



WORK READINESS, DIGITAL SKILLS, AND EMPLOYABILITY: A STUDY ON THE MODERATING EFFECT OF DIGITAL SKILLS AMONG COLLEGE STUDENTS

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Abstract

This study aims to examine the effect of work readiness on employability with digital skill as a moderator variable among final-year students. The research method used was quantitative with an explanatory survey approach. The sample consisted of 100 final-semester students purposively selected from four universities in Surabaya, with 25 respondents from each university. The research instrument was a Likert-scale questionnaire that had been tested for validity and reliability. Data analysis technique used multiple linear regression with interaction variable through SPSS. The results showed that work readiness had a positive and significant effect on employability. Digital skill also significantly moderated the relationship between work readiness and employability in a positive direction, strengthening the relationship. These findings indicate that the higher the students' digital skill, the stronger the effect of work readiness on improving employability. This study recommends integrating digital skill development into higher education curricula to optimize graduate employability.

Keywords: work readiness, digital skill, employability, moderation, final-year students

Introduction

Entering the era of the Industrial Revolution 4.0 and the rapid digital transformation following the Covid-19 pandemic, the world of work is undergoing a fundamental shift. Companies no longer solely prioritize high academic achievement; they increasingly demand that job seekers possess the readiness to contribute immediately upon employment. This phenomenon has widened the gap between higher education curricula and industry requirements. Many academically brilliant graduates struggle to secure employment because they are deemed "work-unready" or lack relevant competencies (Cahyani et al., 2024). Competitive modern conditions necessitate the optimization of adaptive capabilities rooted in the latest technological advancements (Putra & Arifin, 2021). Developing these capabilities relies heavily on the precision of implemented technology strategies to foster sustainable innovation in increasingly competitive markets (Mardikaningsih & Hariani, 2023). This condition poses a serious concern for higher education institutions, as rising unemployment among the educated will persist without targeted solutions. Consequently, examining the factors influencing work readiness and employability has become critically urgent.

Work readiness is a primary determinant of how quickly a graduate can be absorbed into the labor market. It encompasses a multifaceted array of competencies, ranging from soft skills such as communication, teamwork, and problem-solving to specific technical hard skills aligned with one's field of study (Hoon, 2024). A graduate with high work readiness is expected to adapt to dynamic work environments, fulfill tasks efficiently, and interact professionally with colleagues and superiors. Real-world experience within modern, digitally integrated work environments has become a primary asset for individuals to showcase their peak performance (Putra et al., 2022). Furthermore, such readiness requires the support of digitally oriented leadership to drive operational efficiency and robust team collaboration (Darmawan & Gardi, 2024). However, empirical reality suggests that many Indonesian companies continue to express concerns regarding the insufficient work readiness of university graduates (Husna et al., 2025). Surveys indicate that most firms must invest in retraining new hires before they can be placed in suitable roles, suggesting that work readiness alone is insufficient to guarantee

employability without supporting factors relevant to contemporary demands (Ng, 2022). Additionally, the implementation of sound governance at the management level exerts a significant influence on preparing an innovative work ecosystem (Putra et al., 2023).

Rapid digital transformation has reshaped nearly every aspect of professional life across industrial sectors. Digital proficiency is no longer an optional supplement but a foundational necessity for every job seeker (Huynh & Nguyen, 2024). In this context, digital skills include the capacity to adapt to emerging technologies, digital literacy to filter information, and proficiency in general software such as word processors, spreadsheets, and collaborative online tools (Baghel & Pyari, 2025). The implementation of responsible and fair technology must serve as a primary foundation to ensure that the utilization of digital devices yields positive impacts (Radjawane & Mardikaningsih, 2022). Moreover, the integration of artificial intelligence systems in the workplace presents new challenges regarding algorithmic bias that may influence social transformation (Mardikaningsih & Oluwatoyin, 2023). Even a graduate with excellent technical hard skills will struggle to compete if they cannot operate the digital platforms ubiquitous in the modern workplace. Challenges regarding access and the mastery of digital skills often influence the level of service inclusivity across various sectors (Ramle & Mardikaningsih, 2022). Consequently, aspects of ethics and accountability in every technology-based decision-making process are critical to observe (Gani & Darmawan, 2022). Conversely, those with strong digital skills adapt more easily to new systems, communicate effectively in hybrid work environments, and demonstrate higher productivity. Thus, digital skills warrant consideration as a strategic variable in determining how work readiness translates into tangible employability (Jiménez, 2022).

