviation	8.08060183
Most Extreme Differences	Absolute	.085
	Positive	.056
	Negative	-.085
Test Statistic		.085
Asymp. Sig. (2-tailed)		.073[c]

a. Test distribution is Normal.
b. Calculated from data.
c. Lilliefors Significance Correction.
Source: SPSS data processing results, 2024

The significance value (Sig.) is 0.073, which is higher than 0.05, according to Table 9. The data is deemed normally distributed in accordance with the normality test criteria if Sig. is greater than 0.05. This suggests that the Model III data distribution is typical.

4. Model IV (Effect of Industry Partnership and Work Readiness on Graduate Absorption)

a. Normality Test

Using the One Sample Kolmogorov-Smirnov Test, a normality test was performed on the unstandardized residuals of the impact of industry collaboration and job preparedness on graduate absorption. Table 10 displays the findings of the Model IV normalcy test.

The significance value (Sig.) is 0.067, which is higher than 0.05, according to Table 10. The data is deemed normally distributed in accordance with the normality test criteria if Sig. is greater than 0.05. This shows that the Model IV data has a normal distribution.

Table 10. Normality Test Results for Model IV

One-Sample Kolmogorov-Smirnov Test		Unstandardized Residual
N		100
Normal Parameters[a,b]	Mean	.0000000
	Std. Deviation	1.85008556
Most Extreme Differences	Absolute	.086
	Positive	.060
	Negative	-.086
Test Statistic		.086
Asymp. Sig. (2-tailed)		.067[c]

a. Test distribution is Normal.
b. Calculated from data.
c. Lilliefors Significance Correction.
Source: SPSS data processing results, 2024

b. Multicollinearity Test

The multicollinearity test aims to confirm that the independent variables are not strongly correlated with one another. In an effective regression model, it is important for the independent variables to have low correlations. The Variance Inflation Factor (VIF) is a tool used to detect multicollinearity. The outcomes of the multicollinearity test are shown in Table 11.

Table 11. Multicollinearity Test Results

Coefficients[a]			
Model		Collinearity Statistics	
		Tolerance	VIF
1	Industry Partnership	.606	1.651
	Work Readiness	.606	1.651

a. Dependent Variable: Graduate Absorption
Source: SPSS data processing results, 2024

Table 4.11 shows that the tolerance values are larger than 0.10 and the VIF values for each independent variable are fewer than 10. This suggests that the independent variables have a poor association with one another. Thus, it can be said that there is no multicollinearity.

c. Heteroscedasticity Test

The purpose of the heteroscedasticity test is to determine whether the residual variance of one observation differs from that of other observations in the regression model. A regression model is considered valid if heteroscedasticity is not present. Heteroscedasticity is tested using the Glejser test. A summary of the heteroscedasticity test results is presented in Table 12.

Table 12. Heteroscedasticity Test Results

Model		Coefficients[a] Unstandardized Coefficients B	Unstandardized Coefficients Std. Error	Standardized Coefficients Beta	t	Sig.
1	(Constant)	1.662	1.033		1.609	.111
	Industry Partnership	-.024	.027	-.117	-.902	.369
	Work Readiness	.006	.012	.066	.505	.615

a. Dependent Variable: ABS_Res

Source: SPSS data processing results, 2024

According to Table 12, the significance values for the absolute residual (ABS) and the independent variables exceed 0.05. This indicates that there is no evidence of heteroscedasticity in the regression model applied.

Hypothesis Testing

Based on the results of the prerequisite tests conducted for the four models under investigation, it is found that the first and third models met the normality assumption. The second and fourth models met the normality, multicollinearity, and heteroscedasticity assumptions. Since the prerequisite tests have been fulfilled, hypothesis testing is then performed to determine the direct and indirect effects. The direct effect hypothesis test uses multiple linear regression analysis, while the indirect effect hypothesis test uses path analysis and the Sobel test.

1. Direct Effect Hypothesis Test

a. The Effect of Teaching Factory on Work Readiness

The results of the simple linear regression analysis for the first regression model are shown in Table 13.

