

Article

The Effect of Industrial Internship and Campus Environment on the Work Readiness of Students

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Abstract

Purpose: This study aims to analyze the influence of industrial work practice and the campus environment on the work readiness of students at the Faculty of Vocational Studies, Universitas Negeri Malang, and to explain the extent to which both factors contribute to shaping graduates' employability.

Design/Methodology/Approach: This research employs an explanatory quantitative approach with a cross-sectional survey design involving 35 students who have completed or are currently undertaking industrial work practice. Data were collected through Likert-scale questionnaires measuring industrial work practice, campus environment, and work readiness, and were analyzed using descriptive statistics and multiple linear regression with IBM SPSS Statistics at a 5% significance level.

Results/Findings: The results show that industrial work practice and the campus environment have a positive and significant effect on work readiness, with industrial work practice contributing slightly more. Taken together, the two variables explain 65.2% of the variance in students' work readiness.

Originality/Value: This study extends previous research by simultaneously examining the roles of industrial work practice and the campus environment in the context of higher vocational education, thereby providing an empirical basis for designing practice-based and campus-environment-strengthening interventions to enhance graduates' work readiness.

Keywords: work readiness; campus environment; industrial work practice

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1. Introduction

Changes in the global economic structure and the penetration of digital technology over the past decade have transformed competency requirements in the labor market. Industry now demands graduates who not only master theoretical knowledge but also possess practical skills, adaptability, and a work ethic aligned with the dynamics of modern workplaces (Agustian et al., 2024). In Indonesia, the gap between graduates' competencies and labor market needs is still evident in the relatively low absorption of graduates, particularly from vocational education, indicating a skills mismatch between the competencies taught in educational institutions and the actual demands of industry (Agustian et al., 2024). Statistics Indonesia (Badan Pusat Statistik/BPS) reports that the open unemployment rate among graduates of vocational secondary education and some higher vocational education graduates in 2024 remains relatively higher than that of other

educational levels, indicating that the school-to-work transition has not yet been fully optimal (Badan Pusat Statistik, 2025). This condition underscores the importance of strengthening the quality of vocational education, including at the Faculty of Vocational Studies, Universitas Negeri Malang (UM), as a provider of skilled labor.

Work readiness is generally understood as a combination of knowledge, technical skills, soft skills, and work attitudes that enable graduates to adapt and contribute effectively in the workplace (Nabilla et al., 2025). For vocational students, work readiness is a key indicator of the success of the educational process because they are prepared to enter the labor market shortly after graduation (Ardiyanto et al., 2025). This readiness is determined not only by mastery of classroom material but also by direct experience in the business and industrial world, which develops communication skills, problem-solving abilities, teamwork, and an understanding of organizational culture (Ardiyanto et al., 2025; Gustiawan et al., 2025). Thus, the quality of on-campus learning that is aligned with industry needs, together with students' involvement in internship or industrial work practice programs, becomes critical in shaping the work readiness of vocational graduates (Gustiawan et al., 2025).

A number of studies highlight the crucial role of industrial work practice or internships as a bridge between education and the world of work. Industrial work practice provides students with the opportunity to apply the knowledge and skills acquired in the classroom to real work situations, while simultaneously building a work ethic and professional networks. Dau et al. (2019), for example, show that industrial work practice makes a significant contribution to improving the competence and work readiness of vocational students. Situmeang et al. (2023) likewise find that structured vocational training and practice promote improved skills and self-confidence among educated job seekers. These findings indicate that industrial work practice has the potential to be an important determinant of work readiness for learners in vocational pathways.

On the other hand, other studies underscore the role of the campus environment as a contextual factor that also shapes students' work readiness. A conducive campus environment characterized by the quality of the learning process, lecturer support, availability of facilities and infrastructure, academic culture, and career-development services can strengthen students' learning motivation, academic achievement, and career orientation. Curahman (2020) shows that the campus environment and student motivation affect learning achievement, which in turn is related to readiness to face the world of work. Rosmayani et al. (2024) and Mitra and Attiq (2024) affirm that campus support in the form of career guidance, networking with industry, and a positive learning climate contributes to the development of self-efficacy and work readiness. Setyawati (2018) also emphasizes that a learning environment aligned with industry needs is a key factor in preparing graduates to be competitive in vocational and technical labor markets.