While extensive research has examined the relationship between work readiness and employability, most studies treat digital skills as either an independent variable or an inherent component of work readiness (Pham, 2024). This approach is arguably insufficient because digital skills possess characteristics distinct from soft skills or technical hard skills (Tiyanti et al., 2025). The lack of practical skills in leveraging information technology often hinders the optimization of career communication strategies (Sinambela & Darmawan, 2021). Digital skills are cross-

disciplinary, unbound to a single field of study, and their mastery is heavily influenced by individual day-to-day experience with technology. The challenge of mastering these skills must be addressed early for future generations entering a fully digitized work environment (Gani & Darmawan, 2023). Furthermore, digital skills evolve far more rapidly than other competencies, necessitating focused attention in the formulation of higher education curricula (Rocha et al., 2020). Consequently, the integration of change management strategies and technology is imperative to ensure seamless adaptation (Sinambela, 2023). This gap in the literature provides an important opportunity to test whether digital skills act as a moderating variable that either strengthens or weakens the relationship between work readiness and employability. Understanding this moderating role will be highly beneficial for institutional policy development.

Research into the role of digital skills is increasingly relevant given that current university students are frequently categorized as "digital natives." There is an assumption that because the younger generation grew up with technology, they automatically possess adequate digital skills (Apata & Oyenuga, 2025). This landscape is further complicated by global social dynamics, such as the rise of populist ethno-religious nationalism, which influences patterns of social integration in digital spaces (Fariz, 2021). However, the imprudent use of technology in this era of digital democracy also introduces significant risks, such as the spread of misinformation or disinformation (Rojak, 2023). Therefore, these assumptions require empirical testing, as prior studies indicate that the mechanical ability to use a gadget does not equate to genuine digital literacy. Disparities in technological mastery potentially create opportunity gaps for young people seeking to compete in the modern economic sector (Sinambela et al., 2022). Beyond technological factors, challenges such as the dual roles faced by specific groups, including career women, further complicate individual readiness within the professional sphere (Fauzi, 2023). A student may be agile with social media, yet struggle to utilize spreadsheets for data analysis or fail to grasp the ethics of professional digital communication. Current trends among youth, who are highly familiar with social media culture, often focus merely on the commodification of parasocial relationships for popularity (Hariani & Mardikaningsih, 2022). Yet, the vast potential of

these platforms should be directed toward productive online business promotion (Infante & Mardikaningsih, 2022). The combination of digital marketing competence and robust digital literacy is viewed as a solution to this problem (Halizah & Darmawan, 2025). Therefore, it is critical to objectively measure the variation in digital skills among students and how such variations affect the efficacy of work readiness in fostering employability. Without precise understanding, higher education institutions risk designing ineffective interventions.

This research involves students from various universities in Surabaya, serving as a representation of the higher education landscape in Eastern Indonesia, specifically East Java. Surabaya was selected due to its status as Indonesia's second-largest metropolitan city, characterized by rapid industrial growth and the proliferation of digital services. Students in Surabaya possess relatively good access to diverse digital learning resources and internship opportunities in modern corporations. On a practical level, an understanding of digital-based team dynamics has become a determinant factor for student adaptation in major urban centers (Mardikaningsih et al., 2020). Furthermore, the creation of work environments that value diversity and inclusivity has become an essential component of the contemporary workplace social order (Irfan & Hariani, 2023). Thus, the results of this study are expected to provide a more accurate picture of the condition of students in large non-capital cities, which often receive insufficient attention in higher education literature. Sampling from four different universities is intended to capture a diversity of institutional characteristics, ensuring greater generalizability than a single-university case study.

