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The role of digital skills, digital self-efficacy, and government support in enhancing digital work readiness

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Abstract

This study aims to examine and analyze the influence of digital skills (DS) on digital work readiness (DWR) among youth, with digital self-efficacy (DSE) as a mediating variable and government digital support (GDS) as a moderating variable. Given the rapid pace of digital transformation reshaping the labor market, understanding the interplay between technical competencies and psychological empowerment is crucial, particularly for young job seekers. A quantitative survey was employed involving 200 respondents aged 18–35 years old in Yogyakarta, Indonesia. Data were analyzed using the partial least squares structural equation modeling (PLS-SEM). The findings indicate that DSE is strongly and significantly impacted by DS. Nevertheless, DWR is not directly impacted by DS. Rather, DSE plays a crucial function as a psychological facilitator by fully mediating the link between DS and DWR. However, the statistically insignificant moderating effect of GDS on the relationship between DS and DWR indicates that this pathway is not strengthened by GDS. This study is context-specific to youth in the Yogyakarta region and focuses solely on the integration of DS, DSE, and GDS in predicting DWR. Further research could expand the demographic scope and incorporate additional socio-contextual factors to deepen understanding of digital employability. This study contributes a novel empirical model by integrating both psychological and institutional dimensions into the analysis of DWR. It challenges the conventional reliance on technical training alone and underscores the critical need for confidence-building and GDS to enhance youth employability.

Introduction

Digital transformation has become a disruptive force that radically revolutionizes the structure of the global labor market (Tenney, 2024). Rapid technological advancements not only redesign organizational workflows and work patterns but also redefine the skills required, transform the paradigm of work relationships, open access to new types of jobs, and demand multidimensional and adaptive competencies (Gomber et al., 2018; Śledziewska & Włoch, 2021). In the context of the continuously evolving digital economy, flexibility such as remote work systems has been proven to enhance the inclusion of workers who have been previously marginalized (Dettling, 2017; Shukla et al., 2021). However, along with this expanded access, demands for new competency standards are also inevitable (Lent, 2018; Li, 2024).

The substantial rise of remote workers in Indonesia, which went from 4% prior to the pandemic to 41% during it and then leveled off at about 23% following, is indicative of this change

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(Muhyiddin & Nugroho, 2021). Concurrently, the rise in digital transactions is a reflection of the increasing incorporation of digital technology into business and labor processes. In the Yogyakarta Special Region (DIY), electronic transactions from key platforms including Tokopedia, Bukalapak, and Blibli.com totaled over IDR 480 billion between August 30 and September 12, 2024 (Humas Pemda DIY, 2025). The phenomena highlight the increasing demand for digital skills and preparedness to adjust to the changing digital work landscape by demonstrating how digitization not only changes labor patterns but also reshapes local economies.

According to the World Economic Forum, by 2025, about half of all workers would need training, with technology-related abilities accounting for one-third of the required skill set (Rehman et al., 2024; Li, 2024). As noted by earlier researchers (Hanna, 2018; Ahi et al., 2023), integration into the global economy and the expansion of service exports are also facilitated by a robust digital ecosystem. In this regard, having digital skills (DS) is crucial for people to compete and adjust to the demands of the modern workplace (Mannila et al., 2018; Yuan et al., 2024; Bejaković & Mrnjavac, 2020). However, digital work readiness (DWR) among the younger generation, especially students and entry-level workers, is not yet fully optimal (Mkhize & Reddy, 2025). Despite having technical training, many people lack the digital self-efficacy (DSE) necessary to use technology successfully in the workplace (Paredes-Aguirre & Fernandez-Solis, 2025). DSE is the conviction that one can use digital tools and platforms efficiently. DSE is a psychological factor that promotes success and active engagement in the digital workplace (Bejarano et al., 2022; Ibrahim & Aldawsari, 2023; Tomczak et al., 2023; Na et al., 2024; Tee et al., 2024). Furthermore, the environment's lack of support, particularly from local government laws and initiatives, hinders the widespread adoption of technology (Chen et al., 2021; Bejaković & Mrnjavac, 2020).

Although many studies have examined these aspects separately, there is still limited research that simultaneously investigates the relationships among DS, DSE, government digital support (GDS), and DWR within a comprehensive structural framework (Yuan et al., 2024; Prasetiyo et al., 2024; Na et al., 2024). Based on the social cognitive theory (Bandura, 1986), this study sees these concepts as components of a system that is interconnected and in which self-beliefs (digital self-efficacy), environmental factors (GDS), and personal capabilities (digital skills) interact dynamically to shape behavioral outcomes like digital work readiness. According to this theoretical perspective, digital readiness is not just the outcome of technical competence but rather of mutual interactions between behavioral, environmental, and personal factors. It highlights how people's confidence and contextual support work together to convert digital competence into effective work readiness.This is particularly relevant for Indonesian youth aged 18–35, who are a key group in supporting the transition to a digital economy. This gap needs to be addressed promptly given the high potential and challenges faced by this productive age group.