Based on this review, it appears that research on work readiness in Indonesia has largely focused on vocational high school (SMK) students, specific study programs, or has examined only one factor, such as industrial work practice or the campus environment, in isolation. Moreover, studies that specifically position students of the Faculty of Vocational Studies as research subjects remain relatively limited, even though this group has characteristics, curricula, and patterns of engagement with industry that differ from non-vocational undergraduate programs. These limitations open up a research space to examine, simultaneously, how industrial work practice and the campus environment contribute to the work readiness of vocational students, particularly at the Faculty of Vocational Studies, Universitas Negeri Malang. Theoretically, the findings of this study are expected to enrich the literature on the determinants of work readiness in higher vocational education; practically, they can serve as a basis for strengthening the design of industrial work practice and for developing a campus environment oriented toward graduates' employability.

Drawing on the above discussion, this study specifically aims to: (1) analyze the effect of industrial work practice on the work readiness of students at the Faculty of Vocational Studies, Universitas Negeri Malang; (2) analyze the effect of the campus environment on the work readiness of students at the Faculty of Vocational Studies, Universitas Negeri Malang; and (3) analyze the simultaneous effect of industrial work practice and the campus environment on the work readiness of students at the Faculty of Vocational Studies, Universitas Negeri Malang.

2. Methods

This study employed a quantitative approach with an explanatory research design, as it aimed to test the influence of industrial work practice and the campus environment on students' work readiness. Data were collected using a survey method with a structured questionnaire distributed to students of the Faculty of Vocational Studies, Universitas Negeri Malang, in the 2024/2025 academic year on a cross-sectional basis (one-time data collection).

The research population comprised all active students of the Faculty of Vocational Studies, Universitas Negeri Malang, who had completed or were undertaking industrial work practice/internships. The sample was determined using proportional stratified random sampling based on study program so that each program was proportionally represented. The minimum sample size was calculated using Slovin's formula with a 5% margin of error, yielding a number of respondents that adequately represented the research population (Sevilla et al., 1960), with the final number consisting of respondents who met the criteria (vocational students who had undertaken an internship and completed the questionnaire). Based on these criteria, 35 fully completed questionnaires from students of the Faculty of Vocational Studies, Universitas Negeri Malang, were obtained and all were used as the sample in the analysis.

The research instrument was a Likert-scale questionnaire ranging from 1 to 5 (1 = strongly disagree, 5 = strongly agree). The industrial work practice variable was measured through indicators such as the alignment of internship tasks with the field of study, the duration and intensity of the internship, the quality of supervision from industry, opportunities for hands-on practice, and understanding of work culture. The campus environment variable was measured through students' perceptions of the quality of teaching, availability of practical/laboratory facilities, lecturer support, career center services, academic atmosphere, and social support on campus. The work readiness variable was measured through students' self-assessments of their mastery of technical competencies, communication skills, teamwork, problem-solving, discipline, adaptability, and confidence in entering the labor market. The development of these indicators adapted constructs of work readiness, internships, and campus environment from previous studies on vocational students (adapted from Gustiawan et al., 2025; Rosmayani et al., 2024; Mitra & Attiq, 2024), with adjustments to the context of the Faculty of Vocational Studies at Universitas Negeri Malang.

Prior to the main data collection, the questionnaire was pilot-tested on a small number of vocational students to ensure the clarity of the items. Validity was tested using item-total (Pearson) correlations, and reliability was assessed using Cronbach's alpha coefficients; items that did not meet the criteria were removed or revised. The collected data were processed using IBM SPSS Statistics through descriptive analysis and multiple linear regression to test the effects of industrial work practice and the campus environment on work readiness at the 5% significance level. This study adhered to research ethics by maintaining the confidentiality of respondents' identities, obtaining voluntary informed consent, and using the data solely for academic purposes.

3. Results

3.1 Validity and Reliability Tests

Before the analysis, the questionnaire instrument was tested for validity and reliability. The validity test used item-total (Pearson) correlations with $\alpha = 0.05$ and showed that all indicators for the industrial work practice variable (X1), campus environment (X2), and work readiness (Y) were valid (r -calculated $>$ r -table 0.148).

Table 1. Hasil Uji Validitas

Variabel	Indikator	r hitung	Status
Industrial Work Practice (X1)	Alignment of internship tasks	0,682	Valid
	Internship duration	0,711	Valid
	Quality of supervision	0,695	Valid
	Opportunities for hands-on practice	0,668	Valid
	Understanding of work culture	0,674	Valid
Campus Environment (X2)	Quality of teaching	0,651	Valid
	Practical/laboratory facilities	0,678	Valid
	Lecturer support	0,662	Valid
	Career center services	0,64	Valid
	Academic atmosphere	0,659	Valid
	Social support	0,647	Valid
Work Readiness (Y)	Technical competence	0,722	Valid
	Communication skills	0,689	Valid
	Teamwork	0,688	Valid
	Problem-solving	0,671	Valid
	Discipline	0,654	Valid
	Adaptability	0,672	Valid
	Self-confidence	0,705	Valid

Table 1 shows that all indicators are declared valid. This means that each questionnaire item is able to measure the intended variable appropriately. In other words, no indicator needed to be eliminated because all of them have correlation values above the required minimum threshold. This good level of validity ensures that the data collected can reflect the actual conditions and more accurately support subsequent analyses.