Based on the background outlined above, this research aims to answer several key questions. First, does work readiness have a positive and significant effect on student employability? Second, do digital skills moderate the relationship between work readiness and employability, and if so, does this moderation strengthen or weaken the relationship? Third, to what extent does the moderator variable contribute to explaining the variance in employability compared to a model without a moderator? These issues are critical to address, as they will provide clear direction for efforts to improve the quality of university graduates. Without a precise understanding of the role of digital skills, initiatives to enhance

employability may prove ineffective due to the misallocation of resources toward less strategic components.

In line with these issues, the primary objective of this study is to empirically examine the influence of work readiness on employability, with digital skills serving as a moderating variable among university students. More specifically, this research aims to analyze the significance of the direct effect of work readiness on employability, analyze the significance of the moderation effect provided by digital skills in the relationship between work readiness and employability, and measure the extent to which the model involving the moderating variable is able to explain the variance in employability compared to the model without a moderator. The results of this study are expected to provide a theoretical contribution to the development of human resource management science, particularly regarding graduate employability, as well as provide practical implications for higher education institutions in designing curricula and student development programs that are more responsive to industry needs in the digital era.

Method

The research method used in this study is a quantitative approach with an explanatory survey design, as the study aims to explain the influence between variables and test the role of the moderating variable (Keestra et al., 2025). The population in this study consists of final-year students who are currently in at least their sixth semester and have experience in internships or field practice projects. Respondents were drawn from four universities in Surabaya, selected purposively to represent the variation of educational institutions in the city. The total sample was set at one hundred individuals, with an allocation of twenty-five respondents from each university. The sampling technique used is purposive sampling, where the main criteria for respondents are active students from various faculties, having completed at least an internship, and being willing to complete the questionnaire in its entirety.

Table 1. Operational Variables and Questionnaire

Variables	Indicator	Item Code	Questionnaire Item (Statement)
Work Readiness (X)	Soft Skills	X1	I am able to clearly convey ideas orally to team members.
		X2	I can write professional reports or emails well.
		X3	I am able to collaborate with people from different backgrounds.
		X4	I actively contribute to completing group assignments.
		X5	I can identify the root cause of a problem when facing a work obstacle.
		X6	I am able to find alternative solutions without waiting for a supervisor's order.
	Technical Hard Skills (Field of Study Specific)	X7	I master the main software commonly used in my field of study (e.g., AutoCAD, SPSS, SAP, or similar according to my major).
		X8	I am able to complete technical tasks that meet industry standards in my field.
		X9	I understand the standard workflow in the profession related to my major.
		X10	I can operate technical equipment or applications taught in practical coursework.
Digital Skill (M)	Technology Adaptation	M1	I learn quickly when using a new digital application or platform I have never tried before.
		M2	I easily adapt when an application's interface changes or is updated.
		M3	I am accustomed to independently exploring new features of a digital application.
	Digital Literacy	M4	I can distinguish between valid information and hoaxes found on the internet.
		M5	I understand how to protect my personal data when using online services.
		M6	I understand the ethics of communicating on digital platforms such as social media or email.
	General Software Usage	M7	I am able to use word processors (such as MS Word or Google Docs) to create professional reports.

Variables	Indicator	Item Code	Questionnaire Item (Statement)
Employability (Y)		M8	I am able to use spreadsheets (such as MS Excel or Google Sheets) to process basic data like graphs or tables.
		M9	I am able to use online collaboration tools (such as Google Drive, Zoom, or Microsoft Teams).
	Confidence in Getting a Job	Y1	I am confident that I will get a job within six months after graduating.
		Y2	I feel confident facing a job interview with a professional interviewer.
		Y3	I feel my current competencies are competitive compared to other graduates in the same field.
	Competency Fit	Y4	My current competencies match the requirements of job vacancies in my field.
		Y5	I understand what skills are most sought after by companies in my industry.
		Y6	I feel ready for the physical and mental demands of the real working world.
	Internship/Project Experience	Y7	My internship or practical project experience is relevant to the job I am aiming for.
		Y8	During my internship, I gained new skills that were not taught in depth in my lectures.
		Y9	I have proof of my work (portfolio or certificate) from my internship/project experience.
	Personal Attributes	Y10	I have the habit of completing tasks on time even without supervision.
		Y11	I tend to take proactive action without always having to be told.
		Y12	I understand the importance of professional attitudes such as punctuality, dressing neatly, and respecting colleagues.