Table 13. Regression Equation Results for Model I

Model		Coefficients[a] Unstandardized Coefficients B	Unstandardized Coefficients Std. Error	Standardized Coefficients Beta	t	Sig.
1	(Constant)	54.953	7.278		7.550	.000
	Teaching_Factory	1.715	.219	.621	7.845	.000

a. Dependent Variable: Work Readiness

Source: SPSS data processing results, 2024

Table 4.13 indicates that the teaching factory variable's regression coefficient (β1) is 1.715 and its constant (α) value is 54.953. Additionally, Table 4.13 demonstrates that the regression coefficient is 1.715 and the significance value for the teaching factory variable is 0.000 < 0.05 (5% critical value). This finding clarifies how work preparedness is positively impacted by the teaching factory

variable. This demonstrates that the study's initial hypothesis, that "there is an effect of the teaching factory on the work readiness of students in the SPA and Beauty Program," is accepted.

The analysis revealed that the correlation coefficient between the teaching factory and the work readiness of students in the SPA and Beauty Expertise Program is 0.621, indicating that the teaching factory contributes 62.1% to the students' work readiness. These findings are consistent with previous studies, such as (Purnamawati & Yahya, 2019), which examined the effect of the teaching factory on work readiness, finding a positive impact on students' work readiness in the catering services program at SMKN 2 Mojokerto. Similarly, (Purnawan et al., 2020) found that the implementation of teaching factories significantly influences students' work readiness, supporting the idea that this model enhances students' preparation for the workforce. The coefficient of 62.1% suggests that the teaching factory plays a significant role in improving students' work readiness in the SPA and Beauty Expertise Program. This aligns with Yusri and (Sani, R. A., Dwiyono. G. & Santosa, 2020) assertion that the teaching factory model contributes to SMK's vision of producing graduates who are ready for work, entrepreneurial, competitive, and nationally and globally aware.

b. The Effect of Teaching Factory and Work Readiness on Graduate Absorption

The results of the simple linear regression analysis for the second regression model are shown in Table 14.

Table 14. Regression Equation Results for Model II

Model		Coefficients[a] Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	7.849	1.939		4.047	.000
	Teaching_Factory	.344	.059	.484	5.819	.000
	Work Readiness	.094	.021	.367	4.411	.000

a. Dependent Variable: Graduate_Absorption

Source: Processed data from SPSS, 2024

Based on Table 14, the constant (α) value is 7.849, the regression coefficient (β1) for the teaching factory variable is 0.344, and the regression coefficient (β2) for the work readiness variable is 0.094. Table 14 also shows that the significance value for the teaching factory variable is 0.000 < 0.05 (5% critical value), and the regression coefficient is 0.344. This result explains that the teaching factory variable positively influences graduate absorption. This confirms that the second hypothesis proposed in this study, namely "there is an effect of the teaching factory on the graduate absorption of students in the SPA and Beauty Program," is accepted. Additionally, the significance value for the work readiness variable is 0.000 < 0.05 (5% critical value), and the regression coefficient is 0.094.

This result explains that the work readiness variable positively influences graduate absorption. This confirms that the fifth hypothesis proposed in this study, namely "there is an effect of work readiness on the graduate absorption of students in the SPA and Beauty Program," is accepted.

This study supports previous research by (Sudaryono, 2011), which aimed to provide policy recommendations on the implementation of teaching factories as an effort to improve graduate quality in vocational schools. Sudiyono's study indicated that teaching factories positively impact the quality of graduates, although further efforts are needed, particularly involving stronger collaboration with the business and industrial sectors. Similarly, (Maigida et al., 2013) examined the effectiveness of the teaching factory model in enhancing graduate quality, specifically among students in the Agribusiness program, finding a significant improvement in graduate quality through the application of this model. The regression coefficient of 0.344 in this study suggests that teaching factories play a positive role in improving the employability of students in the SPA and Beauty Expertise Program, which is in line with (Widiyastuti et al., 2023) view that teaching factories bridge the gap between theory and practice, providing students with real-world experience to better prepare them for the workforce.

