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# The Effect of Internship Experience, Soft Skills, and Hard Skills on Work Readiness: The Mediating Role of Self-Efficacy

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**Abstract**

This study aims to analyze the influence of Internship Experience, Soft Skills, and Hard Skills on Work Readiness, with Self-Efficacy as a mediating variable among university alumni in Sidoarjo. This research employed a quantitative method with a causal approach. The population consisted of 230 university alumni, and the sample was selected using a non-probability sampling technique, specifically purposive sampling, based on predetermined criteria established by the researcher. Data were collected through questionnaires using a Likert scale. Data analysis was conducted using Structural Equation Modeling–Partial Least Squares (SEM-PLS) with the assistance of SmartPLS 4 software. The results indicate that Internship Experience, Soft Skills, and Hard Skills have a positive and significant effect on Work Readiness. In addition, Self-Efficacy has a positive and significant effect on Work Readiness. Furthermore, Self-Efficacy is able to mediate the relationship between Internship Experience, Soft Skills, and Hard Skills and Work Readiness. These findings suggest that improving the quality of internship experiences, soft skills, and hard skills, supported by strong self-confidence, can enhance work readiness among university alumni in Sidoarjo. This study is expected to contribute theoretically to the development of research on factors affecting Work Readiness and to serve as a reference for students, higher education institutions, and companies in improving work readiness through the development of Internship Experience, Soft Skills, Hard Skills, and Self-Efficacy.

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## 1. Introduction

The increasingly competitive and digitally transformed labor market requires university graduates to possess competencies that extend beyond academic knowledge. Employers expect graduates to combine discipline-specific knowledge with transferable competencies, adaptability, digital competence, and the ability to contribute effectively in organizational settings (Borg et al., 2025; Dinda et al., 2026). Recent employer-based evidence further indicates that interpersonal relations, communication, teamwork, self-management, critical thinking, and problem-solving have become increasingly important in graduate recruitment and employability (Osman et al., 2025; Vázquez-Rodríguez et al., 2025). Consequently, higher education institutions need to develop students' work-related competencies before graduation to facilitate a more effective transition from education to employment (Borg et al., 2025).

The urgency of strengthening graduate work readiness is also reflected in Indonesia's labor market conditions. Indonesia's open unemployment rate reached 4.85% in August 2025, while the unemployment rate among individuals aged 15–24 years reached 16.89%, indicating that young people face considerably greater challenges in labor market absorption than the overall working population (Kusumastuti et al., 2026). A substantial proportion of individuals entering the labor market within this age group belong to Generation Z, commonly defined as those born between 1997 and 2012, who are currently navigating the transition from education to employment (Putra & Dewi, 2025). These

conditions suggest that obtaining a university degree does not automatically ensure that graduates possess the competencies and attributes required to enter and perform effectively in professional employment (Borg et al., 2025).

Work readiness refers to the attributes, capabilities, and behaviors that enable graduates to transition successfully into employment and contribute effectively within workplace settings (Borg et al., 2025). One important factor that may contribute to the development of work readiness is internship experience. Internships provide students with opportunities to apply academic knowledge in authentic workplace environments, understand organizational practices, develop professional behavior, and strengthen communication, adaptability, collaboration, and digital competence (Musa et al., 2025). Internship participation may also enhance professional confidence and provide greater clarity regarding future career orientation and workplace expectations (Musa et al., 2025).

In addition to internship experience, soft skills and hard skills constitute important components of graduate employability and work readiness. Soft skills encompass nontechnical competencies such as communication, teamwork, leadership, critical thinking, problem-solving, adaptability, and self-management, which are increasingly valued by employers when recruiting university graduates (Osman et al., 2025; Vázquez-Rodríguez et al., 2025). Individuals with strong soft skills are generally better positioned to interact effectively with colleagues, adapt to organizational demands, and demonstrate productive professional behavior (Osman et al., 2025). In contrast, hard skills refer to technical and domain-specific competencies acquired through education and training, including the ability to operate relevant technologies, process and analyze data, use occupational software, and perform technical tasks associated with a particular profession (Martínez-Gómez & Nicolalde, 2025; Sembiring et al., 2025). The simultaneous development of technical and nontechnical competencies is therefore essential for improving graduates' capacity to meet changing labor market requirements (Martínez-Gómez & Nicolalde, 2025).

Another psychological factor that may influence work readiness is self-efficacy. Self-efficacy reflects an individual's confidence in their ability to perform tasks, overcome challenges, and successfully respond to demands encountered in professional contexts (Syam, 2025). Individuals with higher levels of self-efficacy tend to demonstrate greater confidence in applying their knowledge and skills when confronting workplace responsibilities, whereas individuals with lower self-efficacy may experience greater uncertainty when facing unfamiliar tasks or professional challenges (Beno et al., 2025; Syam, 2025). Empirical evidence has also demonstrated a significant positive relationship between self-efficacy and work readiness, suggesting that confidence in one's abilities constitutes an important psychological resource during the transition into employment (Syam, 2025).

A preliminary survey involving 31 higher education alumni in Sidoarjo indicated that differences in work readiness remain evident among graduates. The survey showed that 45% of respondents considered themselves ready to compete in the labor market, whereas 26% remained uncertain and 29% reported that they were not yet ready. Regarding internship experience, 53% of respondents reported that their internships had provided meaningful exposure to actual workplace activities, while the remaining respondents indicated that they had received limited involvement in substantive work or had primarily performed administrative tasks. In terms of soft skills, 52% of respondents perceived themselves as possessing adequate nontechnical competencies, although several respondents continued to experience difficulties related to communication and self-confidence. Furthermore, 63% of respondents demonstrated relatively strong self-efficacy, whereas the remaining respondents continued to express uncertainty when confronted with new responsibilities. These preliminary findings indicate that the experience and competencies accumulated by alumni do not necessarily translate automatically into optimal levels of work readiness.

The relationships among these variables can be conceptually explained through Human Capital Theory. Contemporary applications of Human Capital Theory view education, training, occupational competencies, experiential learning, and employability skills as investments that enhance individuals' productive capacity and competitiveness in the labor market (Kholifah et al., 2025). The development of human capital is therefore not

limited to formal academic knowledge but also involves technical competence, transferable skills, and opportunities to apply knowledge in practical settings (Borg et al., 2025; Kholifah et al., 2025). In the present study, internship experience, soft skills, and hard skills are positioned as forms of human capital, whereas self-efficacy is conceptualized as a complementary psychological mechanism through which accumulated competencies may be translated into stronger work readiness.

Nevertheless, previous empirical findings regarding the determinants of work readiness remain inconsistent. University-based research has demonstrated a significant positive relationship between internship experience and work readiness, whereas evidence from another student population found that internship experience did not have a statistically significant direct effect on work readiness (Beno et al., 2025; Ningsih et al., 2025). Similar inconsistencies have been reported for soft skills and hard skills, with some studies demonstrating significant direct contributions of both competencies to work readiness, while other findings indicate that their direct effects may be nonsignificant or vary according to the type of competency and research context (Mahesti & Waskito, 2026; Sembiring et al., 2025; Sinaga et al., 2024). These differing findings suggest that possessing experience and competencies alone may not fully explain why some individuals demonstrate higher levels of work readiness than others.