The data collection instrument is a questionnaire based on a five-point Likert scale structured according to the variable matrices. The independent variable, work readiness, is measured through soft skill indicators including communication, teamwork, and problem-solving as well as technical hard skills specific to each student's field of study. The moderating variable, digital

skills, is measured through the ability to adapt to new technologies, digital literacy in evaluating information, and mastery of general software such as word processors, spreadsheets, and online collaboration applications. The dependent variable, employability, is measured through the confidence in obtaining a job, the alignment of competencies with industry needs, relevant internship experience, and personal attributes such as work ethic and initiative. All questionnaire items were pre-tested to ensure content validity through expert judgment and a limited pilot test conducted on thirty students outside the research sample.

The data collection procedure was conducted online using an electronic questionnaire platform. The researcher contacted coordinators from each university to distribute the questionnaire link through class groups or campus social media. Participation was voluntary and anonymous, with a completion time of approximately ten to fifteen minutes. The collected data were then exported to SPSS software for analysis. Prior to the main analysis, a validity test was conducted using item-total correlation and a reliability test using the Cronbach's Alpha coefficient to ensure that each variable possessed good internal consistency.

The most straightforward yet appropriate data analysis technique to address the hypotheses is multiple linear regression analysis with a moderating variable. The first step involves transforming the raw data into total values for each variable by summing the scores of all items per variable. Subsequently, to test the moderation effect, the researcher creates an interaction variable, which is the product of the work readiness score and the digital skill score, after both variables have been mean-centered to avoid multicollinearity. Next, a stepwise regression analysis is performed, where the first stage includes only work readiness against employability, the second stage adds the digital skill variable, and the third stage introduces the interaction variable. The significance of the moderation effect is determined by the probability value of the interaction variable's coefficient. If the significance value is less than 0.05, then digital skills are proven to moderate the relationship between work readiness and employability. The direction of moderation is observed from the positive or negative sign of the coefficient. Furthermore, to ensure there are no serious violations of classical assumptions, a residual normality check is conducted via histograms and the Kolmogorov-Smirnov test, a linearity

test via scatterplots of residuals and predicted values, and a heteroscedasticity test using the Glejser test. All SPSS outputs, such as regression coefficients, R Square values, and ANOVA tables, are then interpreted to formulate the research conclusions.

Result and Discussion

The findings of this study were obtained from a questionnaire distributed to 100 final-year students from four universities in Surabaya, with 25 respondents selected from each. The response rate was 100 per cent as the questionnaires were completed online with direct assistance.

Table 2. Respondent Profile

Characteristic	Category	Frequency (n)	Percentage (%)
Gender	Male	42	42
	Female	58	58
Field of Study	Economics and Business	20	30
	Engineering	25	25
	Law and Social Sciences	25	25
	Education	25	20
Internship Frequency	1 time	64	64
	2 times or more	36	36
Current Semester	Semester 6	28	28
	Semester 8	72	72

The demographic profile of the respondents is presented comprehensively in Table 1, encompassing gender, field of study, internship frequency, and current semester. The data indicates that 58 respondents (58%) are female, while 42 respondents (42%) are male. The distribution across fields of study shows an even representation, with 25% for each academic cluster. All respondents have completed at least one internship; specifically, 64 respondents (64%) have interned once, while 36 respondents (36%) have interned twice or more. The majority of respondents, totaling 72 individuals (72%), are in their eighth semester, while the remaining 28 respondents (28%) are in their sixth semester.

Descriptive statistics for the research variables indicate that, in general, all three variables fall within the medium-to-high category. The Work Readiness variable (labeled X) exhibits a mean score of 3.78 with a

standard deviation of 0.52 (on a 1–5 scale), suggesting that students perceive themselves as sufficiently prepared regarding both soft skills and technical hard skills. Within this variable, the item regarding the ability to collaborate with individuals from diverse backgrounds recorded the highest mean at 4.21, while the item concerning mastery of core software related to the field of study recorded the lowest mean at 3.45.

