



# The Role of Digital Skills Advantage Enhancing Gen Z Work Readiness for the Future Digital Workplace: Evidence from Indonesia

Fery Riyanto<sup>(✉)</sup>, Amron, and Sih Darmi Astuti

Doctor Management, Dian Nuswantoro University, Semarang 50131, Indonesia  
p42202200002@mhs.dinus.ac.id

**Abstract.** Digitalization in the industrial era 4.0 has changed how work and workplaces have become digital. It is predicted that many jobs will disappear in the future, which requires individuals to move dynamically according to the movement of industrial patterns. Many jobs are lost, of co. Of, there will be many opportunities and new job opportunities in generation z (gen z) ready to seize the opportunity to work in the future digital workplace? For this reason, this study aims to explore digital skill advantage and competency in increasing job readiness in the industrial era 4.0 for Indonesian gen z students. The research method used is quantitative. The population in this study is all Gen Z students at public and private universities in Indonesia, totaling 7,600,000 students. The research sample was final semester students totaling 408, using a purposive sampling technique. Data was collected through a survey method with a questionnaire. Data analysis used Structural Equation Modeling (SEM) with the AMOS 26 program. Data analysis revealed that all the proposed hypotheses were accepted. Digital skill advantage can increase work readiness directly and indirectly through competence with dominant communication and content creation indicators.

**Keywords:** Digital Skill Advantage, Competency, Work Readiness, Generation Z

## 1 Introduction

Digitalization in the industrial era 4.0 has changed all human activities [1]. It is predicted that many jobs will disappear in the future, and this requires individuals to move dynamically. With the movement of industrial patterns, many jobs will be lost, and of course, there will be many opportunities and new job opportunities in the future. In line with that, the digital economy in Indonesia continues to grow [2]. At least this can be seen from the number of workers who support this industry in 2021, which is recorded at 1.2 million workers [3]. The need for a workforce will increase every year [4]. Currently, new businesses are popping up, especially in the technology sector, such as startup companies that are of interest to Gen Z [5]. Technology development is turning the place into a digital workplace and requires employees to have Skills and mastery of technology [6]. Digitalization is transforming a technological opportunity into a pure

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necessity to meet the continuing needs and expectations of the world's individuals [3]. Digital developments have made significant changes in many organizations, with technological updates introducing new processes and mechanisms or ways that can affect the main structure of organizations' operations [6].

For this reason, it is hoped that prospective human resources in this era will have digital skills, namely skills related to technology, starting from basic skills common to all individuals or professional workers [7]. The contribution of increasing productivity is undoubtedly the support of technology [8]. For this reason, the policy for employees with digital skills must be continuously improved [9]. Generation Z is the dominant generation pursuing higher education in this era and is a candidate for future human resources who must be dynamic with the technological opportunities of this era [5].

Indonesia 2022 is enjoying a demographic bonus where the productive age is more than the old age. This is an opportunity where the generation of effective age candidates is expected to contribute to the industrial world [3]. Today's Gen Z is the key to future industrial success. Because this generation is the successor to the previous generation, namely millennials and x [10]. This is a new challenge for higher education institutions to prepare this generation to work in the industrial era 4.0 because this generation is still dominantly studying higher education [5]. In Indonesia, there has been an increase in the number of students every year in 2020; according to the Central Statistics Agency (BPS), by the end of 2021, there will be around 7.6 million students in Indonesia [11]. It consists of about 3.2 million students on state campuses and 4.4 million on private campuses. The findings of [6] show that technology is the primary skill of gen z. There is a gap regarding equipping Gen Z with job readiness. Some think that the best way to equip Gen Z with Digital skills is because this is realistic with the ever-changing labor market in the industrial 4.0 era. [12] research results confirm the importance of the influence of generations in career and career readiness. Individuals with career choices that match the values of their age will enjoy their work more [13]. Individuals who feel unsuited to their workers will feel unhappy and tend to react negatively to their jobs [13]. The research results by [14] regarding "the challenges of work readiness of graduates in the Asia-Pacific region and the role of HRM" define the challenges of graduates from three countries, Malaysia, Indonesia, and Australia. Competence and skills and job readiness of graduates of tertiary and vocational education were the main issues reported by Indonesian participants [15].

In this research, we take the perspective of goal-setting theory, which states that when an individual has a goal, he will continue to try to achieve the goal he wants to [16]. The goal-setting theory has a premise, namely, challenges. It is said that every individual attaining goals must have challenges in it, so based on this premise, we propose to develop digital skills into digital skill advantages to achieve Gen Z work readiness in the future. We create those digital skills should have a gift, not only the use of technology that must be mastered but psychological aspects must be considered, for example, communication and problem-solving. Phenomenon studies show that many job opportunities are available in the digital field. The availability of a competent and professional workforce has not matched the significant demand for skilled digital workers. Our question is, are the current (gen z) ready to seize opportunities and opportunities to work in the future digital workplace?