The role of self-efficacy also remains empirically inconclusive. Several studies have shown that self-efficacy has a significant positive effect on work readiness and can mediate the relationship between internship experience, soft skills, hard skills, and work readiness (Beno et al., 2025; Sembiring et al., 2025; Sinaga et al., 2024; Syam, 2025). In contrast, recent evidence involving Generation Z respondents found that self-efficacy did not exert a significant direct effect on work readiness, indicating that its contribution may depend on the presence of experiential or contextual mechanisms (Mahesti & Waskito, 2026). These differences reinforce the need to investigate whether self-efficacy functions as a psychological mechanism through which practical experience and individual competencies are transformed into work readiness.

Accordingly, the research gap lies in the inconsistent empirical relationships among internship experience, soft skills, hard skills, self-efficacy, and work readiness. Much of the recent empirical literature has focused on university students or final-year students who have not yet fully experienced the transition from education to sustained participation in the labor market (Dinda et al., 2026; Ningsih et al., 2025; Sembiring et al., 2025; Sinaga et al., 2024; Syam, 2025). Furthermore, existing studies have generally examined internship experience and soft skills with self-efficacy or examined soft skills and hard skills with self-efficacy, whereas empirical research integrating internship experience, soft skills, and hard skills simultaneously within a single mediation model remains comparatively limited (Beno et al., 2025; Sembiring et al., 2025). Evidence specifically focusing on higher education alumni who have already undergone the transition from university to the labor market is also relatively limited.

The novelty of this study lies in the simultaneous examination of internship experience, soft skills, and hard skills as determinants of work readiness, with self-efficacy positioned as a mediating variable among higher education alumni in Sidoarjo. By focusing on alumni rather than exclusively on active or final-year students, this study evaluates work readiness from the perspective of individuals who have already experienced the transition from education to the labor market. The proposed model is therefore expected to provide a more comprehensive explanation of not only the direct contribution of practical experience and competencies to work readiness but also the psychological mechanism through which these resources may be converted into readiness for professional employment.

This study aims to analyze the effects of internship experience, soft skills, and hard skills on work readiness and self-efficacy, examine the effect of self-efficacy on work readiness, and investigate the mediating role of self-efficacy in the relationships between internship experience, soft skills, hard skills, and work readiness among higher education alumni in Sidoarjo.

## 2. Literature Review

### 2.1 Human Capital Theory

Human Capital Theory explains that individuals possess productive resources that can be developed through investments in education, training, skills development, and

practical experience, thereby increasing their productivity, employability, and competitiveness in the labor market (Cheng et al., 2025; Kholifah et al., 2025). Contemporary applications of Human Capital Theory emphasize that investment in knowledge and competencies is particularly important in rapidly changing labor markets because graduates are increasingly required to combine academic knowledge with occupational, digital, interpersonal, and adaptive competencies (Salim et al., 2025). In higher education, internship experience, soft skills, and hard skills can therefore be regarded as forms of human capital investment that enable individuals to develop competencies relevant to professional employment (Cheng et al., 2025; Kholifah et al., 2025).

Internship programs represent experiential investments in human capital because they allow students to transform theoretical knowledge into practical competence, acquire workplace experience, understand organizational expectations, and develop professional confidence before entering full-time employment (Alharethi et al., 2025; Banker & Borchardt, 2025). Similarly, soft skills and hard skills represent complementary components of human capital because contemporary workplaces require individuals to demonstrate both technical expertise and interpersonal, analytical, problem-solving, communication, and adaptive capabilities (Syafira et al., 2025). These competencies become increasingly valuable when individuals possess psychological confidence in their capacity to apply them effectively, suggesting that self-efficacy may function as a psychological mechanism through which accumulated human capital contributes to work readiness (Josua & Lataruva, 2025). Accordingly, this study positions internship experience, soft skills, and hard skills as forms of human capital, while self-efficacy is conceptualized as a psychological mechanism that facilitates the conversion of these resources into stronger work readiness.

## 2.2 Internship Experience

Internship experience refers to structured work-based learning that provides students with opportunities to participate in professional activities and acquire direct exposure to actual workplace situations within a specified period (Banker & Borchardt, 2025). Internship programs bridge academic learning and workplace practice by enabling students to apply theoretical knowledge, develop occupation-related competencies, understand job requirements, and become familiar with organizational environments and professional expectations (Alharethi et al., 2025). Empirical evidence indicates that internship experience can strengthen students' role clarity, professional ability, career readiness, and confidence in dealing with workplace responsibilities (Alharethi et al., 2025; Magang & Setyawati, 2026).

Internships can also contribute to career readiness by exposing students to workplace diversity, professional communication, teamwork, problem-solving, and other practical demands that may not be fully developed through classroom learning alone (Banker & Borchardt, 2025). Recent empirical evidence further demonstrates that structured internship experience contributes significantly to work readiness and can simultaneously strengthen self-efficacy, thereby providing both practical and psychological preparation for the transition into employment (Beno et al., 2025; Josua & Lataruva, 2025). In this study, internship experience is assessed through clear internship objectives, workplace support, academic support, and the general competencies acquired during the internship program, reflecting the extent to which the internship provides meaningful professional learning experiences (Beno et al., 2025; Magang & Setyawati, 2026).

## 2.3 Soft Skills

Soft skills refer to nontechnical and transferable competencies that enable individuals to interact effectively with others, manage themselves, solve problems, adapt to changing environments, and demonstrate appropriate professional behavior (Anggeraini et al., 2025). These competencies include communication, collaboration, critical thinking, emotional intelligence, adaptability, leadership, creativity, and time management, all of which are increasingly important in contemporary educational and professional environments (Anggeraini et al., 2025). Strong soft skills allow individuals to communicate more effectively, collaborate with colleagues, manage workplace challenges, respond constructively to changes, and establish productive professional relationships (Manhia et al., 2025).

Empirical evidence demonstrates that soft skills contribute positively to work readiness because individuals who possess strong interpersonal and self-management

competencies are better prepared to respond to organizational and occupational demands (Manhia et al., 2025; Syafira et al., 2025). Soft skills may also strengthen self-efficacy because successful communication, problem-solving, collaboration, and leadership experiences can increase individuals' confidence in their ability to perform professional tasks effectively (Kristiana et al., 2025). In this study, soft skills are measured through communication skills, emotional intelligence, critical thinking, ethics, and leadership, which represent essential nontechnical competencies for effective participation in professional environments (Anggeraini et al., 2025; Beno et al., 2025).

### 2.4 Hard Skills

Hard skills refer to measurable technical and occupation-specific competencies that enable individuals to perform tasks related to a particular field of work and are generally acquired through formal education, professional training, certification, or practical experience (Dalifa et al., 2025; Syafira et al., 2025). These competencies include the knowledge and technical abilities required to operate relevant tools and technologies, process information, conduct analyses, solve technical problems, and perform specialized occupational activities effectively (Cheng et al., 2025). In increasingly digitalized workplaces, hard skills also encompass competencies related to information technology, digital applications, data processing, analytical tools, and other technologically mediated work processes (Dinda et al., 2026).

Adequate mastery of hard skills provides individuals with the technical capacity required to perform job responsibilities efficiently and increases their ability to meet occupational standards and employer expectations (Dalifa et al., 2025). Empirical findings also demonstrate that hard skills significantly contribute to work readiness when technical competencies are aligned with the requirements of the labor market and are supported by relevant practical experience (Syafira et al., 2025). In this study, hard skills are measured through technical competence, computer and information technology skills, data analysis, project management, programming, digital-based research, and digital marketing competencies, reflecting the multidimensional technical capabilities increasingly required in contemporary employment environments (Cheng et al., 2025; Dinda et al., 2026).