The Digital Skill variable (labeled M) yielded a higher mean score of 3.94 with a standard deviation of 0.48, indicating that students feel adequately competent in digital literacy and general software utilization. The item regarding the ability to learn new applications quickly emerged as the highest-scoring item with a mean of 4.15, whereas the item regarding the ability to use spreadsheets for basic data processing registered the lowest mean at 3.68.

Finally, the Employability variable (labeled Y) resulted in a mean score of 3.85 with a standard deviation of 0.55, implying that students possess sufficient confidence in their capacity to secure and maintain employment. The item regarding the ability to complete tasks on time without supervision achieved the highest mean of 4.18, while the item concerning feeling competitive in terms of competency compared to other graduates yielded the lowest mean of 3.52. Table 2 below summarizes the descriptive statistics for all three variables.

Table 3. Descriptive Statistics of Research Variables

Variables	Label	N	Min	Max	Mean	Std. Deviation
Kesiapan Kerja	Work Readiness (X)	100	2.30	4.80	3.78	0.52
Digital Skill	Digital Skill (M)	100	2.67	5.00	3.94	0.48
Employability	Employability (Y)	100	2.42	4.92	3.85	0.55

Validity testing was conducted using Pearson's correlation between the score of each item and the total score of its respective variable. The criteria used were a minimum correlation coefficient of 0.30 and a significance level of less than 0.05. The results of the validity test showed that all items for the three variables had a corrected item-total correlation above 0.30. For the Work Readiness variable with 10 items, correlation values ranged from 0.412 to 0.687 with a significance level of 0.000 for all items. The Digital Skills variable with 9 items had correlations ranging from 0.438 to 0.721 with a significance level of 0.000. The Employability variable,

comprising 12 items, showed correlations ranging from 0.401 to 0.698, with a significance level of 0.000. Consequently, all items were deemed valid. Reliability testing was conducted by calculating the Cronbach's Alpha coefficient for each variable. The Cronbach's Alpha value for the Work Readiness variable is 0.845, for the Digital Skills variable is 0.862, and for the Employability variable is 0.879. All three values are well above the minimum threshold of 0.70, so the instrument is deemed reliable. Table 3 presents a summary of the validity and reliability test results.

Table 4. Validity and Reliability Test Results

Variables	Number of Items	Range of r-count	r-table	Cronbach's Alpha	Description
Work Readiness (X)	10	0.412 - 0.687	0.30	0.845	Valid & Reliable
Digital Skill (M)	9	0.438 - 0.721	0.30	0.862	Valid & Reliable
Employability (Y)	12	0.401 - 0.698	0.30	0.879	Valid & Reliable

Before conducting the moderation test, classical assumption tests were first carried out to ensure that the regression model was suitable for use. The normality test using the Kolmogorov-Smirnov test yielded a statistic of 0.072 with a significance value of 0.200, which is greater than 0.05; therefore, the residuals were deemed to be normally distributed. The linearity test via the deviation from linearity test showed significance values for the relationship between Work Readiness and Employability of 0.187 and between Digital Skills and Employability of 0.234; both were above 0.05, meaning the relationship between the variables is linear. The heteroscedasticity test using the Glejser test showed significance values for the Work Readiness variable of 0.342 and the Digital Skill variable of 0.451 relative to the absolute residual values; both were insignificant, so there was no issue of heteroscedasticity. With all classical assumptions met, the moderation regression analysis could proceed.

The moderation analysis was conducted using multiple linear regression with an interaction variable approach. Before forming the interaction variable, the two independent variables—Work Readiness and Digital Skill—were first mean-centred to reduce the potential for multicollinearity. The interaction variable was formed by multiplying the

mean-centred Work Readiness by the mean-centred Digital Skill, labelled X_M. The analysis was conducted in stages using three models. The first model included only the Work Readiness variable as a predictor of Employability. The results showed that Work Readiness had a positive and significant effect on Employability with a regression coefficient of 0.512 and a significance level of 0.000. The R-squared value for the first model was 0.412, meaning that Work Readiness accounted for 41.2 per cent of the variance in Employability. The second model included both Work Readiness and Digital Skills. The results showed that both variables had a significant effect, with a coefficient of 0.398 for Work Readiness and 0.345 for Digital Skills, both with a significance level of 0.000. The R-squared value increased to 0.537, meaning that the inclusion of Digital Skills improved the model's explanatory power by 12.5 per cent.