Table 2. Reliability Test Results

Variabel	Jumlah Item	Cronbach's α	Keterangan
Industrial Work Practice (X1)	5	0,841	Reliabel
Campus Environment (X2)	6	0,829	Reliabel
Work Readiness (Y)	7	0,865	Reliabel

Based on the reliability test results in Table 2, all research variables have Cronbach's alpha values above 0.70, thus all instruments are declared reliable. The Industrial Work Practice (X1) variable obtained a Cronbach's alpha value of 0.841, indicating that its items are consistent and trustworthy for measuring the variable. Furthermore, the Campus Environment (X2) variable has a Cronbach's alpha value of 0.829, which also indicates a good level of internal consistency. Meanwhile, the Work Readiness (Y) variable obtained a Cronbach's alpha value of 0.865, the highest among the three variables, showing that the instrument for this variable is highly reliable. Overall, these values confirm that all instruments in this study have a high level of reliability and are suitable for use in further analyses.

3.2 Descriptive Statistics

Table 3. Descriptive Statistics

Variabel	Mean	SD	Min	Max
Industrial Work Practice	4,02	0,45	2,5	5
Campus Environment	3,85	0,5	2	5
Work Readiness	3,96	0,48	2	5

Based on Table 3, the Industrial Work Practice variable has a mean of 4.02, indicating that respondents' perceptions fall into a very positive category, with relatively low variation in the data. The Campus Environment variable has a mean of 3.85, suggesting that the campus environment is perceived as good, although there is some variation in respondents' assessments. Meanwhile, the Work Readiness variable has a mean of 3.96, indicating that respondents' level of work readiness is in the high category. Overall, the three variables have high average scores and reflect positive evaluations from the respondents.

3.3 Regression Analysis

Table 4. Regression Analysis

Variabel	Koefisien (B)	Std. Error	t	p-value
Constant	0,872	0,312	2,8	0,006*
Industrial Work Practice (X ₁)	0,482	0,081	5,95	0,000*
Campus Environment (X ₂)	0,365	0,078	4,68	0,000*

From Table 4, the regression equation can be written as:

$$Y = 0.872 + 0.482X_1 + 0.365X_2 + \varepsilon$$

The regression results indicate that the model is statistically significant. The constant value of 0.872 means that when X_1 and X_2 are equal to zero, the baseline level of work readiness is 0.872. The Industrial Work Practice variable (X_1) has a coefficient of 0.482 with a p-value of 0.000, indicating a positive and significant effect. This means that the better the implementation of industrial work practice, the higher the respondents' work readiness. Furthermore, the Campus Environment variable (X_2) also has a positive and significant effect, with a coefficient of 0.365 and a p-value of 0.000, showing that a conducive campus environment contributes to higher work readiness. Overall, both X_1 and X_2 are proven to make a significant contribution to improving work readiness.

4. Discussion

The findings indicate that industrial work practice and the campus environment have a positive and significant effect on the work readiness of students at the Faculty of Vocational Studies, Universitas Negeri Malang. The positive regression coefficients for both predictor variables suggest that the better the quality of industrial work practice and the more conducive the campus environment perceived by students, the higher their level of readiness to enter the labor market. In addition, the coefficient of determination (R^2) of 0.652 indicates that the combination of the two variables explains most of the variance in students' work readiness, while the remaining proportion is influenced by factors outside the model. This section further discusses these results based on the influence of each variable and previous empirical findings.

4.1 The Effect of Industrial Work Practice on Work Readiness

The findings show that industrial work practice has a positive and significant effect on students' work readiness. The regression coefficient for industrial work practice is positive and larger than that of the campus environment, indicating that internship or practical experience in the business and industrial world is one of the main determinants

of vocational students' work readiness. The more relevant the tasks performed are to the field of expertise, the more intensive the supervision from field supervisors, and the greater the opportunity for students to engage in real work activities, the higher their perceived work readiness.

These results are consistent with the findings of Dau et al. (2019), who reported that industrial work practice makes a significant contribution to improving the competence and work readiness of vocational students. They show that industrial work practice not only enriches technical experience but also shapes discipline, responsibility, and an understanding of work culture. Setyawati (2018) likewise concludes that industrial work practice experience has a positive effect on the work readiness of vocational high school (SMK) students, particularly when the practice is supported by adequate vocational guidance and family support. In the context of higher vocational education, Situmeang et al. (2023) emphasize that structured vocational training and practice can enhance the skills and self-confidence of educated job seekers.