### 2.5 Work Readiness

Work readiness refers to an individual's capacity to enter and function effectively in the workplace by possessing an appropriate combination of knowledge, skills, attitudes, personal attributes, and professional behaviors required by employers and organizational environments (Magang & Setyawati, 2026). Work readiness extends beyond technical competence because successful transitions into employment require individuals to demonstrate adaptability, confidence, communication ability, problem-solving skills, professional responsibility, and an understanding of workplace expectations (Ghufron & Baskoro, 2026). In the context of digital transformation, work readiness increasingly requires individuals to adjust to rapidly changing technologies, communication patterns, and organizational processes while continuously updating their competencies (Dinda et al., 2026).

Individuals with high work readiness are more capable of applying their competencies to actual job requirements, adapting to organizational environments, undertaking professional responsibilities, and managing the transition from education to employment (Magang & Setyawati, 2026). Recent evidence also suggests that work readiness is shaped by the interaction between practical experience, competence, digital capability, and psychological factors rather than by academic achievement alone (Ghufron & Baskoro, 2026). In this study, work readiness is measured through skills, knowledge, understanding, and personal attributes that enable individuals to enter employment and perform professional responsibilities effectively (Beno et al., 2025).

### 2.6 Self-Efficacy

Self-efficacy refers to an individual's belief in their capability to organize and execute the actions required to successfully perform specific tasks, overcome challenges, and achieve desired outcomes (Magang & Setyawati, 2026). Within the employment context, self-efficacy represents psychological confidence that enables individuals to apply their knowledge and competencies, respond to unfamiliar responsibilities, persist when facing difficulties, and make effective decisions during the transition into professional work (Ghufron & Baskoro, 2026). Individuals with stronger self-efficacy are therefore more likely to perceive themselves as capable of dealing with workplace demands and translating acquired

competencies into effective professional performance (Syam, 2025).

Empirical evidence indicates that self-efficacy has a positive and significant relationship with work readiness, demonstrating that psychological confidence constitutes an important element of graduate preparation for employment (Magang & Setyawati, 2026; Syam, 2025). Self-efficacy may also operate as a mediating mechanism because internship experiences and competencies can strengthen individuals' confidence in their capabilities, which subsequently improves their readiness to enter the workforce (Josua & Lataruva, 2025; Kristiana et al., 2025). In this study, self-efficacy is assessed through three dimensions, namely the perceived level of task difficulty that an individual believes can be handled (magnitude), the strength of the individual's confidence in their capabilities (strength), and the extent to which such confidence can be generalized across different situations and tasks (generality) (Beno et al., 2025).

### 2.7 Research Hypotheses

H1: Internship experience has a significant effect on work readiness.
H2: Soft skills have a significant effect on work readiness.
H3: Hard skills have a significant effect on work readiness.
H4: Internship experience has a significant effect on self-efficacy.
H5: Soft skills have a significant effect on self-efficacy.
H6: Hard skills have a significant effect on self-efficacy.
H7: Self-efficacy has a significant effect on work readiness.
H8: Self-efficacy mediates the effect of internship experience on work readiness.
H9: Self-efficacy mediates the effect of soft skills on work readiness.
H10: Self-efficacy mediates the effect of hard skills on work readiness.

## 3. Methods

### 3.1 Research Design

This study employed a quantitative approach with a causal research design. The quantitative approach was used to objectively measure the research variables, statistically analyze numerical data, and test the proposed hypotheses regarding the relationships among the constructs (Lim, 2025). A causal research design was adopted to examine the hypothesized directional relationships between the independent and dependent variables and to determine whether changes in the predictor variables are associated with changes in the outcome variable. The independent variables in this study consisted of internship experience, soft skills, and hard skills, while work readiness was specified as the dependent variable and self-efficacy as the mediating variable. The quantitative approach was considered appropriate because the study examines multiple relationships among predetermined variables and tests the proposed hypotheses using data collected from a defined sample, consistent with recent quantitative studies examining work readiness and self-efficacy (Dinda et al., 2026; Syam, 2025).

### 3.2 Research Location and Period

The study was conducted among alumni of Universitas Nahdlatul Ulama Sidoarjo and STKIP PGRI Sidoarjo. The selection of Sidoarjo Regency as the research location was based on its characteristics as one of the industrial-base areas in East Java, where manufacturing activities and labor-market absorption constitute important regional economic issues, making the area relevant for examining the work readiness of higher education graduates (Maharani et al., 2025). The research was conducted over an eight-month period, from November to June, encompassing proposal preparation, primary and secondary data collection, data processing and analysis, and preparation of the final research report.

### 3.3 Population and Sample

The population of this study consisted of all alumni of Universitas Nahdlatul Ulama Sidoarjo and STKIP PGRI Sidoarjo who possessed characteristics relevant to the objectives of the study. A research population represents the complete group of individuals or units that satisfy the characteristics defined by the research question and from which a study sample is subsequently selected (Ahmed, 2024). The total population in this study consisted of 1,362 alumni.

The sample was selected using a non-probability sampling technique with a purposive sampling approach. Purposive sampling enables researchers to select participants based on predetermined characteristics that are directly relevant to the research objectives, particularly when eligibility depends on specific experience or attributes possessed by potential respondents

(Memon et al., 2025). The respondent criteria in this study were alumni of Universitas Nahdlatul Ulama Sidoarjo or STKIP PGRI Sidoarjo, graduates from the 2023–2025 cohorts, and individuals who had participated in an internship program during their higher education studies.

The sample size was determined using the Slovin formula with an error tolerance of 5%, as follows:

$$n = N / (1 + Ne^2)$$

where:

n = sample size

N = population size

e = error tolerance

Based on a total population of 1,362 alumni, the sample size was calculated as follows:

$n = 1{,}362 / [1 + 1{,}362(0.05)^2]$

$n = 1{,}362 / [1 + 1{,}362(0.0025)]$

$n = 1{,}362 / 4.405$

$n = 309.19$

Based on this calculation, the required sample size was rounded to 309 respondents. The determination of an adequate sample size is an important component of quantitative research because sample size influences statistical precision, reliability, and the strength of subsequent statistical inference (Ahmed, 2024).

### 3.4 Types and Sources of Data

This study used both primary and secondary data. Primary data refer to information collected directly from participants for the specific purpose of addressing the research objectives, and questionnaire-based surveys represent a systematic method of obtaining standardized information directly from respondents (Metallinos-Katsaras & Beto, 2025). In this study, primary data were collected by distributing questionnaires to alumni of Universitas Nahdlatul Ulama Sidoarjo and STKIP PGRI Sidoarjo who met the predetermined respondent criteria. The use of questionnaire-based primary data is consistent with recent studies investigating work readiness and self-efficacy among university students and graduates (Dinda et al., 2026; Syam, 2025).

Secondary data were obtained indirectly from relevant supporting sources, including scientific articles, institutional documents, books, and other academic materials related to internship experience, soft skills, hard skills, self-efficacy, and work readiness. Secondary sources were used to strengthen the conceptual foundation, support the operationalization of the variables, and provide contextual information relevant to the empirical investigation.

### 3.5 Research Variables and Instruments

Research variables represent measurable constructs or attributes that are operationalized to enable empirical examination of relationships proposed within a theoretical model (Lim, 2025). This study involved three independent variables, namely internship experience (X1), soft skills (X2), and hard skills (X3); one dependent variable, namely work readiness (Y); and one mediating variable, namely self-efficacy (Z).