## 2 Hypotheses and Literature Review

### 2.1 Digital Skill Advantage on competence and work readiness

Digital skill advantage is a skill in which technology and basic human skills play the central role and collaborators to solve the challenges faced. We take this variable from the perspective of goal-setting theory, stating that when an individual has a goal, he will continue to try to achieve the goal he wants to complete [16]. The concept of digital skills was born by Glister, 1998, defined as an individual's ability to understand and use digital resources. Some experts state that digital skills are the ability to use digital resources effectively and efficiently [9]. [17] explain that digital skills as an individual's ability to use technology, information, and communication (ICT) well in an environment that is increasingly dominated by access to information mediated by information enabled by electronics. Digital skill reflects behavior, ability, and skill that can be seen directly by the eye and is a form of individual essential skill development [18]. Digital skills are considered skills that can make an individual make something or take action [7]. Currently, digital skills are needed in terms of people's lives, especially Gen Z [19]. This is because Gen Z prefers technology use [20]. By having digital skills, individuals are considered better prepared to face technological challenges that continue to proliferate. In the end, it will make the individual have to adapt to this condition [7]. Gen Z, who is often referred to as the "digital native" generation, in fact currently does not have the relevant digital skills to work [21]. Digital skills are essential skills that individuals need at a basic level to remain relevant, have resilience, survive, to work in the digital workplace of the future [22]. In the current era, technological intelligence is a competency part because the two concepts have something in the standard [18]. For this reason, digital skills are currently considered necessary for their contribution to the work readiness of graduates, especially to face tough competition in the industrial era 4.0 [23]. Recently, digital skills have been needed in the work world because this ability can help someone apply the knowledge gained in college to the world of work [24]. The better the digital skills that exist in individuals, the better the work readiness that exists in these individuals, and vice versa [9]. Research conducted by [25] said that digital skills have a significant favorable influence on work readiness. According to [6], digital skills will make an individual competent in the scientific field. Meanwhile, digital skills will enable students to gain the ability to manage emotions in themselves and those around them. If students are equipped with adequate digital skills, these skills will become part of student activities, opening up opportunities for success to become even wider [17]. Digital skills are technical competence and knowledge of a field [26]. Research [9] said that Digital skills are significantly related to competence.

- H1: Digital Skill Advantage has a significant positive effect on work readiness
- H2: Digital skill advantage has a significant positive effect on work readiness

## 2.2 Competence in work readiness

Standardization defines competency as an individual's ability, including knowledge, skills, and work attitude [27]. Currently, employers' participation in educational activities such as universities and educational evaluations is growing, making employers need assurances that they will be able to find the qualified specialists required in the labor market [14]. More and more employers are involved with universities because they need human resource candidates who have high competence and a ready-to-work attitude [28]. Many studies say there is a perceived discrepancy regarding how well the supply side of current graduates is doing, even if seen as competence is essential for career readiness and aligned with the demand side of employers [29].

A graduate who has high competence, then student's work readiness is also high. Conversely, if the competence of graduates is low, it will make it difficult for graduates to get jobs [30]. Every corporation will need competent human resource (H.R.) candidates to enter their organization. For this reason, forming competencies in current graduates is essential [31]. Research by [32] said that competency significantly positively affects work readiness.

- H3: Competence has a significant positive effect on work readiness.

## 3 Method

This research was conducted in Indonesia in May and September 2022, with the object of study being gen z students of public universities (PTN) and private universities (PTS) in Indonesia. The research method used is quantitative. The population in this study were all students in the final semester category, aged (18-28) years in Indonesia, totaling 7,600,000 students. The sample size for this study was 408 (n=400) students, using a purposive sampling technique. The data was obtained by distributing questionnaires method. The data processing analysis used in the study used Structural Equation Modeling (SEM) using AMOS 26 version.

## 4 Results

### 4.1 Characteristics of Respondents

The characteristics of the respondents in this study, namely the description of a respondent's condition, are displayed using descriptive statistics. Respondent characteristic data obtained can provide information natural explanation of the state of the respondents used in the research object [33]. Respondents in this study are illustrated by the university, gender, age, semester of study, and faculty. Respondent characteristics can be seen in Table 1.

According to the university, the characteristics of the respondents in this study were dominated by state university students with a percentage of 54.1 %. The features of

respondents according to gender were dominated by female respondents with a percentage of 60.8 %. The characteristics of respondents according to age were dominated by respondents aged 18-23 with a percentage of 91.4 %. Respondents dominated the parts of the respondents by faculty from the medical faculty with a percentage of 15.44 %. The digital skill advantage indicator is measured by five items [9] [7]. Competence indicators are measured by four indicator items [34] [25]. The hand of work readiness is measured by five indicator items [14].