Beyond earlier research that concentrated on DS scale validation in Europe, this study closes a significant gap by creating an integrated quantitative model that investigates the relationship between DS and DWR in Indonesia while establishing DSE as a psychological mediator (Audrin et al., 2024; Suhada et al., 2024). Additionally, this study broadens our knowledge of DSE's function beyond an academic setting to include actual work preparedness. (Ibrahim & Aldawsari, 2023; Tomczak et al., 2023; Na et al., 2024). Accordingly, this study aims to explore the complex interplay between individual competencies and institutional support in shaping digital work readiness. Specifically, it investigates whether DS exert a significant influence on DWR among employees in the Indonesian context. Furthermore, it examines the mediating role of DSE in linking DS to DWR, highlighting the psychological mechanisms that enable workers to translate their technical capabilities into workplace readiness. Lastly, the study assesses whether GDS moderates this relationship, thereby evaluating how external policy environments and institutional facilitation strengthen or potentially weaken, the impact of individual digital competence on work readiness. The DSE scale used was adapted from DigComp and PIAAC and locally validated for the young population in Yogyakarta, thereby enhancing contextual relevance (Laver et al., 2012). The quantitative approach to government digital support (GDS) as a moderator also represents a significant methodological contribution, considering that previous studies have mostly been qualitative (Bejaković & Mrnjavac, 2020). The integration of mediation and moderation within a single framework provides deep insights into the dynamics of digital work readiness from skill-based, psychological, and structural perspectives (Aldawsari, 2023; Na et al., 2024).

Therefore, in addition to providing fresh perspectives on the evolution of theories pertaining to digital employability, this study also makes useful contributions to aid in the creation of more focused policies. The study's conclusions can be used as a basis for creating responsive, flexible digital HR capacity-building initiatives that meet labor market demands in the quickly changing age of technology revolution. The remainder of this paper is organized as follows: the next section reviews the relevant literature and develops the hypotheses, followed by the research methodology, results, discussion, and implications.

Literature Review and Hypotheses Development

Digital skills

Basic and advanced capabilities known as "digital skills" (DS) allow people to use information and communication technologies in a variety of social and professional contexts. Information and data literacy, teamwork and communication, digital content production, security, and problem-solving are the five primary domains that comprise digital skills (European Commission, 2013). Another way to describe digital talents is as abilities that are applicable to the digital age. The capacity to use digital technology, communication tools, and networks efficiently is referred to as basic technical competence, or DS. They divide digital talents into three primary categories: communication skills, information skills, and fundamental skills (Van Deursen et al., 2016). According to its definition, DS is a strategic competency that empowers people to use digital technology efficiently to accomplish activities and accomplish organizational objectives (Yoo & Jang, 2023). Eight dimensions comprise technology usage skills, content management, cybersecurity, communication and teamwork, critical thinking, accountability, identity and development, and digital well-being were found based on a measuring evaluation of digital skill items (Audrin et al., 2024).

According to recent research, the impact of digital skills on preparedness for digital work seems to vary by industry, age, and institutional support (Leesakul et al., 2022; Audrin et al., 2024). To maximize their contribution to work preparedness in the age of digital transformation, customized training interventions remain necessary, even though digital skills are increasingly essential in the labor market.

Digital self-efficacy

Digital self-efficacy is the conviction that one can use digital tools and technologies efficiently (Banoglu et al., 2015; Urdan & Pajares, 2006; Yoo & Jang, 2023). This concept is derived from Bandura's (1986). The self-efficacy hypothesis has been modified for the digital age. Additionally, research like those conducted by Adegbite (2024) and Marijani et al. (2023) has shown that DSE is a key mediator in the association between digital skills and work readiness or performance outcomes. Individuals' potential contribution to work is diminished when they have digital abilities but lack confidence in their ability to use them. Understanding digital self-efficacy (DSE) as a psychological component that converts digital skills into real workplace behavior is therefore essential (Rezai et al., 2024; Liu et al., 2024).

Digital work readiness

The degree to which people are equipped to adjust, participate, and maintain themselves in a digital workplace is reflected in their digital work readiness (DWR) (Sulistyohati et al., 2022). DWR, according to Kucuksuleymanoglu (2025), includes psychological and behavioral elements like self-assurance, adaptability, and digital learning experiences in addition to technical competencies. According to research by Anthonysamy et al. (2020), lifelong learning and digital literacy are essential components for managing the ever-changing labor market, and they are closely related to digital job readiness.

External elements including training, access to technology, and digital corporate culture also have an impact on digital work readiness (DWR) (Jewapatarakul & Ueasangkomsate, 2024;

Suhada & Muafi, 2024). The infrastructure, knowledge, and abilities required to incorporate digital technology into routine work procedures are all included in digital work readiness, or DWR (Boc et al., 2023; Nikolaev et al., 2020; Rahmat et al., 2024).

Digital government support

The term "government digital support" (GDS) refers to programs, regulations, and infrastructure that the state offers to improve technology access, digital literacy, and community preparedness. The government is strategically involved in making sure that digital transformation is a tool for empowerment rather than a means of exacerbating socioeconomic inequalities. Research by Ayimah et al. (2024) shows that strong GDS can encourage the adoption of technology, especially among SMEs, job seekers, and students.

Additionally, there is a favorable correlation between the population's digital abilities and digital self-efficacy and government support in the form of inclusive policies, technological scholarships, and digital training (Zein & Twinomurinzi, 2019). Government digital support (GDS) has the potential to serve as a catalyst for greater digital work preparedness when these policies are included into the educational and employment sectors (Janowski, 2015). This emphasizes that effective digital human resource development in the digital age depends critically on cooperation between the government, the education sector, and industry.