The internship experience variable was measured through clear objectives, workplace support, university support, and general competencies acquired during internship activities, reflecting the extent to which the internship provided a structured and meaningful professional learning experience (Beno et al., 2025). The soft skills variable was measured through communication skills, emotional intelligence, critical thinking ability, ethics, and leadership, representing essential nontechnical competencies required in professional environments (Beno et al., 2025).

The hard skills variable was measured through technical competence, computer and information technology skills, data-analysis ability, project-management skills, programming competence, digital research ability, and digital-marketing skills. These dimensions reflect contemporary technical and digital competencies that contribute to graduates' capacity to perform occupational tasks and respond to increasingly technology-oriented work environments (Dinda et al., 2026; Senadheera & Wisenthige, 2026; Syafira et al., 2025).

The work readiness variable was measured through skills, knowledge, understanding, and personal attributes that support an individual's capacity to enter and perform effectively in the workplace (Beno et al., 2025). The self-efficacy variable was measured using three dimensions, namely the perceived level of task difficulty that an individual believes can be successfully addressed (magnitude), the strength of the individual's confidence in their capabilities (strength), and the extent to which such confidence can be applied across different tasks and situations (generality) (Beno et al., 2025).

Data were collected using a structured

closed-ended questionnaire developed on the basis of the indicators for each research variable. Structured questionnaires facilitate standardized data collection and enable responses to be systematically quantified for statistical analysis (Metallinos-Katsaras & Beto, 2025). Each statement was measured using a five-point Likert scale consisting of strongly disagree (1), disagree (2), somewhat disagree (3), agree (4), and strongly agree (5). The use of Likert-type measurement is appropriate for quantifying respondents' perceptions, beliefs, and evaluations of latent constructs and has also been applied in recent quantitative research examining self-efficacy and work readiness (Lim et al., 2026; Syam, 2025).

### 3.6 Data Analysis Technique

The research data were analyzed using Structural Equation Modeling–Partial Least Squares (SEM-PLS). PLS-SEM is particularly appropriate for analyzing complex models involving multiple latent constructs and simultaneous structural relationships and is widely applied when the research model emphasizes explanation, prediction, or the assessment of direct and indirect relationships (Hair & Alamer, 2022; Ringle et al., 2023). The continued methodological development and multidisciplinary application of PLS-SEM further demonstrate its relevance for examining complex theoretical models involving multiple interrelated constructs (Angelelli et al., 2025). The stages of data analysis in this study consisted of descriptive analysis, evaluation of the measurement model or outer model, evaluation of the structural model or inner model, hypothesis testing, and mediation-effect testing.

The outer model was evaluated through convergent validity, average variance extracted (AVE), discriminant validity, and construct reliability. Measurement-model evaluation is required to ensure that the observed indicators adequately represent their intended latent constructs before relationships among the constructs are interpreted (Hair & Alamer, 2022; Lim et al., 2026). Convergent validity was assessed using the outer loading values, with indicators considered to demonstrate satisfactory convergent validity when their loading values exceeded 0.70 (Hair & Alamer, 2022; Lim et al., 2026). The AVE value was required to exceed 0.50, indicating that a construct explains more than half of the variance in its indicators (Hair & Alamer, 2022; Lim et al., 2026).

Discriminant validity was assessed through the cross-loading criterion, whereby each indicator was expected to exhibit a higher loading on its intended construct than on the other constructs included in the model. This criterion was used to confirm that indicators were more strongly associated with the constructs they were intended to measure than with conceptually distinct constructs.

Reliability testing was conducted to evaluate the internal consistency of the measurement instrument. Construct reliability was assessed using composite reliability and Cronbach's alpha, with composite reliability values greater than 0.70 and Cronbach's alpha values greater than 0.60 considered acceptable in this study. Contemporary scale-validation guidance generally recommends reliability coefficients approaching or exceeding 0.70 to provide stronger evidence of internal consistency (Lim et al., 2026).

The inner model was evaluated using R-square ($R^2$), F-square ($f^2$), and Q-square ($Q^2$). The $R^2$ value was used to evaluate the extent to which the exogenous variables explained the variance in the endogenous constructs. $R^2$ values of approximately 0.75, 0.50, and 0.25 were interpreted as indicating substantial, moderate, and weak explanatory power, respectively (Salifu et al., 2025).

The $f^2$ value was used to assess the magnitude of the contribution of each exogenous construct to an endogenous construct. Effect-size values of 0.02, 0.15, and 0.35 were interpreted as small, medium, and large effects, respectively (Lim et al., 2026). The $Q^2$ value was used to evaluate the predictive relevance of the structural model through the blindfolding procedure. A $Q^2$ value greater than zero indicates that the model possesses predictive relevance, while values of approximately 0.02, 0.15, and 0.35 represent small, medium, and large predictive relevance, respectively (Salifu et al., 2025).

Hypothesis testing was conducted through a bootstrapping procedure by examining the path coefficients, t-statistics, and p-values. Bootstrapping is a nonparametric resampling procedure widely used in PLS-SEM to evaluate the statistical variability and significance of model parameter estimates without requiring normal-distribution assumptions (Lamberti & La Rocca, 2026). A direct effect was considered statistically significant when the p-value was below 0.05, with a t-statistic greater than 1.96 representing

statistical significance for a two-tailed test at the 5% significance level (Lim et al., 2026).

The indirect effect was subsequently examined to determine whether self-efficacy mediated the relationships between internship experience, soft skills, hard skills, and work readiness. PLS-SEM enables simultaneous estimation of direct and indirect paths, making it suitable for examining mediation mechanisms within models containing multiple latent constructs (Beno et al., 2025; Ringle et al., 2023). The mediation effect was considered statistically significant when the p-value was below 0.05 and the corresponding t-statistic exceeded 1.96 at the 5% significance level (Lim et al., 2026).

## 4. Result and Discussion

### 4.1 Overview of the Research Object

The research subjects were alumni of Universitas Nahdlatul Ulama Sidoarjo and STKIP PGRI Sidoarjo who graduated during the 2023–2025 period and had participated in an internship program during their higher education. Alumni were selected as respondents because they had experienced the transition from higher education to the labor market and therefore possessed relevant experience in assessing their level of work readiness. This study examined the effects of internship experience, soft skills, and hard skills on work readiness, both directly and indirectly through self-efficacy as a mediating variable.

### 4.2 Respondent Characteristics

This study involved 309 respondents who met the predetermined sample criteria. Respondent characteristics based on gender, university of origin, year of graduation, and employment status are presented in Table 1.

*Table 1. Respondent Characteristics*

| Characteristic | Category | Frequency | Percentage |
|---|---|---|---|
| Gender | Male | 115 | 37.2% |
| | Female | 194 | 62.8% |
| University of origin | Universitas Nahdlatul Ulama Sidoarjo | 195 | 63.1% |
| | STKIP PGRI Sidoarjo | 114 | 36.9% |
| Year of graduation | 2023 | 78 | 25.2% |
| | 2024 | 86 | 27.8% |
| | 2025 | 145 | 46.9% |
| Employment status | Employed | 258 | 83.5% |
| | Unemployed | 51 | 16.5% |

Source: Data processed by the researchers (2026).