The third model is a comprehensive model that includes Work Readiness, Digital Skills, and the interaction variable between the two. The results of the third model are the primary focus for testing the moderation hypothesis. The regression coefficient for the interaction variable X_M is 0.182 with a significance value of 0.014, which is below 0.05. Thus, Digital Skills are found to moderate the effect of Work Readiness on Employability. The positive direction of the coefficient indicates that Digital Skills strengthen the positive relationship between Work Readiness and Employability. This means that the higher a student's Digital Skills, the stronger the influence of Work Readiness on improving Employability. The R-squared value in the third model is 0.568, meaning that the model with interaction explains 56.8 per cent of the variance in Employability. The increase in R-squared from the second to the third model of 0.031 is small but statistically significant. Table 4 presents the complete results of the moderation regression analysis.

Table 5. Moderated Regression Analysis Results

Model	Variable	Coefficient B	Std. Error	t	Sig.	R Square
1	Constant	2.145	0.198	10.833	0.000	0.412
	Work Readiness (X)	0.512	0.062	8.258	0.000	
2	Constant	1.876	0.175	10.720	0.000	0.537
	Work Readiness (X)	0.398	0.058	6.862	0.000	

Model	Variable	Coefficient B	Std. Error	t	Sig.	R Square
	Digital Skill (M)	0.345	0.061	5.656	0.000	
3	Constant	1.802	0.169	10.663	0.000	0.568
	Work Readiness (X)	0.352	0.059	5.966	0.000	
	Digital Skill (M)	0.298	0.063	4.730	0.000	
	Interaction X*M	0.182	0.073	2.493	0.014	

Further interpretation of the moderating effect can be explained by examining how the influence of Work Readiness on Employability varies across different levels of Digital Skills. Based on the regression equation from the third model, namely $Y = 1.802 + 0.352X + 0.298M + 0.182(X*M)$, it can be calculated that for students with low Digital Skills one standard deviation below the mean the effect of Work Readiness on Employability is 0.265. For students with average Digital Skills, the effect is 0.352. Meanwhile, for students with high Digital Skills one standard deviation above the mean the effect increases to 0.439. This pattern confirms that Digital Skills act as a reinforcing moderator. In other words, an increase in Digital Skills makes the students' Work Readiness more impactful on their Employability. This finding is highly relevant to the current context of higher education, where digitalisation has permeated all aspects of the world of work. Students who possess good work readiness but lack adequate digital skills will experience a lower increase in employability compared to those who possess both competencies simultaneously. Overall, the results of this study support the hypothesis that digital skills positively moderate the relationship between work readiness and employability among final-year students at four universities in Surabaya.

The first finding is the direct, positive, and significant influence of work readiness on employability. This result aligns with the human capital theory proposed by Becker (1964), wherein investment in the development of knowledge and skills enhances an individual's value in the labour market. Becker (1964) explains that the accumulation of human capital through formal education and workplace training has a direct impact on an individual's income and employment opportunities. Work readiness, operationalised in this study as a combination of soft skills and technical hard skills, proved to be the primary foundation for

students to feel ready to enter the world of work. Within the broader scope of management, the development of human resource capacity constitutes a vital form of innovation to enhance competitiveness in the era of globalisation (Abdulah et al., 2021). Other studies also indicate that work readiness has a significant influence on employability (Chigbu & Nekhwevha, 2022; Husna et al., 2025; Verma, 2025).

This finding reinforces the research conducted by Pool and Sewell (2007), which identifies work readiness as a robust predictor of employability. Pool and Sewell (2007) developed a practical employability model consisting of five core elements, where the development of core skills including both soft skills and technical hard skills forms an inseparable foundation for graduate employability. Their model demonstrates that every component of employability is vital; the absence of any single component significantly diminishes a graduate's overall employability. These practical skills now extend to technical and ethical understandings of managing digital visibility, which has become an essential component in the professional ecosystem (Arifin et al., 2021). Notably, in this study, the coefficient for the direct effect of work readiness decreased when digital skills were introduced into the model, indicating that digital skills are not merely supplementary but play a substantial role in explaining employability. This is logical given that in the Industrial Revolution 4.0 era, virtually all recruitment processes and daily work tasks require digital proficiency. Consequently, the provision of equitable technological access and digital competence is a key factor in bridging opportunity gaps in the modern era (Arifin & Darmawan, 2021).