Theoretical foundation: social cognitive theory

This study, which is based on social cognitive theory (SCT) (Bandura, 1986), defines digital skill (DS) as a fundamental human ability that permits people to engage with, adjust to, and gain knowledge from digital settings. SCT places a strong emphasis on how behavior, personal characteristics, and environmental variables all interact to shape people's competency and preparation for the workplace. DSE serves as a crucial cognitive mechanism in this framework, converting digital skills into self-assured and goal-directed actions that strengthen people's confidence in their capacity to complete digital activities successfully (Compeau & Higgins, 1995; Krippendorff, 2004; Xu et al., 2025). Consequently, higher levels of DS are expected to enhance DSE, which in turn strengthens digital work readiness (DWR), a state reflecting employees' preparedness, adaptability, and engagement in technology-driven work settings (Audrin et al., 2024; Suhada et al., 2024). Moreover, digital government support (DGS) is viewed as an enabling environmental factor that aligns with SCT's notion of external reinforcement, shaping individuals' motivation and opportunities to apply and develop their digital competencies (Rezai et al., 2024; Zinaida et al., 2025). Thus, this theoretical model integrates personal capability (DS), cognitive belief (DSE), behavioral readiness (DWR), and environmental facilitation (DGS) to provide a holistic understanding of how individuals become digitally competent and prepared for future work ecosystems.

The impact of digital skills on digital self-efficacy

Social cognitive theory by Bandura (1986) provides a more comprehensive explanation of this relationship. People get mastery experiences, a major source of self-efficacy, when they practice and apply digital abilities in practical or hands on contexts. This boosts their confidence in their capacity to complete digital activities successfully. A person's increasing digital self-confidence is greatly influenced by the improvement of their digital skills through instruction and practical experience (Mannila et al., 2018). This happens because people who use technology effectively develop positive views of their own abilities, which in turn motivates them to be more engaged and self-assured in digital settings (Bellini et al., 2016; Cosby et al., 2023). It has been demonstrated that people with high levels of digital proficiency and self-efficacy are better equipped to adjust to changes in technology and can confidently handle digital issues (Rosales-Márquez et al., 2025). Theory and the results of earlier studies support the proposal of Hypothesis 1.
H_1: Digital skills have a positive and significant effect on digital self-efficacy.

The impact of digital skills on digital work readiness

One of the most important indicators of workforce readiness for the fourth and fifth industrial revolutions is digital skills, which also predict digital work readiness (Panjaitan et al., 2024). Additionally, studies conducted in the tourist industry show a discrepancy between graduates' digital abilities and industry requirements, highlighting the crucial role that digital skills play in determining digital work readiness (Stylianou & Pericleous, 2025). It has been shown that digital self-efficacy (DSE) greatly and favorably influences digital work readiness (DWR) (Arpasi Bejarano et al., 2022; Tee et al., 2024). Up to 94.3% of the influence on IT students' preparedness for the workforce comes from digital literacy, hard skills, and soft skills (Sulistyohati et al., 2022). Other studies have also demonstrated a positive correlation between digital skills and digital work preparedness (Rahmat et al., 2024). Theory and the results of earlier studies support the proposal of Hypothesis 2.

H_2: Digital skills have a positive and significant impact on digital work readiness.

The impact of digital self-efficacy on digital work readiness

In the age of digital work, a person's confidence in their capacity to use digital tools is known as digital self-efficacy, and it is seen to be a significant predictor of digital job readiness. Social cognitive theory by Bandura (1986) states that people's confidence in their capacity to use these abilities effectively mediates the relationship between DS and DWR. The study refers to this as "digital work readiness," which is the state in which people internalize their digital skills through self-efficacy, converting technical proficiency into the readiness to function well in digital work environments. Numerous scholarly investigations have indicated that in the digital age, self-efficacy positively impacts work readiness (Rahmat et al., 2024). In Bali, Indonesia, self-efficacy significantly improves students' preparation for the workforce (Eagle et al., 2022). Self-efficacy has a positive impact on job readiness when the relationship between digital self-efficacy, remote social skills, and emotional management is examined (Tramontano et al., 2021). Based on existing theories and previous research findings, hypothesis 3 is proposed.

H_3: Digital work preparedness is positively and significantly impacted by digital self-efficacy.

Digital self-efficacy as mediator

According to the social cognitive theory (Bandura, 1986), behavior and performance are the result of interactions between actions, the environment, and cognitive factors. In the context of digital work, digital self-efficacy (DSE) acts as a cognitive bridge, transforming digital skills (DS) into effective work readiness. Even if DS provides technical expertise, people are only ready when they believe they can employ these skills confidently and adaptably in digital settings. Digital literacy improves self-efficacy, and digital sales preparedness has a beneficial impact on both (Na et al., 2024). Additional research has also examined the connection between academic success, self-efficacy, and digital abilities, with an emphasis on the mediating function of self-efficacy (Ibrahim & Aldawsari, 2023; Tomczak et al., 2023). Considering current theories and the results of earlier studies, hypothesis 4 is put forth.

H_4: The association between digital skills and digital work preparedness is mediated by digital self-efficacy.

Digital government support as a moderator

According to social cognitive theory by Bandura (1986), external elements like digital government support (DGS) can improve the connection between DS and DWR by offering environmental reinforcement that boosts people's self-confidence in their ability to use digital skills efficiently. Government initiatives that offer resources, training, and digital infrastructure create a helpful In order to improve digital literacy and preparedness, government digital support (GDS) includes skill development programs, policy and regulatory assistance, and infrastructure expenditures (Chen et al., 2021; Bejaković & Mrnjavac, 2020). The majority of research on government digital support (GDS) is still qualitative, though, and there hasn't been any empirical analysis of how it influences the relationship between digital skills (DS) and digital work readiness (DWR). Hypothesis 5 is put forth in light of current theories and earlier research.

H_5: The association between digital skills and digital work preparedness is moderated by digital government support.