Table 1 shows that the respondents were predominantly female, comprising 194 respondents or 62.8% of the total sample. Based on university of origin, the majority of respondents were alumni of Universitas Nahdlatul Ulama Sidoarjo, totaling 195 respondents or 63.1%. In terms of graduation year, the largest proportion consisted of graduates from 2025, totaling 145 respondents or 46.9%. Furthermore, 258 respondents or 83.5% were employed, whereas 51 respondents or 16.5% were unemployed. These findings indicate that the majority of respondents had obtained actual experience in entering the labor market.

### 4.3 Measurement Model Evaluation

The measurement model, or outer model, was evaluated to ensure that the indicators used in the study were capable of measuring their respective constructs validly and reliably. The evaluation was conducted using outer loading, average variance extracted (AVE), Cronbach's alpha, composite reliability, and cross-loading values. A summary of the measurement model evaluation is presented in Table 2.

*Table 2. Measurement Model Evaluation Results*

| Variable | Outer loading range | AVE | Cronbach's alpha | Composite reliability | Interpretation |
|---|---|---|---|---|---|
| Internship experience | 0.779–0.847 | 0.683 | 0.933 | 0.938 | Valid and reliable |
| Soft skills | 0.802–0.861 | 0.682 | 0.946 | 0.945 | Valid and reliable |
| Hard skills | 0.789–0.845 | 0.674 | 0.922 | 0.954 | Valid and reliable |
| Work readiness | 0.899–0.919 | 0.829 | 0.970 | 0.975 | Valid and reliable |
| Self-efficacy | 0.872–0.906 | 0.794 | 0.948 | 0.959 | Valid and reliable |

Source: Data processed using SmartPLS 4 (2026).

Table 2 shows that all indicators had outer loading values greater than 0.70, ranging from 0.779 to 0.919. All constructs also obtained AVE values greater than 0.50, indicating that the requirements for convergent validity were satisfied. In addition, the Cronbach's alpha and composite reliability values of all constructs exceeded 0.70, demonstrating that the research instrument had good internal consistency. Therefore, all constructs were considered valid and reliable for subsequent structural model testing.

Overall, the measurement model results confirm that the indicators adequately represent their respective constructs. The satisfactory levels of convergent validity and internal consistency provide sufficient evidence that the measurement instrument is appropriate for further analysis, while

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discriminant validity testing is necessary to ensure that each construct is empirically distinct from the others.

Discriminant validity was evaluated using cross-loading values. Each indicator was required to have a higher correlation with its intended construct than with the other constructs. A summary of the discriminant validity evaluation is presented in Table 3.

*Table 3. Summary of Discriminant Validity Testing*

| Variable | Lowest value on intended construct | Highest value on other constructs | Interpretation |
|---|---|---|---|
| Internship experience | 0.779 | 0.416 | Criterion met |
| Soft skills | 0.802 | 0.432 | Criterion met |
| Hard skills | 0.789 | 0.647 | Criterion met |
| Work readiness | 0.899 | 0.697 | Criterion met |
| Self-efficacy | 0.872 | 0.675 | Criterion met |

Source: Data processed using SmartPLS 4 (2026).

Table 3 indicates that the cross-loading value of each indicator on its intended construct was higher than its correlation with the other constructs. These results demonstrate that each construct possessed distinct measurement characteristics and was capable of appropriately explaining its respective indicators. Therefore, all research variables satisfied the discriminant validity criterion.

### 4.4 Structural Model Evaluation

The structural model, or inner model, was evaluated using R-square, Q-square, and F-square values. The R-square value was used to assess the ability of the independent variables to explain the endogenous variables, whereas the Q-square value was used to evaluate the model's predictive capability. The results are presented in Table 4.

*Table 4. R-square and Q-square Values*

| Endogenous variable | R-square | R-square adjusted | Q-square predict | Interpretation |
|---|---|---|---|---|
| Work readiness | 0.699 | 0.695 | 0.641 | Moderate with high predictive capability |
| Self-efficacy | 0.442 | 0.437 | 0.426 | Moderate with high predictive capability |

Source: Data processed using SmartPLS 4 (2026).

Table 4 shows that the R-square value for work readiness was 0.699. This indicates that 69.9% of the variation in work readiness could be explained by internship experience, soft skills, hard skills, and self-efficacy, while the remaining 30.1% was explained by other variables outside the research model. The R-square value for self-efficacy was 0.442, indicating that 44.2% of the variation in self-efficacy could be explained by internship experience, soft skills, and hard skills, while the remaining 55.8% was influenced by other factors. The Q-square values for both endogenous variables exceeded 0.35, indicating that the model possessed high predictive capability.

The magnitude of the effect of each exogenous variable on the endogenous variables was evaluated using the F-square value. The effect-size testing results are presented in Table 5.

*Table 5. F-square Test Results*

| Relationship | F-square | Effect category |
|---|---|---|
| Internship experience → Work readiness | 0.027 | Small |
| Internship experience → Self-efficacy | 0.094 | Small |
| Soft skills → Work readiness | 0.135 | Small |
| Soft skills → Self-efficacy | 0.044 | Small |
| Hard skills → Work readiness | 0.449 | Large |
| Hard skills → Self-efficacy | 0.313 | Medium |
| Self-efficacy → Work readiness | 0.168 | Medium |

Source: Data processed using SmartPLS 4 (2026).

Table 5 shows that hard skills had the largest effect size on work readiness, with an F-square value of 0.449, which was categorized as a large effect. The effect of hard skills on self-efficacy was 0.313, while the effect of self-efficacy on work readiness was 0.168, both of which were categorized as medium effects. Meanwhile, the effects of internship experience and soft skills on the endogenous variables were categorized as small. These findings indicate that technical competence was the most dominant factor in explaining alumni work readiness.

Overall, the effect-size analysis indicates that the contribution of each predictor to the endogenous constructs varies substantially. Although internship experience and soft skills contribute to the model, their effect sizes are relatively limited compared with hard skills and self-efficacy. This pattern suggests that alumni work readiness is more strongly influenced by technical competence and psychological confidence than by experiential and

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interpersonal factors alone, thereby providing an important basis for interpreting the subsequent direct-effect hypothesis testing.

### 4.5 Direct Effect Testing

Direct-effect hypotheses were tested through the bootstrapping procedure by examining the path coefficients, t-statistics, and p-values. A hypothesis was considered supported when the t-statistic exceeded 1.96 and the p-value was below 0.05. The results of direct-effect testing are presented in Table 6.

*Table 6. Direct Effect Testing Results*

| Hypothesis | Relationship | Path coefficient | T-statistic | P-value | Decision |
|---|---|---|---|---|---|
| H1 | Internship experience → Work readiness | 0.104 | 3.107 | 0.002 | Accepted |
| H2 | Soft skills → Work readiness | 0.221 | 6.999 | <0.001 | Accepted |
| H3 | Hard skills → Work readiness | 0.456 | 12.590 | <0.001 | Accepted |
| H4 | Internship experience → Self-efficacy | 0.252 | 4.776 | <0.001 | Accepted |
| H5 | Soft skills → Self-efficacy | 0.169 | 3.317 | 0.001 | Accepted |
| H6 | Hard skills → Self-efficacy | 0.452 | 9.282 | <0.001 | Accepted |
| H7 | Self-efficacy → Work readiness | 0.301 | 6.579 | <0.001 | Accepted |

Source: Data processed using SmartPLS 4 (2026).