The data description for the teaching factory variable shows high mean values close to the maximum, with lower standard deviations, indicating that most students in the SPA and Beauty Expertise Program view the implementation of the teaching factory positively. Similarly, the employability of graduates also showed high mean values and low standard deviations, indicating that most students' employability is considered good. However, 9% of students rated the teaching factory as poor, and 3% showed low employability. This suggests that a poorly implemented teaching factory can negatively affect graduates' employability, emphasizing the importance of effectively participating in teaching factory activities to improve employment outcomes.

c. The Effect of Industrial Partnership on Work Readiness

The results of the simple linear regression analysis for the third regression model are shown in Table 15. Based on Table 15, the constant (α) value is 67.718, and the regression coefficient (β1) for the industrial partnership variable is 1.420.

Table 15 also shows that the significance value for the industrial partnership variable is 0.000 < 0.05 (5% critical value), and the regression coefficient is 1.420. This result explains that the industrial partnership variable positively influences work readiness. This confirms that the third hypothesis proposed in this study, namely "there is an effect of industrial partnership on work readiness of students in the SPA and Beauty Program," is accepted.

Table 15. Regression Equation Results for Model III

Model		Coefficients[a] Unstandardized Coefficients B	Unstandardized Coefficients Std. Error	Standardized Coefficients Beta	t	Sig.
1	(Constant)	67.718	5.566		12.167	.000
	Industrial Partnership	1.420	.178	.628	7.986	.000

a. Dependent Variable: Work_Readiness

Source: Processed data from SPSS, 2024

The analysis reveals that the correlation coefficient between industry partnerships and the work readiness of students in the SPA and Beauty Expertise Program is 0.628, indicating that industry partnerships contribute 62.8% to students' work readiness. This finding aligns with Judijanto et al. (2024), which explored the impact of school-industry partnerships on career readiness, highlighting positive effects such as practical experience, industry insights, and soft skill development, though challenges like logistical barriers and resource limitations were noted. Similarly, Dau et al. (2019) found significant effects of industrial internships on work readiness, supporting the role of industry partnerships in enhancing career preparation. Furthermore, the data analysis indicates that most students in the SPA and Beauty Expertise Program perceive the industry partnership as beneficial, with high mean values and low standard deviation, reflecting good work readiness. However, 16% of students rated the partnership as poor, and 5% showed lower work readiness, suggesting that inadequate industry partnerships could negatively impact students' readiness for work. Therefore, effective participation in industry partnerships is crucial to improving students' work readiness.

d. The Effect of Industrial Partnership and Work Readiness on Graduate Absorption

The results of the simple linear regression analysis for the fourth regression model are shown in Table 16.

Table 16. Regression Equation Results for Model IV

Model		Coefficients[a] Unstandardized Coefficients B	Unstandardized Coefficients Std. Error	Standardized Coefficients Beta	t	Sig.
1	(Constant)	10.595	2.029		5.221	.000
	Industrial Partnership	.207	.053	.355	3.933	.000
	Graduate Absorption	.114	.023	.444	4.919	.000

a. Dependent Variable: Graduate_Absorption

Source: Processed data from SPSS, 2024

Based on Table 16, the constant (α) value is 10.595, the regression coefficient (β1) for the industrial partnership variable is 0.207, and the regression coefficient (β2) for the work readiness variable is 0.114. Table 16 also shows that the significance value for the industrial partnership variable is 0.000 < 0.05 (5% critical value), and the regression coefficient is 0.207. This result explains that the industrial partnership variable positively influences graduate absorption. This confirms that the fourth hypothesis proposed in this study, namely "there is an effect of industrial partnership on graduate absorption of students in the SPA and Beauty Program," is accepted. Additionally, the significance value for the work readiness variable is 0.000 < 0.05 (5% critical value), and the regression coefficient is 0.114. This result explains that the work readiness variable positively influences graduate absorption. This confirms that the fifth hypothesis proposed in this study, namely "there is an effect of work readiness on the graduate absorption of students in the SPA and Beauty Program," is accepted. This study supports previous research by Azizah (2022), which examined the impact of school-business-industry partnerships on graduate employability, finding significant positive effects.