Based on the various hypotheses proposed, grounded in theory and previous research, the research model can be illustrated as follows:

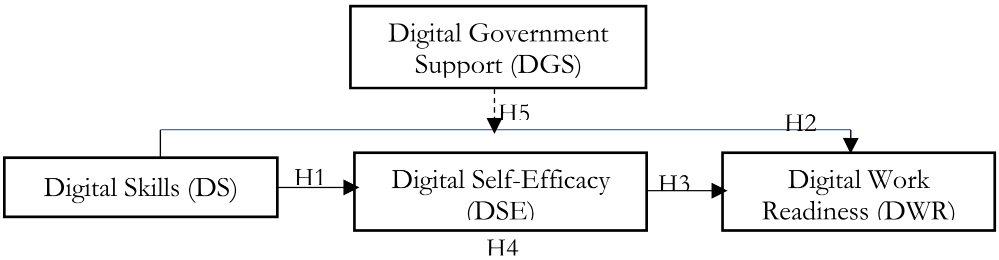

Figure 1. Research Framework

Research Methods

This study employed a quantitative explanatory design with PLS-SEM to fully examine the correlations between variables. Since the population size was unknown, the sample size was determined using G*Power under the assumption that there were five predictors or hypotheses. Faul et al. (2009) recommended a minimum of 50 respondents at a power of 0.85 and 74 at a power of 0.95. The optimal sample size should be five to ten times the number of items in the largest model construct, per the recommendations of Hair Jr. et al. (2014). A conservative method (5–10 times the amount of items) recommends a minimum sample size of 40–80 responders, with a maximum of 8 items. The intended sample consisted of 200 Yogyakarta residents aged 18 to 35, most of whom were final-year students and recent graduates with prior experience working remotely or in a hybrid setting. To ensure the data's applicability in the context of digitization and job preparedness, purposive sampling was used.

Measurement instruments

Validated Likert-scale items modified from earlier research were used to measure each construct. Digital work readiness (DWR), digital skill (DS), digital self-efficacy (DSE), and digital government support (DGS) were the four primary variables that were observed. A Likert scale is used to measure several statement items that make up each construct.

Technology use, cybersecurity, critical inquiry, communication and cooperation, digital well-being, ethics and social responsibility, environment, and identity and development are the eight indicators that make up digital skill, which is based on the measurement and scale created by Audrin et al. (2024). The Audrin et al. (2024) scale was adopted and modified to include about sixteen statement questions that were used to measure DS. Information and data literacy, teamwork and communication, creating digital content, and problem-solving are all components of digital self-efficacy, or DSE. Eight questionnaire items that were adjusted and adapted from Laver et al. (2012) were used to measure these parameters. Ulfert-Blank and Schmidt (2022), to ascertain the indications and measurement of DWR, the authors also takes inspiration from Boc et al. (2023) and Nikolaev et al. (2020). There are seven statement items in the DWR for this study. The author also incorporates pieces from DWR. The author also incorporates Rahmat et al. (2024) items. The supply of technology infrastructure, incentives to stakeholders in the digital industry, policy and regulatory assistance, and the development of digital skills are all components of DGS. The indicators were taken and adjusted from Bejaković and Mrnjavac (2020) and Chen et al. (2021). Eight statement items were used to measure DGS.

Results and Discussion

Descriptive analysis

With 200 participants between the ages of 18 and 35, this study aimed to investigate the relationship between digital abilities and digital work preparedness. Digital self-efficacy was the mediating variable, while digital government support was the moderating variable. Women made up 60% of the respondents, 39% were in the early productive age range (usually between the ages of 22 and 25), and 63% had a bachelor's degree. The majority of those surveyed were still enrolled in college (61%), but the remaining respondents had jobs and provided a range of viewpoints on the use of digital skills. Because it represents a youthful population at a pivotal point in the development of digital capacity and is impacted by educational background and professional experience, this demographic profile is extremely pertinent to examining the correlations between the variables under investigation.

Table 1. Respondent Profiles

Characteristics	Criteria	Frequency	Percentage
Gender	Man	80	40%
	Woman	120	60%
	Total	200	
Age	18–21 years old	52	26.0%
	22–25 years old	78	39.0%
	26–30 years old	41	20.5%
	31–35 years old	29	14.5%
	Total	200	
Education	Senior high school	67	33.5%
	Bachelor	126	63.0%
	Master	7	3.5%
	Total	200	
Status	Students	122	61%
	Employees	78	39%
	Total	200	

Source: Primary data processed, 2025

Measurement model evaluation

Outer model evaluation

The outer loadings analysis yielded values ranging from 0.61 to 0.87, with indicators in digital skills (0.66) and digital self-efficacy (0.61) being kept since the AVE and composite reliability (CR) satisfied the necessary criteria. According to Hair et al. (2014), indicator loadings between 0.50 and 0.70 are acceptable if the overall construct reliability and AVE exceed the recommended thresholds, as removing such indicators may reduce content validity.