Table 6 indicates that all direct relationships had positive and statistically significant coefficients. Hard skills exerted the strongest direct effect on work readiness, with a coefficient of 0.456, followed by self-efficacy at 0.301, soft skills at 0.221, and internship experience at 0.104. With respect to self-efficacy, the strongest effect was also generated by hard skills, with a coefficient of 0.452. Therefore, all direct-effect hypotheses proposed in this study were accepted.

More specifically, internship experience had a positive and significant effect on work readiness, with a path coefficient of 0.104, a t-statistic of 3.107, and a p-value of 0.002. This finding indicates that better internship experiences acquired by alumni are associated with higher levels of readiness to enter the workforce.

Soft skills had a positive and significant effect on work readiness, with a path coefficient of 0.221, a t-statistic of 6.999, and a p-value below 0.001. This result indicates that communication, teamwork, critical thinking, ethical behavior, and leadership abilities contribute to improving alumni work readiness.

Hard skills had a positive and significant effect on work readiness, with a path coefficient of 0.456, a t-statistic of 12.590, and a p-value below 0.001. This coefficient was the largest among all paths leading to work readiness. Therefore, mastery of technical skills represents the most dominant factor in improving alumni work readiness.

Internship experience had a positive and significant effect on self-efficacy, with a path coefficient of 0.252, a t-statistic of 4.776, and a p-value below 0.001. This finding indicates that experience in performing tasks, receiving workplace support, and completing responsibilities during internships can strengthen alumni confidence in their own capabilities.

Soft skills had a positive and significant effect on self-efficacy, with a path coefficient of 0.169, a t-statistic of 3.317, and a p-value of 0.001. This finding demonstrates that interpersonal competence, emotional regulation, problem-solving ability, and leadership can strengthen alumni confidence in dealing with various workplace demands.

Hard skills had a positive and significant effect on self-efficacy, with a path coefficient of 0.452, a t-statistic of 9.282, and a p-value below 0.001. This result indicates that mastery of technical competencies strengthens alumni confidence in completing tasks and addressing problems in the workplace.

Self-efficacy had a positive and significant effect on work readiness, with a path coefficient of 0.301, a t-statistic of 6.579, and a p-value below 0.001. Therefore, the stronger the alumni's confidence in their ability to complete tasks and overcome challenges, the higher their level of work readiness.

### 4.6 Indirect Effect Testing

Indirect-effect testing was conducted to determine whether self-efficacy mediated the effects of internship experience, soft skills, and hard skills on work readiness. The indirect-effect testing results are presented in Table 7.

*Table 7. Indirect Effect Testing Results*

| Hypothesis | Mediating relationship | Path coefficient | T-statistic | P-value | Decision |
|---|---|---|---|---|---|
| H8 | Internship experience → Self-efficacy → | 0.076 | 3.547 | <0.001 | Accepted |

| | | | | | |
|---|---|---|---|---|---|
| | Work readiness | | | | |
| H9 | Soft skills → Self-efficacy → Work readiness | 0.051 | 3.059 | 0.002 | Accepted |
| H10 | Hard skills → Self-efficacy → Work readiness | 0.136 | 5.452 | <0.001 | Accepted |

Source: Data processed using SmartPLS 4 (2026).

Table 7 demonstrates that self-efficacy significantly mediated the effects of all independent variables on work readiness. The largest indirect effect was found in the relationship between hard skills and work readiness through self-efficacy, with a coefficient of 0.136. This was followed by the indirect effect of internship experience, with a coefficient of 0.076, and the indirect effect of soft skills, with a coefficient of 0.051. All t-statistic values exceeded 1.96, and all p-values were below 0.05; therefore, H8, H9, and H10 were accepted.

Internship experience had a positive and significant indirect effect on work readiness through self-efficacy, with an indirect coefficient of 0.076, a t-statistic of 3.547, and a p-value below 0.001. This finding indicates that internship experience not only enhances work readiness directly but also strengthens alumni confidence in their abilities, which subsequently contributes to greater work readiness.

Soft skills had a positive and significant indirect effect on work readiness through self-efficacy, with a coefficient of 0.051, a t-statistic of 3.059, and a p-value of 0.002. This result indicates that interpersonal and professional competencies can improve work readiness by strengthening individuals' confidence in their own capabilities.

Hard skills had a positive and significant indirect effect on work readiness through self-efficacy, with a coefficient of 0.136, a t-statistic of 5.452, and a p-value below 0.001. This pathway produced the largest indirect effect among all mediation relationships. This finding indicates that stronger technical competencies can increase alumni confidence in performing work-related tasks, which subsequently strengthens their readiness to enter the workforce.

## 4.7 Summary of Hypothesis Testing Results

Based on the structural model testing results, all hypotheses proposed in this study were accepted. Internship experience, soft skills, and hard skills were found to have positive and significant effects on both work readiness and self-efficacy. In addition, self-efficacy had a positive and significant effect on work readiness and successfully mediated the effects of all three independent variables on work readiness. Among all independent variables, hard skills emerged as the variable with the strongest direct and indirect effects on the work readiness of higher education alumni in Sidoarjo.

## 4.8 Discussion

### 4.8.1 The Effect of Internship Experience on Work Readiness

The results indicate that internship experience has a positive and significant effect on work readiness, with a path coefficient of 0.104, a t-statistic of 3.107, and a p-value of 0.002. This finding indicates that the better the internship experience acquired by alumni, the higher their readiness to enter the workforce. Although the effect size is relatively small, as indicated by an F-square value of 0.027, internship experience still makes a meaningful contribution to the development of alumni work readiness.

Internship experience provides students with opportunities to become directly familiar with workplace conditions, apply academic knowledge, understand work procedures, and adapt to organizational culture. During internship activities, students are not only exposed to operational procedures but are also required to demonstrate discipline, communication, teamwork, responsibility, and the ability to complete tasks according to predetermined targets. Such exposure reduces the gap between academic learning and workplace requirements and consequently strengthens graduates' readiness to operate in formal professional environments.

The findings are consistent with recent studies demonstrating that internship experience significantly improves work readiness by providing practical knowledge, workplace exposure, professional competencies, and a better understanding of organizational expectations (Alharethi et al., 2025; Herawati & Turangan, 2025; Suryani et al., 2025; Wilopo et al., 2025). Recent evidence on work-integrated learning also indicates that practical workplace exposure contributes to graduate readiness by developing the capabilities required to adapt to actual

professional environments (Dara et al., 2026). From the perspective of Human Capital Theory, internship experience represents an investment in experiential human capital because workplace exposure enables individuals to accumulate practical knowledge, competencies, and adaptive capabilities that enhance their productivity and labor-market readiness (Kholifah et al., 2025).

#### 4.8.2 The Effect of Soft Skills on Work Readiness

The results show that soft skills have a positive and significant effect on work readiness, with a path coefficient of 0.221, a t-statistic of 6.999, and a p-value below 0.001. These results indicate that improvements in communication, teamwork, critical thinking, emotional regulation, ethics, and leadership are associated with increased alumni work readiness. The F-square value of 0.135 indicates that soft skills have a small effect size, although the value approaches the threshold for a medium effect.

Alumni with strong communication and teamwork abilities are generally better able to interact effectively with colleagues and supervisors. Critical-thinking and decision-making abilities also enable graduates to identify problems, evaluate alternative solutions, and determine appropriate actions in different workplace situations. In addition, ethical competence and leadership contribute to individuals' ability to perform professional responsibilities appropriately. The combination of these competencies enables graduates to become more adaptive when responding to changes and various workplace demands.