Azizah (2022) highlighted the importance of managing these partnerships through planning, organization, implementation, and control, including curriculum synchronization, internships, guest lecturers, and recruitment processes. Similarly, Maydatullaela (2023) found that such partnerships contribute to improving the quality of graduates. The regression coefficient of 0.207 indicates that industry partnerships positively influence the employability of students in the SPA and Beauty Expertise Program. This aligns with Alnursa et al. (2022) and Sumaryanto et al. (2023), who emphasized the role of industry partnerships in curriculum alignment, internships, competency certification, and industry recruitment. Data analysis shows that most students in this program perceive the industry partnership as effective, reflected in high mean values and low standard deviation. However, 16% of students rated the partnership as poor, and 3% showed lower employability, indicating that inadequate partnerships could negatively affect graduates' employability. Therefore, active participation in industry partnerships is crucial for improving graduate employability.

2. Indirect Effect Hypothesis Test (Mediation)

a. The Effect of Teaching Factory on Graduate Absorption Through Work Readiness

Based on Figure 6, it is shown that the significance value of the Sobel test is 0.000 < 0.05 (5% critical value). This result explains that there is an indirect effect of the teaching factory on graduate absorption through work readiness. This finding proves that the sixth hypothesis proposed in this

study, namely "there is an effect of the teaching factory on graduate absorption through work readiness of students in the SPA and Beauty Program," is accepted.

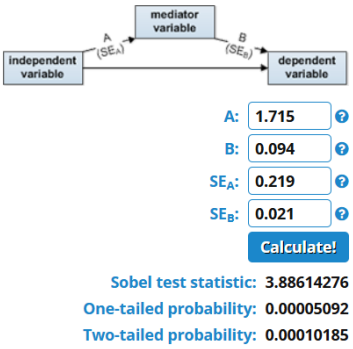

Fig 6: Indirect Effect Sobel Test Results

b. The Effect of Industrial Partnership on Graduate Absorption Through Work Readiness

Based on Figure 7, it is shown that the significance value of the Sobel test is 0.000 < 0.05 (5% critical value). This result explains that there is an indirect effect of industrial partnership on graduate absorption through work readiness. This finding proves that the seventh hypothesis proposed in this study, namely "there is an effect of industrial partnership on graduate absorption through work readiness of students in the SPA and Beauty Program," is accepted.

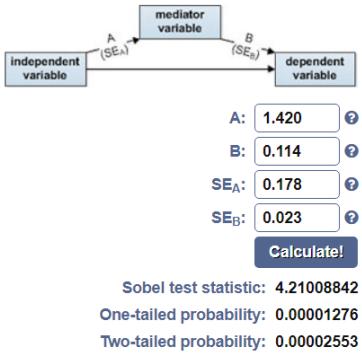

Fig 7: Indirect Effect Sobel Test Results

Conclusion

The teaching factory has an influence on both work readiness and graduate absorption of students in the SPA and Beauty Program, as shown by a significance value of 0.000 (less than 0.05) and regression coefficients of 1.715 and 0.344, respectively. The teaching factory contributes 62.1% to students' work readiness, and students who engage effectively in it are more likely to have better work readiness and graduate absorption. Similarly, industrial partnerships also impact both work

readiness and graduate absorption, with a significance value of 0.000 and regression coefficients of 1.420 and 0.207, respectively. Industrial partnerships contribute 62.8% to work readiness, and students participating effectively in such partnerships tend to experience better graduate absorption. Work readiness positively influences graduate absorption, with a significance value of 0.000, indicating that improving work readiness leads to better graduate absorption. Furthermore, both the teaching factory and industrial partnerships indirectly influence graduate absorption through work readiness. The Sobel test results show significance values of 0.000 and indirect effect regression coefficients of 0.161 and 0.162, respectively, suggesting that effective implementation of the teaching factory and industrial partnerships, along with improved work readiness, leads to higher graduate absorption.

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