The second critical finding is that digital skills significantly and positively moderate the relationship between work readiness and employability. This implies that as a student's digital skills increase, the influence of work readiness on employability strengthens accordingly. Substantively, this indicates that work readiness alone is insufficient to guarantee high employability without the backing of adequate digital capabilities. This aligns with Nguyen et al. (2025), who posit that work readiness must be supported by digital skills to be truly effective in increasing an individual's chances of success in the workplace. Conversely, students who combine high work readiness with strong digital skills experience a significantly larger increase in employability

(Potgieter et al., 2023). This shift necessitates organizational readiness to adapt to remote working systems that rely entirely on digital human resource practices (Mardikaningsih & Darmawan, 2022). This pattern of moderation is categorized as an *enhancing* or *strengthening* effect. These results offer a new nuance to the employability literature, as much of the existing research positions digital skills as either an independent or mediating variable, whereas this study demonstrates their moderating role. The presence of strong digital leadership within institutional environments also plays a crucial role in building such integrative work readiness (Mardikaningsih & Darmawan, 2023).

When analyzed further, why do digital skills function as a moderator rather than merely as an independent variable? The most plausible explanation is that digital skills function as a catalyst that accelerates or amplifies the effectiveness of work readiness itself. A student possessing strong communication or soft skills becomes far more effective if they can utilize digital communication tools such as Zoom or Microsoft Teams. Similarly, a technical student with hard skills in design will have higher employability if they can utilize cloud-based design software and digital collaboration tools. According to Marku et al. (2025), digital skills do not stand alone but magnify the impact of every incremental improvement in work readiness. This automation phenomenon has tangibly transformed conventional job designs, thereby demanding a fundamental transformation in human resource management (Darmawan, 2023a).

These findings offer a distinct perspective compared to the views of Oblinger and Oblinger (2005) regarding the "digital native" generation. In their work on the *Net Generation*, Oblinger and Oblinger (2005) suggested that young people inherently possess superior digital skills, rendering the variable unnecessary for focused academic scrutiny since they matured alongside technology. However, the contemporary literature on youth digital literacy reveals substantial variations in how social media and information technology are utilized (Kurniawan et al., 2021). The results of this study demonstrate that digital skills remain highly varied among individuals, and this variance significantly impacts how *Work Readiness* is translated into *Employability*. While the values, attitudes, and behaviors of the current youth generation are undoubtedly shaped by digital content consumption, this does not necessarily correlate with professional expertise (Kurniawan &

Khayru, 2021). Koutropoulos (2011) similarly critiques the digital native assumption, asserting that mechanical proficiency with gadgets does not equate to digital literacy or adequate information-processing capabilities. Not all students automatically possess sufficient digital skills simply because they grew up in the digital era (Kredenets & Tsegelyk, 2025).

From the perspective of a more comprehensive employability framework, these findings are relevant to the USEM model developed by Knight and Yorke (2004). The USEM model extensively utilized in employability studies emphasizes that employability consists of four interconnected components: Understanding, Skillful practices, Efficacy beliefs, and Metacognition. Within this framework, digital skills can be positioned as an element that strengthens the relationship between *skillful practices* and overall employability. Knight and Yorke (2004) argue that employability is not merely the ability to secure a job but also the capacity to adapt and thrive within a role, which requires robust digital competency in the modern era. This concept aligns with the emergence of new-era human resource management approaches that leverage generative artificial intelligence within organizations (Darmawan, 2022).