This finding is consistent with recent empirical evidence showing that communication, collaboration, adaptability, leadership, and other nontechnical competencies contribute significantly to students' and graduates' readiness to enter professional employment (Herawati & Turangan, 2025; Syafira et al., 2025; Wilopo et al., 2025). A recent review of graduate employability literature further indicates that communication, collaboration, self-management, and problem-solving capabilities play a substantial role in graduates' early workplace adaptation and performance (Mardiyah & Hayat, 2026). From the perspective of Human Capital Theory, soft skills constitute an important component of human capital because nontechnical competencies enhance adaptability, productivity, interpersonal effectiveness, and individuals' value in the labor market (Kholifah et al., 2025).

#### 4.8.3 The Effect of Hard Skills on Work Readiness

The results demonstrate that hard skills have a positive and significant effect on work readiness, with a path coefficient of 0.456, a t-statistic of 12.590, and a p-value below 0.001. This coefficient represents the strongest direct effect among all variables predicting work readiness. The F-square value of 0.449 further indicates that hard skills exert a large effect on alumni work readiness.

These findings suggest that technical competence is the dominant factor in shaping the work readiness of higher education alumni in Sidoarjo. Proficiency in technical skills, information technology, data analysis, project management, programming, digital research, and digital marketing enables alumni to respond more effectively to occupational requirements. Graduates who possess relevant technical knowledge and are capable of operating appropriate technologies and procedures are better equipped to perform job responsibilities, solve technical problems, and produce outputs that meet organizational standards.

Recent studies have emphasized that technical and digital competencies remain fundamental components of graduate readiness, particularly as contemporary employment increasingly involves technologically mediated tasks and rapidly changing occupational requirements (Dinda et al., 2026; Mardiyah & Hayat, 2026; Syafira et al., 2025). Digital employability research based on Human Capital Theory similarly demonstrates that technology-related competencies constitute an important component of workforce readiness and competitiveness in Industry 4.0 environments (Kholifah et al., 2025). Therefore, higher education institutions need to ensure that curricula, laboratory activities, projects, and professional training continuously develop technical competencies that correspond with current and emerging industry requirements.

#### 4.8.4 The Effect of Internship Experience on Self-Efficacy

The results show that internship experience has a positive and significant effect on self-efficacy, with a path coefficient of 0.252, a t-statistic of 4.776, and a p-value below 0.001. The F-square value of 0.094 indicates that

internship experience has a small effect on self-efficacy. Nevertheless, internship experience still contributes to strengthening alumni confidence in their own capabilities.

Internships allow students to encounter actual occupational tasks and workplace problems. Successfully completing assignments, receiving constructive feedback, and obtaining recognition from supervisors can strengthen individuals' perceptions that they are capable of dealing with professional challenges. Conversely, mistakes or difficulties experienced during internships can function as learning experiences through which students refine their strategies, improve problem-solving approaches, and gradually develop greater confidence in their professional abilities.

This finding is consistent with evidence demonstrating that internship and work-based experiences can strengthen individuals' self-efficacy by exposing them to real tasks, professional responsibilities, feedback, and opportunities for successful performance (Josua & Lataruva, 2025; Syawitri et al., 2024). Work-based learning also contributes to psychological readiness because repeated exposure to realistic workplace situations enables individuals to develop confidence in applying their acquired competencies (Zahirulhaq & Pramusinto, 2025). Within the framework of Human Capital Theory, workplace experience contributes not only to the accumulation of occupational skills but also to individuals' capacity to recognize and apply their acquired human capital in professional environments (Kholifah et al., 2025).

#### 4.8.5 The Effect of Soft Skills on Self-Efficacy

The findings indicate that soft skills have a positive and significant effect on self-efficacy, with a path coefficient of 0.169, a t-statistic of 3.317, and a p-value of 0.001. The F-square value of 0.044 indicates that the effect size of soft skills on self-efficacy is relatively small. Nevertheless, the result demonstrates that nontechnical competencies contribute to strengthening alumni confidence in their own capabilities.

Communication, emotional regulation, critical thinking, teamwork, and leadership enable individuals to respond more effectively to social and professional situations. Alumni who are accustomed to communicating ideas, delivering presentations, coordinating with teams, and resolving interpersonal conflicts are more likely to feel confident when undertaking responsibilities that require interaction with other people. Repeated successful experiences in applying these competencies reinforce individuals' beliefs that they are capable of dealing with various professional demands.

Recent research supports this relationship by showing that soft skills can strengthen self-efficacy because interpersonal competence, problem-solving capability, emotional management, and professional interaction contribute to individuals' confidence in managing academic and occupational challenges (Butar-butar & Wijaya, 2025; Kristiana et al., 2025; Syawitri et al., 2024). From a human-capital perspective, the development of interpersonal and adaptive competencies represents an investment that enhances not only productivity but also individuals' confidence in using their capabilities effectively in professional settings (Mardiyah & Hayat, 2026).

#### 4.8.6 The Effect of Hard Skills on Self-Efficacy

The results indicate that hard skills have a positive and significant effect on self-efficacy, with a path coefficient of 0.452, a t-statistic of 9.282, and a p-value below 0.001. The F-square value of 0.313 indicates that hard skills have a medium effect on self-efficacy. This coefficient also represents the strongest effect on self-efficacy compared with those of internship experience and soft skills.

Mastery of technical competencies provides alumni with a concrete foundation for performing occupational tasks. Individuals who are capable of operating relevant technologies, analyzing data, using occupational tools and applications, and managing technical tasks are likely to feel more prepared when responsibilities are assigned to them. Such confidence emerges because individuals possess demonstrable knowledge and competencies that can be applied directly when addressing workplace problems.

This result is supported by research demonstrating that hard skills significantly strengthen self-efficacy because technical competence provides individuals with greater confidence in their ability to perform tasks and respond to occupational challenges (Butar-butar & Wijaya, 2025). Recent studies examining digital competencies provide further support, showing that stronger digital skills significantly enhance digital self-efficacy among young individuals preparing to enter contemporary labor markets (Suhada et al.,

2026). The finding is therefore consistent with Human Capital Theory, which emphasizes that investment in technical knowledge and occupational competencies strengthens the productive capacity of individuals and enhances their ability to utilize those competencies effectively (Kholifah et al., 2025).

#### 4.8.7 The Effect of Self-Efficacy on Work Readiness

The results demonstrate that self-efficacy has a positive and significant effect on work readiness, with a path coefficient of 0.301, a t-statistic of 6.579, and a p-value below 0.001. The F-square value of 0.168 indicates that self-efficacy has a medium effect on work readiness. This finding demonstrates that work readiness is determined not only by experience and competencies but also by individuals' confidence in their capacity to apply those competencies effectively.

Alumni with high levels of self-efficacy are more likely to feel confident when participating in recruitment processes, attending job interviews, adapting to new organizational environments, and completing challenging occupational tasks. Such confidence encourages individuals to persist when encountering obstacles and reduces the tendency to withdraw when experiencing difficulties or failure. In contrast, alumni with low self-efficacy may doubt their ability to apply their competencies effectively, thereby reducing their perceived readiness to enter professional employment.