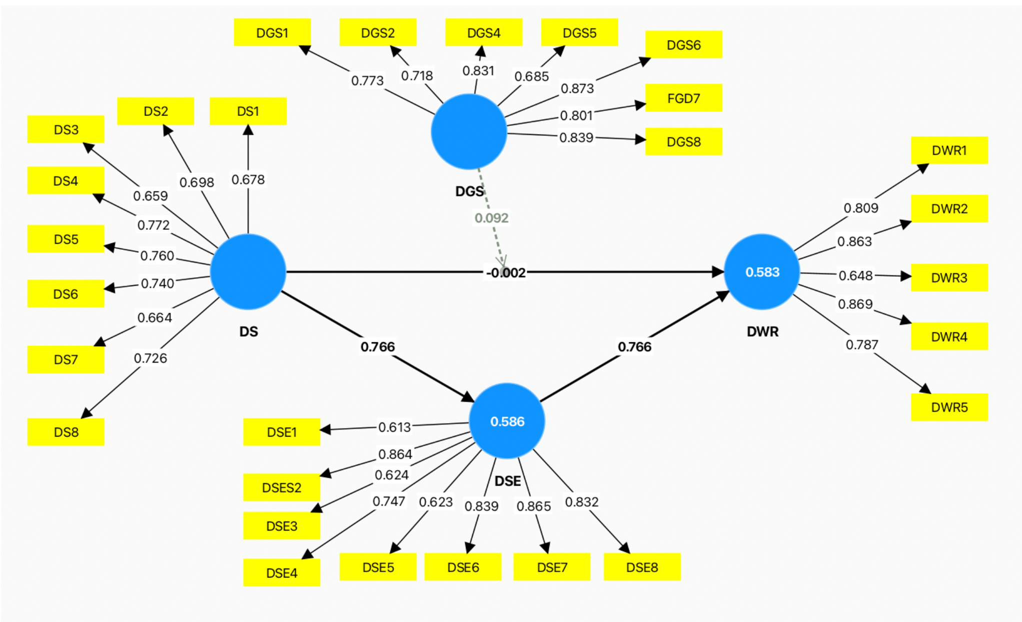

Figure 2. Outer Model
Source: Processed by the author (2025)

Cronbach's alpha scores ranging from 0.862 to 0.907 and CR values from 0.867 to 0.968, all of which exceeded the minimal requirement of 0.70, demonstrated good construct dependability. With AVE values ranging from 0.509 to 0.639, convergent validity was also attained, meaning that the constructs could account for over 50% of the variation in their indicators.

Table 2. Loading Factor

Constructs	Items	Loading Factor	CA	CR	Decision
Digital Skills (DS)	I feel I can quickly learn new digital technology tools to improve productivity. (DS1)	0.678	0.862	0.868	Retained
	I am aware of online security threats such as phishing and malware. (DS2)	0.698			Retained
	I can verify the accuracy, timeliness, and credibility of online information sources. (DS3)	0.659			Retained
	I can provide professional feedback and support colleagues in communicating, collaborating, and networking through digital tools. (DS4)	0.772			Retained
	I can search for, manage, and store online information in various formats to keep it easily accessible. (DS5)	0.760			Retained
	I can interact and share content online ethically, maintain privacy, and behave politely and respectfully toward others. (DS6)	0.740			Retained
	I can share information online securely and manage the use of digital tools to maintain physical and mental health. (DS7)	0.664			Retained
	I develop and assess my own and others' digital skills using digital technology. (DS8)	0.726			Retained
Digital Self-Efficacy (DSE)	I am confident in my ability to accurately search for and evaluate digital information or data. (DSE1)	0.613	0.907	0.968	Retained
	I am confident in my ability to manage digital information effectively for work purposes. (DSE2)	0.864			Retained
	I have faith in my capacity to cooperate, share content, and offer feedback using digital tools. (DSE3)	0.625			Retained
	I am sure I can facilitate good networking and communication among coworkers. (DSE4)	0.747			Retained
	I believe I can search for, manage, and store online information in various formats so that it is easily accessible. (DSE5)	0.623			Retained
	I am certain that I can help colleagues efficiently arrange content and securely share information while upholding the integrity and privacy of others. (DSE6)	0.839			Retained
	My ability to fix technical issues on digital devices and look for answers online or in forums is something I am confident in. (DSE7)	0.865			Retained
	I can analyze digital situations, selecting appropriate tools, and adapting quickly to technological changes in the workplace. (DSE8)	0.32			Retained
Digital Work Readiness (DWR)	I am prepared to face work pressures in a digital environment while maintaining mental and physical health, taking responsibility for tasks, and striving for achievement. (DWR1)	0.809	0.890	0.901	Retained
	I am critical, innovative, and able to solve digital problems using knowledge, skills, and logical judgment. (DWR2)	0.863			Retained
	I adapt quickly to digital work systems and collaborate effectively. (DWR3)	0.648			Retained
	I have relevant work experience in the digital field and have been involved in various cross-disciplinary projects. (DWR4)	0.869			Retained

Constructs	Items	Loading Factor	CA	CR	Decision
	I am accustomed to learning or attending professional training and using digital platforms to search for and apply for jobs. (DWR5)	0.787			Retained
Digital Government Support (DGS)	The government provides relatively equitable access to digital technology, which is highly beneficial for my work. (DGS1)	0.773	0.907	0.867	Retained
	I observe that the government provides adequate incentives or assistance for digital entrepreneurs. (DGS2)	0.718			Retained
	Government financial support or easier access to capital fosters the growth of the digital industry. (DGS3)	0.447			Rejected
	Government programs have helped digital entrepreneurs develop their businesses online. (DGS4)	0.685			Retained
	Government policies support the development of digital skills for the workforce. (DGS5)	0.873			Retained
	Regulations for digital work (such as data protection and remote work systems) are becoming clearer and easier to understand. (DGS6)	0.801			Retained
	The government provides training or digital competency improvement programs that are beneficial for workers. (DGS7)	0.839			Retained

Source: Processed by the author (2025)

Reliability and validity of the measures

As indicated in Table 3, the Heterotrait–Monotrait (HTMT) ratio and the Fornell–Larcker criterion were used to evaluate discriminant validity. The Fornell–Larcker results, which demonstrated that the square root of the AVE values (diagonal elements) was greater than the inter-construct correlations (non-diagonal elements), validated the discriminant validity of all constructs (Fornell & Larcker, 1981). The square roots of the AVE for digital skills (0.812), digital job readiness (0.827), digital self-efficacy (0.841), and digital government support (0.835) exceeded their correlations with the other constructs, indicating that each construct shared a greater variance with its own indicators than with the variance of the other constructs. The HTMT study further confirmed discriminant validity, with all HTMT ratios falling below the conservative limit of 0.90 (Henseler et al., 2015). Some construct pairs, like DS–DSE (0.853) and DWR–DSE (0.860), which were near the upper threshold, suggest a strong but theoretically sound relationship between psychological beliefs, personal abilities, and preparedness in a digital setting. The conceptual independence of digital government support as an institutional or environmental quality rather than a human trait, however, was highlighted by its extremely low HTMT values (0.162–0.290). All constructs (DS, DSE, DWR, and DGS) have satisfactory discriminant validity, according to the combined evidence from the Fornell–Larcker and HTMT analyses.