The consistency between the present findings and these prior studies indicates that the logic of the role of industrial work practice as a "bridge" between education and the world of work also applies to vocational students in higher education. Students not only test the technical skills acquired on campus, but also learn to manage work demands, interact with supervisors and colleagues, and understand performance standards in industry. Thus, the quality of the design and implementation of industrial work practice including the selection of industry partners, clarity of job descriptions, and supervision mechanisms plays a crucial role in shaping graduates' work readiness.

4.2 The Effect of the Campus Environment on Work Readiness

In addition to industrial work practice, this study also finds that the campus environment has a positive and significant effect on students' work readiness. A conducive campus environment includes the quality of the learning process, lecturer support, availability of facilities and infrastructure, an academic climate that encourages active participation, as well as career-development services and networking with industry. Students who perceive adequate academic and non-academic support tend to report higher levels of work readiness, because they feel they possess sufficient knowledge, skills, and career information to enter the labor market.

This finding is in line with Curahman (2020), who shows that the campus environment and student motivation affect learning achievement, which in turn is related to readiness to face post-graduation demands. Rosmayani et al. (2024) also find that self-efficacy, career guidance, and the campus environment contribute to the work readiness of final-year students. Adequate campus support helps students design career plans, strengthen their self-confidence, and understand competency requirements in the labor market. Similarly, Mitra and Attiq (2024) affirm that training, social support, and self-efficacy reinforced through campus programs play an important role in building students' work readiness.

In the context of the Faculty of Vocational Studies, a campus environment that is aligned with industry needs such as practice-based curricula, real projects, involvement of industry practitioners in teaching, and soft-skill development activities can accelerate the internalization of work-related competencies among students. Although the regression coefficient for the campus environment is slightly lower than that for industrial work practice, the results indicate that the campus still plays a strategic role as a "preparation ground" before students enter the world of work. The campus provides the foundational knowledge and skills, while industrial work practice concretizes this foundation in real work situations.

4.3 The Joint Effect of Industrial Work Practice and the Campus Environment

Taken together, industrial work practice and the campus environment have a significant joint effect on students' work readiness. The coefficient of determination (R^2) of 0.652 shows that 65.2% of the variance in work readiness can be explained by the combination of these two variables, while the remaining 34.8% is influenced by other factors outside the model. This indicates that industrial work practice and the campus environment do not operate in isolation, but rather complement each other in shaping vocational students' work readiness. Industrial work practice provides direct exposure to the world of work, while the campus environment offers the conceptual foundation and soft-skill training needed to interpret and maximize the benefits of that practice experience.

These findings are consistent with previous research that highlights the importance of synergy between practical experience and the quality of the learning environment. Dau et al. (2019) and Setyawati (2018) stress that industrial work practice will be more effective when supported by relevant learning and systematic guidance. On the other hand, Curahman (2020), Rosmayani et al. (2024), and Mitra and Attiq (2024) emphasize that a supportive campus environment including career guidance services and linkages with the business and industrial world helps students integrate learning experiences with career planning. Thus, the present study reinforces the view that work readiness is the result of interaction between structural factors at the campus level and direct experiences in the world of work.

The fact that the R^2 value does not reach 1.00 also indicates that work readiness is a multidimensional construct that cannot be fully explained by these two variables alone. Other factors that may influence work readiness include career self-efficacy, career adaptability, family support, part-time work experience, involvement in student organizations, and the condition of the local labor market (Mitra & Attiq, 2024). The limitations of this study namely the relatively small sample from a single faculty and the cross-sectional design also need to be considered when generalizing the findings. Nevertheless, this study makes an important contribution by demonstrating that, in the context of higher vocational education, the combination of high-quality industrial work practice and a supportive campus environment is a key factor in building students' work readiness.

5. Conclusions

Based on the findings, it can be concluded that industrial work practice and the campus environment have a positive and significant effect on the work readiness of students at the Faculty of Vocational Studies, Universitas Negeri Malang. Industrial work practice makes a relatively larger contribution than the campus environment; however, the two factors complement each other and jointly explain the variance in students' work readiness. These findings confirm that a combination of internship experiences that are relevant to the field of study and a conducive academic environment is a crucial prerequisite for shaping the work readiness of vocational graduates.

In practical terms, the results of this study encourage higher education institutions to strengthen partnerships with industry, improve the quality of supervision and practice facilities, and optimize the services provided by career centers. At the same time, students are encouraged to actively engage in internship activities and make full use of campus resources to develop both the technical competencies and soft skills required in the world of work.

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