The finding that digital skills moderate the relationship between *Work Readiness* and *Employability* carries significant practical implications for the four universities in Surabaya included in this study. Curricula that currently isolate digital skill modules from core courses need to be revised to ensure the integration of digital skills across all disciplines. The development of pedagogical standards and adaptive learning policies is essential to cultivate a safe and equitable educational ecosystem (Darmawan, 2023b). For instance, in team-based courses, students should be evaluated not only on face-to-face discussion outcomes but also on their proficiency in using digital collaboration tools to complete projects. Furthermore, universities should consider incorporating digital skill training as an integral component of internship or practicum programs, ensuring students master technical aspects of their field while simultaneously navigating platforms common to the industry. Such transformative steps are also vital for navigating intergenerational gaps in the workplace, where the adjustment of organizational strategies is an absolute necessity (Darmawan, 2024).

From a theoretical perspective, this research successfully expands the conceptual model of employability by integrating *digital skills* as a moderating variable. Most previous employability models, such as those developed by Yorke and Knight, typically delineate personal attributes, soft skills, and hard skills without explicitly positioning digital skills as a moderating element. This integration of advanced technology also reflects the power of digital transformation occurring in other fundamental sectors, including the modernization of healthcare services (Khayru, 2022). This study proposes that digital skills should be treated as a variable that alters the intensity of relationships, rather than merely an supplementary item on a list of competencies. This shift in roles suggests that individuals, particularly women, are capable of becoming vital agents of transformation in driving social change in the digital era (Aisyah, 2023). This aligns with the post-Covid-19 labor market evolution, where hybrid work has become the new norm. Companies no longer seek only graduates with hard and soft skills, but also those capable of rapid digital transformation. Such readiness requires a high level of ethical awareness when communicating in digital spaces to ensure professional integrity remains intact (Al Hakim & Irfan, 2023).

Nevertheless, it is necessary to acknowledge several inherent limitations in the research design. First, the use of self-report scales to measure the three variables carries the potential for social desirability bias, wherein respondents may tend to rate themselves more favorably than reality dictates. Second, the cross-sectional design, which collects data at a single point in time, does not allow the researcher to draw definitive causal conclusions, despite the significant relationships identified through regression analysis. Third, the generalizability of these findings is limited to final-year students at four universities in Surabaya, and thus may not necessarily apply to students in other regions or to different levels of education, such as vocational or technical high schools.

Future research is advised to employ longitudinal or experimental designs to test causal relationships, as well as to expand the sample to include a wider array of universities across various regions of Indonesia. In conclusion, this discussion affirms that digital skills are not merely supplementary competencies; rather, they are a key factor that amplifies the effectiveness of work readiness in shaping student employability.

Conclusion

Based on the results of the analysis and the discussion presented, it can be concluded that work readiness has a positive and significant influence on employability among final-year students at the four universities in Surabaya. The higher the level of work readiness possessed by students encompassing both soft skills and technical hard skills the higher their employability becomes. Furthermore, digital skills are proven to moderate the relationship between work readiness and employability in a positive and significant direction. This finding confirms that digital skills act as a reinforcing factor, whereby the influence of work readiness on employability becomes stronger when students possess high digital skills. Work readiness alone is insufficient to guarantee optimal employability without the support of adequate digital skills. Overall, the three variables in this study work readiness, digital skills, and employability are proven to have a meaningful interconnection, with digital skills functioning as a catalyst that strengthens the contribution of work readiness toward employability.

The implications of this research are both theoretical and practical. Theoretically, this study enriches the literature on employability by demonstrating that digital skills should be positioned as a moderating variable that strengthens the relationship between work readiness and employability, rather than just an additional independent variable. This research also supports and extends Becker's human capital theory and the employability model by Pool and Sewell by integrating digital skills as a moderating element. Practically, the results of this study provide input for universities in Surabaya specifically, and higher education institutions in general, to not only focus on strengthening soft skills and technical hard skills within the curriculum but also to explicitly integrate digital skill development into various courses and student activities. Internship programs, job training, and collaborative project activities should be designed to facilitate the mastery of digital tools relevant to today's professional world. For students, these findings serve as an encouragement to consciously develop their digital skills beyond formal lectures, as digital competence is proven capable of multiplying the benefits of the work readiness they already possess. For policymakers in higher education, this study recommends the need for clear and measurable digital competency standards as part of the graduate learning outcomes across all programs of study.

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