This finding is consistent with recent evidence showing that self-efficacy is an important predictor of work readiness because individuals who possess stronger confidence in their capabilities tend to demonstrate greater persistence, adaptability, decision-making capacity, and willingness to confront occupational challenges (Herawati & Turangan, 2025; Magang & Setyawati, 2026). Evidence from the Income Journal of Economics Development also confirms that self-efficacy has a positive and statistically significant effect on students' work readiness (Syam, 2025). Recent research in digital employment contexts similarly demonstrates that psychological confidence in applying technical competencies is essential for translating acquired skills into actual work readiness (Suhada et al., 2026).

#### 4.8.8 The Mediating Role of Self-Efficacy in the Effect of Internship Experience on Work Readiness

The indirect-effect results indicate that self-efficacy positively and significantly mediates the relationship between internship experience and work readiness, with an indirect path coefficient of 0.076, a t-statistic of 3.547, and a p-value below 0.001. Because the direct effect of internship experience on work readiness remains statistically significant, self-efficacy functions as a partial mediator in this relationship.

This finding demonstrates that internship experience contributes to work readiness through two pathways. First, internship experience directly provides practical knowledge, workplace exposure, and an understanding of professional situations. Second, successful task completion, workplace interaction, and constructive feedback obtained during an internship strengthen alumni confidence in their capabilities. Increased confidence subsequently makes alumni more prepared to participate in recruitment processes and respond to professional responsibilities.

The finding is consistent with recent empirical evidence demonstrating that self-efficacy mediates the relationship between internship or work-based experience and work readiness because practical exposure simultaneously develops occupational competencies and psychological confidence (Josua & Lataruva, 2025; Syawitri et al., 2024; Zahirulhaq & Pramusinto, 2025). These results are also compatible with Human Capital Theory, as practical experience increases the stock of human capital while self-efficacy facilitates the effective utilization of that accumulated competence in the labor market (Kholifah et al., 2025).

#### 4.8.9 The Mediating Role of Self-Efficacy in the Effect of Soft Skills on Work Readiness

The results indicate that self-efficacy positively and significantly mediates the effect of soft skills on work readiness, with an indirect path coefficient of 0.051, a t-statistic of 3.059, and a p-value of 0.002. The direct effect of soft skills on work readiness also remains statistically significant, indicating that self-efficacy acts as a partial mediator.

Communication, teamwork, problem-solving, emotional regulation, and leadership not only facilitate effective task performance but also strengthen individuals' confidence when responding to professional situations. Alumni who communicate effectively and cooperate successfully with others are more

likely to feel confident during interviews, when presenting ideas, and when participating in workplace teams. The resulting increase in confidence subsequently strengthens their overall readiness to enter professional employment.

This result is consistent with studies showing that self-efficacy serves as an important psychological mechanism through which soft skills are translated into stronger work readiness (Kristiana et al., 2025; Syawitri et al., 2024). The findings suggest that possessing interpersonal competencies alone may not be sufficient unless graduates also believe that they can effectively apply those competencies in occupational settings. From the perspective of Human Capital Theory, investment in interpersonal and adaptive capabilities increases the quality of human capital, while self-efficacy facilitates the application of these competencies in actual employment contexts (Mardiyah & Hayat, 2026).

#### 4.8.10 The Mediating Role of Self-Efficacy in the Effect of Hard Skills on Work Readiness

The results demonstrate that self-efficacy positively and significantly mediates the effect of hard skills on work readiness, with an indirect path coefficient of 0.136, a t-statistic of 5.452, and a p-value below 0.001. This coefficient represents the strongest indirect effect among the three mediation pathways. Because the direct effect of hard skills on work readiness also remains significant, self-efficacy functions as a partial mediator.

These findings indicate that mastery of technical competencies improves work readiness both directly and indirectly by strengthening individuals' confidence in their own abilities. Alumni who possess technical competencies relevant to their field are more likely to perceive themselves as capable of performing occupational tasks and solving problems associated with their professional specialization. Confidence derived from the mastery of these competencies subsequently encourages alumni to participate more confidently in recruitment processes, accept professional responsibilities, and adapt to occupational demands.

The mediation finding is supported by recent evidence demonstrating that self-efficacy can serve as a psychological mechanism linking technical competence and work readiness (Butar-butar & Wijaya, 2025). Research focusing specifically on digital competencies has similarly demonstrated that digital self-efficacy significantly mediates the relationship between digital skills and digital work readiness, indicating that technical capabilities generate stronger readiness when individuals are confident in applying those capabilities (Suhada et al., 2026). This finding supports Human Capital Theory by demonstrating that investments in technical competencies produce greater employment benefits when individuals possess the psychological capacity to mobilize and apply their accumulated human capital effectively (Kholifah et al., 2025).

#### 4.8.11 Implications of the Research Findings

Overall, the results demonstrate that internship experience, soft skills, hard skills, and self-efficacy constitute important determinants of the work readiness of higher education alumni in Sidoarjo. The R-square value of 0.699 indicates that the research model explains 69.9% of the variance in work readiness, while the Q-square value of 0.641 indicates strong predictive relevance. Among the independent variables, hard skills exert the strongest direct and indirect effects on work readiness.

These findings have important implications for higher education institutions. Universities need to integrate technical learning, nontechnical competency development, and structured internship experiences rather than treating these components as separate elements of graduate preparation. Recent studies demonstrate that contemporary graduate work readiness requires the integration of technical and digital competence, interpersonal capabilities, adaptability, practical workplace exposure, and psychological confidence (Dara et al., 2026; Mardiyah & Hayat, 2026). Evidence from the Journal Social Society also highlights the importance of preparing students to respond to rapidly changing digital work environments, further emphasizing the need for universities to align learning processes with contemporary labor-market dynamics (Dinda et al., 2026).

Accordingly, higher education learning should not focus exclusively on theoretical mastery but should provide students with opportunities to complete authentic projects, operate relevant technologies, analyze real-world problems, collaborate in teams, and undertake tasks that resemble professional workplace situations. Structured work-integrated learning and internship programs

are more effective when they include meaningful tasks, mentoring, clear learning objectives, constructive feedback, and opportunities for reflection and competency evaluation (Dara et al., 2026; Suryani et al., 2025; Wilopo et al., 2025). Such approaches can simultaneously develop technical and interpersonal competencies while strengthening students' self-efficacy, thereby improving their readiness to transition successfully from higher education into professional employment.

## 5 Conclusion

The findings indicate that internship experience, soft skills, and hard skills have positive and significant effects on the work readiness of higher education alumni in Sidoarjo. These three variables also have positive and significant effects on self-efficacy, while self-efficacy itself has a positive and significant effect on work readiness. In addition, self-efficacy positively and significantly mediates the effects of internship experience, soft skills, and hard skills on work readiness. These findings confirm that work readiness is determined not only by practical work experience and the mastery of interpersonal and technical competencies, but also by individuals' confidence in their ability to perform tasks and deal with workplace challenges. From a practical perspective, higher education institutions should strengthen the quality of internship programs, competency-development training, and activities aimed at enhancing self-efficacy, while companies should provide effective mentoring and meaningful involvement for internship participants.

This study has several limitations because it involved only higher education alumni in the Sidoarjo region, employed a cross-sectional research design, and relied on respondents' perceptual data collected through questionnaires. These conditions limit the study's ability to capture changes in work readiness over time and to generalize the findings to broader geographical contexts. Future research is therefore recommended to involve respondents from different regions and higher education institutions, employ longitudinal or mixed-method designs, and incorporate additional variables such as work motivation, career adaptability, social support, family environment, and organizational experience. Future studies may also compare work readiness based on academic discipline, type of higher education institution, internship duration, and alumni employment status.

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