Table 3. HTMT and Fornell-Larcker

No	Constructs	Heterotrait–monotrait ratio (HTMT)				Fornell-Larcker criterion			
		1	2	3	4	1	2	3	4
1	DS	-				0.812			
2	DWR	0.642	-			0.601	0.827		
3	DSE	0.853	0.860	-		0.652	0.678	0.841	
4	DGS	0.162	0.268	0.290	-	0.534	0.563	0.587	0.835

Notes: DS = digital skills; DWR = digital work readiness; DSE= digital self-efficacy; DGS = digital government support; CA = Cronbach's alpha; CR = Composite reliability; AVE = Average variance explained
Source: Processed by the author (2025)

The SRMR values for the saturated model (0.096) and the estimated model (0.095) slightly exceed the conservative threshold of 0.08 recommended by Henseler et al. (2016); however, they remain within the acceptable tolerance limit of ≤ 0.10, indicating an acceptable level of model fit, particularly for complex models (Hair et al., 2019). The stability of the model and the coherence of covariance structures between the theoretical and empirical models are further supported by the virtually identical d_ULS (4.537 vs. 4.485) and d_G (1.990 vs. 2.001) coefficients (Dijkstra & Henseler, 2015). Meanwhile, the NFI value of 0.629, though below the ideal benchmark of 0.90 (Henseler et al., 2016), still reflects a moderate and acceptable level of model fit in exploratory research using PLS-SEM (Henseler et al., 2016; Hair et al., 2019). The structural complexity of the model and the non-normal distribution of the data, which are typical in studies of digital behavior, may have an impact on this number. All things considered, these results show that the model fits well enough to move on to the next phase of study, which is the structural (inner) model evaluation.

Table 4. Model Fit

	Saturated model	Estimated model
SRMR	0.096	0.095
d_ULS	4.537	4.485
d_G	1.990	2.001
NFI	0.629	0.629

Source: Processed by the author (2025)

Inner model evaluation

Digital skills (DS) had a positive and substantial impact on digital self-efficacy (DSE), according to the SmartPLS study. The coefficient was β = 0.766, the t-value was 17.30, the p-value was less than 0.05, and the effect size was considerable (F^2 = 1.416). With strong predictive relevance (Q2 = 0.321), DS accounted for 58.6% of the variance in DSE (R2 = 0.586). Conversely, there was no significant correlation between DS and DWR (β = -0.002, p = 0.987); nonetheless, all model factors accounted for 58.3% of the variance in DWR (R2 = 0.583), and the construct showed strong predictive relevance (Q2 = 0.348).

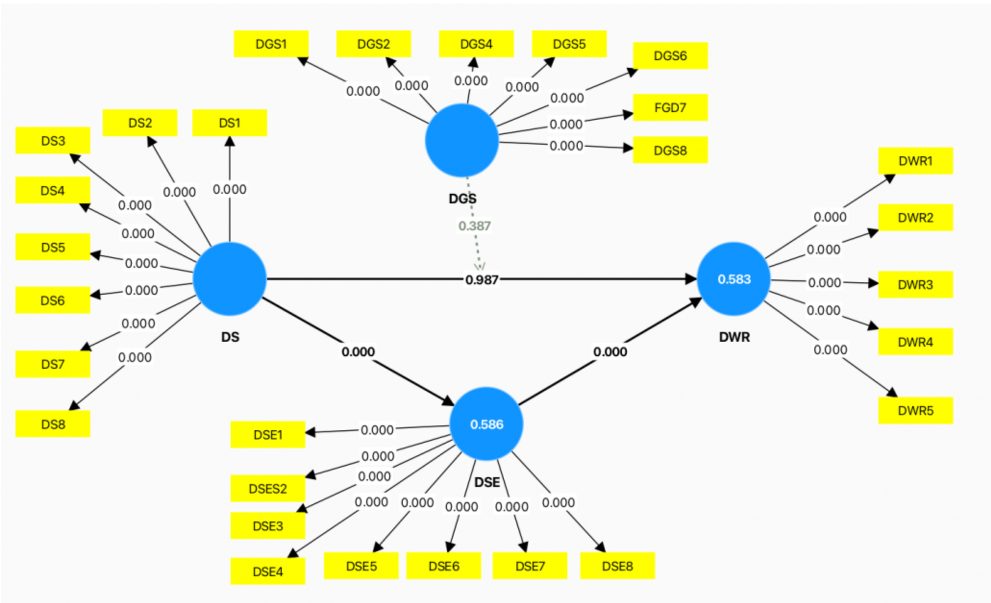

Figure 3. Inner Model Output
Source: Processed by the author (2025)

The results further indicated that DSE had a positive and significant effect on DWR (β = 0.766, p < 0.05) with a large effect size (F^2 = 0.523), underscoring the critical role of DSE in digital work readiness. However, the moderating effect of digital government support (DGS) on the DS–DWR relationship was not significant (β = 0.092, p = 0.387, F^2 = 0.025). The mediation analysis showed that DSE significantly mediated the relationship between DS and DWR (β = 0.587, p <

0.05), indicating that DS influenced DWR only through the enhancement of DSE. Overall, the model demonstrated strong explanatory power and high predictive relevance for both endogenous variables.

Table 6. Structural Model Results

	β	SD	t-statistics	p-values	f^2	R^2square	Q^2
Direct effect							
DS → DSE	0.766	0.044	17.30	0.000*	1.416	0.586	0.321
DS → DWR	-0.002	0.132	0.016	0.987	0.000	0.583	0.348
DSE → DWR	0.766	0.118	6.470	0.000*	0.523		
Moderating effect							
DGS x DS → DWR	0.092	0.107	0.866	0.387	0.025		
Indirect effect							
DS → DSE → DWR	0.587	0.098	5.964	0.000*			

Notes: DS = digital skills; DWR = digital work readiness; DSE= digital self-efficacy; DGS = digital government support
*p<0.05
Source: Processed by the author (2025)

Discussion

Digital skills and digital self-efficacy

Digital self-efficacy (DSE) is positively and significantly impacted by digital skills (DS), according to the analysis ($t = 17.30$; $p < 0.001$). This result confirms earlier studies indicating people feel better at ease using technology when they have a firm grasp of digital abilities, whether from formal schooling or practical experience (Mannila et al., 2018; Bellini et al., 2016; Cosby et al., 2023). This finding, when applied to Yogyakarta, is consistent with earlier studies showing that self-efficacy is positively impacted by the widespread use of technology in a variety of industries, including MSMEs, tourism, and higher education (Hsu et al., 2025; Rosales-Márquez et al., 2025). Consequently, there is substantial evidence for hypothesis H1.

Training should incorporate higher-order cognitive skills like critical thinking, problem-solving, and adaptability along with technical competencies like data management, digital communication, and information security to effectively improve youths' digital self-efficacy (Ma et al., 2025). Because experiential and project-based learning methods encourage confidence and a sense of control, they are especially successful. Incorporating such training into Yogyakarta's institutions, career programs, and community-based projects can enable young people to prosper in the digital economy. To develop competent and self-assured digital citizens, digital skills training should use a comprehensive approach that blends technical proficiency with socioemotional resilience.

Digital skills and digital work readiness

The test results show that DS does not significantly affect digital work readiness (DWR) directly, which is in contrast to expectations and some previous research (Panjaitan et al., 2024; Stylianou & Pericleous, 2025; Rahmat et al., 2024) ($t = 0.016$; $p = 0.987$). This implies that having digital abilities alone may not always translate into being prepared for digital employment, especially if psychological variables like technology confidence are not present. One such explanation is provided by the Yogyakarta context. Therefore, without bolstering the self-efficacy factor, enhancing technical skills alone doesn't seem to be enough to affect work preparedness. Therefore, H2 is not supported.

Using digital communication and collaboration tools like Slack and Microsoft Teams, teamwork can be enhanced (Canton, 2021) and problem-solving and critical thinking workshops that mimic actual digital work scenarios are the main forms of digital skills training required to improve youth work readiness in Yogyakarta (Van Laar et al., 2020). Training in digital literacy, data management, and cybersecurity helps ensure ethical and productive work practices, even as digital project management increases workflow and time efficiency. Last but not least, adaptive learning and continual upskilling foster flexibility and resilience in the face of rapid technological change (Hasan et al., 2024). The primary types of digital skills training needed to increase youth work readiness in Yogyakarta are workshops on problem-solving and critical thinking that replicate real-world digital work scenarios.

Digital self-efficacy and digital work readiness

DSE is a significant predictor of DWR, according to the analysis ($t = 6.470$; $p < 0.001$). According to research by Rahmat et al. (2024), Eagle et al. (2022), and Tramontano et al. (2021), those who are more comfortable with technology are better equipped to handle the demands of digital work. Self-efficacy contributes to enhancing digital resilience in the local setting. According to Bandura's (1986) social cognitive theory, DSE acts as a psychological link between digital abilities and productive work output. While low DSE frequently results in fear and avoidance tendencies that impair preparedness for digital activities, high DSE encourages perseverance, flexibility, and a desire to try out new technologies.

Through the prism of Bandura's social cognitive theory (1986). In technology-driven work environments, digital self-efficacy (DSE) serves as a psychological link that transforms digital skills into productive performance. While low DSE can lead to worry, self-doubt, and avoidance, which impede digital work readiness (DWR), high DSE encourages perseverance, experimentation, and adaptation when confronted with digital problems (Eagle et al., 2022). For young Yogyakarta workers, DWR encompasses not only technical proficiency but also self-assurance, independence, and communication abilities molded by DSE. Therefore, strengthening DSE is essential to closing the gap between digital competence and confidence, particularly as young people move into remote or hybrid work situations that call for self-control and teamwork in solving problems.

For young Yogyakarta workers, digital work readiness (DWR) encompasses not only technical skills but also self-assurance, independence, and communication qualities impacted by digital self-efficacy (DSE). DSE needs to be improved in order to bridge the gap between competence and confidence, especially in remote or hybrid work settings where self-control and teamwork are essential. In order to develop self-efficacy and digital skills, training should make use of the four sources of efficacy: mastery experience, vicarious learning, social persuasion, and emotional control (Bandura, 1986). When combined, the three integrated methodologies of reflective-emotional training, mentorship-based learning, and experiential mastery may produce a resilient, self-assured, and digitally-ready workforce in Yogyakarta.

Mediating role of digital self-efficacy

The analysis of indirect effects shows that DSE significantly mediates the relationship between DS and DWR ($t = 5.964$; $p < 0.001$). This indicates that digital skills impact digital work readiness only when internalized through enhanced self-confidence. This finding aligns with Ibrahim and Aldawsari (2023), Tomczak et al. (2023), and Na et al. (2024), who emphasize that the effectiveness of digital training largely depends on the success of fostering participants' self-efficacy. Grounded in Bandura's social cognitive theory (1986), this result confirms that self-efficacy functions as a key psychological mechanism transforming digital competence into actual work readiness. It demonstrates that cognitive belief in one's capability mediates the translation of technical skills into adaptive and confident performance in digital work contexts. H4 is supported.

Moderating role of digital government support

The moderation test results indicate that the interaction between DGS and DS on DWR is not significant ($t = 0.866$; $p = 0.387$). This means that digital government support neither strengthens nor weakens the effect of digital skills on work readiness. A possible explanation is that government support remains at a macro level, such as the provision of infrastructure and general policies, which are not yet directly integrated with programs aimed at enhancing individual work readiness. It could also be further explored whether the measured digital skills could be categorized in more detail, for instance, into "digital in use" and "cybersecurity," as well as "content management" and "development." In line with Bejaković and Mrnjavac (2020) and Chen et al. (2021), the effectiveness of government support will be optimal if implemented through targeted training and interventions relevant to labor market needs. H5 is not supported.

To strengthen this relationship, the government must adopt more targeted and inclusive intervention strategies. First, it's critical to combine government assistance with useful initiatives for developing digital skills. Current programs frequently place a strong emphasis on connectivity and accessibility, but they are not in line with the skills that businesses in the digital economy require. To ensure that training outputs align with labor market demands, programs should concentrate on applied digital competencies like data analysis, cybersecurity, digital communication, and content management (Cancino & Towle, 2022; Foroughi, 2021).

Second, in order to create contextual training modules that represent the local work landscape, especially in the creative industries, MSMEs, and digital services that make up the majority of Yogyakarta's economy, local cooperation between the government, academic institutions, and business should be improved. This involves cultivating public-private partnerships that facilitate project-based learning, apprenticeships, and internships in authentic work environments. Third, to close the gap between access and real employability, digital literacy and employability initiatives should be extended to rural and underserved youth. Programs such as youth digital laboratories, community innovation centers, and digital bootcamps can assist in converting policy-level assistance into opportunities for practical experience and confidence-building. Lastly, in order to guarantee sustainability, the government needs to spend money on adaptive learning platforms and ongoing review systems that update training materials in response to new developments in technology and business trends. Digital government assistance can better equip young workers to navigate and prosper in the changing digital labor market by reorienting the focus from macro-infrastructure to a human-centered, skill-oriented approach.

Conclusion and Implications

This study illustrates the interrelationship of DS, DSE, and DGS, thereby advancing an integrated model of DWR. Although DS greatly increases DSE, it does not predict DWR directly unless self-efficacy is involved, demonstrating that technical proficiency is insufficient on its own without psychological assurance. This discovery is in line with social cognitive theory (Bandura, 1986), which holds that DSE serves as a cognitive and motivational bridge that converts digital potential into adaptive performance. From a practical standpoint, these findings underscore the significance of incorporating self-efficacy improvement into digital training through mentorship, experiential learning, and reflective-emotional techniques that foster competence and confidence. In conclusion, enhancing young digital preparedness necessitates a collaborative strategy that combines self-efficacy, digital proficiency, and policy support, building a resilient, capable, and self-assured workforce ready to prosper in the rapidly changing digital economy.

The results indicate that government programs ought to shift from broad policies and infrastructure development to more focused interventions that enhance people's digital capacities. Digital work readiness (DWR) modules should be integrated into higher education, youth employment, and vocational education programs. To create context-specific training that takes into account the real demands of the digital labor market in Yogyakarta and other similar areas, cooperation between government organizations, regional businesses, and academic institutions is crucial. Additionally, training courses should incorporate the development of digital self-efficacy through exposure to genuine digital tasks, simulation-based learning, and mentoring. Policy frameworks must also prioritize fair access to digital learning resources, digital career counseling, and ongoing upskilling opportunities in order to guarantee inclusivity and sustainability. Essentially, creating a young workforce that is resilient, creative, and prepared for the future will require governmental interventions that balance investments in digital infrastructure with human-centered capacity building.

The limitations of this study provide opportunities for further research. First, research findings may not be as applicable to other areas with distinct labor market dynamics and internet infrastructure because the data were gathered from young respondents in Yogyakarta. To investigate contextual differences in digital job preparedness, future study could use comparative studies across provinces or nations. The study's assessment of DGS was restricted to perceived support instead of program implementation, which would not adequately reflect the extent of governmental impact.

Future research should look more closely at the ways that DSE mediates and changes the relationship between DWR and DS. The effects of feedback, adaptive learning, and prolonged digital interaction on the development of self-efficacy may be captured using longitudinal or experimental methods. Differentiating between digital skills like cybersecurity, problem-solving, and communication would make it clear which abilities best predict readiness in different digital industries. Future studies should examine the ways in which other types of government interventions, such as finance, policy, and training programs, affect young employability, given the limited moderating role of DGS found in this study. It is advised to use mixed method approaches that combine policy or program assessments with surveys. Finally, cross-regional or cross-national comparisons could provide insights into the institutional and cultural elements that influence workforce readiness in the digital age, validating the integrative DWR model across various digital ecosystems.

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