**Table 1.** Characteristics of Respondents

Characteristics of Respondent		Total	%
Type of University	State University	187	45,3%
	Private University	221	54,1%
Gender	Male	160	39,2%
	Female	248	60,8%
Age	18-23	373	91,4%
	24-28	35	8,6%
Faculty	Faculty of economics	40	9,80%
	Faculty of science and technology	21	5,1%
	Faculty of Cultural Studies	45	11,0%
	Faculty of Agriculture and Animal Husbandry	22	5,39%
	Faculty of law	30	7,35%
	Faculty of engineering	31	7,59%
	Faculty of medical	63	15,44%
	Faculty of Health	45	11,0%
	Faculty of Education	60	14,70%
	Faculty of computer science	30	7,35%
Faculty of Psychology	21	5,14%	
<b>Total</b>		<b>408</b>	<b>100%</b>

Source: Primary Data Processed

## 4.2 Reliability and Validity Test

The reliability test in this study shows the extent to which the measuring instrument can give relatively the same results if measurements are made again on the same object [37]. The value of the reliability of an indicator forming latent variables can be accepted if the value is composite reliability (C.R.)  $> 0.70$  and variance extracted (AVE)  $> 0.5$ . The reliability test in the research that has been done shows all indicators on the digital skill advantage, competency, and work readiness variables are said to be reliable, with a reliability value above ( $>$ ) 0.7. This shows that the SEM model used meets the reliability requirements. Followed also for the variance extracted values, all deals are above ( $>$ ) 0,5. Cronbach's alpha value indicates no value less than ( $<$ ) 0.7. The analysis results show that the measurement of the SEM model in this study meets the requirements for good factor extraction.

### 4.3 Confirmatory Factor Analysis (CFA) Model

The CFA model of this research is a form and part of the SEM method, which functions to test and analyze hypothesis relationships Among latent variables and CFA validity (S. H. Chan & Lay, 2018). The full CFA research model can be seen in Fig. 1.

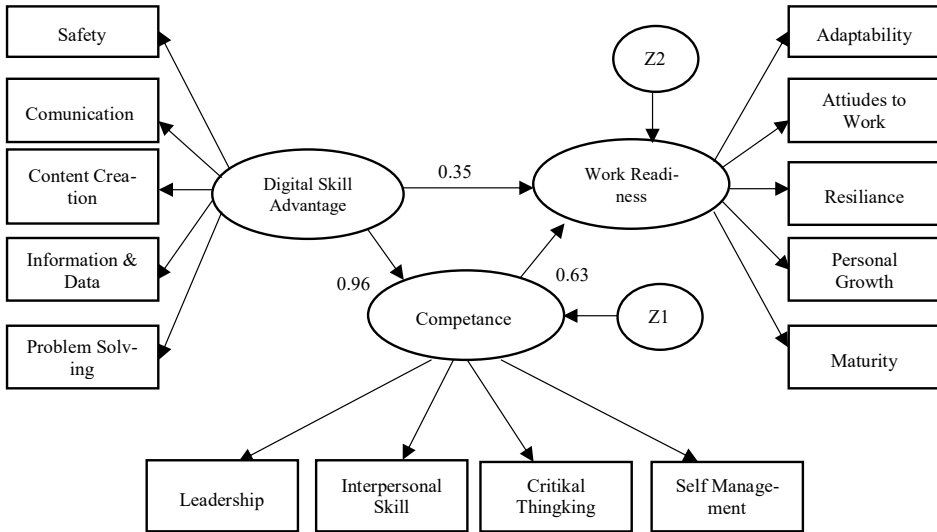


Fig. 1. CFA Full model (Source: Amos 2022 data processing)

### 4.4 Hypotheses test

The results of the data analysis showed that all hypotheses were accepted, judging from the value of C.R.> 1.96 and the value of  $p < 0.00$  [38]. (H1) digital skill advantage has a significant positive effect on work readiness being accepted. (H2) digital skill advantage has a significant positive impact on competence received. (H3) competence has a significant effect on work readiness accepted. The hypothesis test in this study can be seen in Table 2.

Table 2. Hypotheses test

	Hypotheses	C.R.	P	P-value	Result
Work readiness	← Digital skill advantage	3.809	.000	0.349	Accepted
Competence	← Digital skill advantage	29.118	.000	0.960	Accepted
Work readiness	← Competence	6.729	.000	0.630	Accepted

Source: Amos 2022 data processing.

The path test shows that digital skill advantage directly affects work readiness by 0.349. The effect of digital skill advantage on competence is 0.960. Meanwhile, the

result of competence in work readiness is 0.630. Thus, the indirect impact of digital skill advantage on work readiness through competence is  $0.960 \times 0.630 = 0.604$ . The total effect of digital skills on work readiness through competence is  $0.960 \times 0.630 + 0.349 = 0.953$ . The Sobel test in this study was conducted to find out whether the mediating variable was able to mediate the dependent and independent variables. The Sobel test provisions themselves if the value of  $Z > 1.98$  with a significance of  $< 0.05$ , then the effect of intervening or mediation is proven. Sobel digital skill advantage test on work readiness through competency as an intervening variable. The Sobel test results show that the Z value is 7.26, and the sig value of 0.0 is less than 0.05. It is stated that digital skill advantage affects job readiness through competence as a mediating variable. To better understand the sequence of impacts that lead to the variables studied, an analysis of the effects of mediation is fundamental to do so that the result of mediation can be known [39]. The role of digital skill advantage mediation is tested by examining the indirect effect of competency on work readiness. The results of data analysis have been carried out, showing the findings of this study proves that the most vital factor in increasing work readiness is digital skill advantage through competence rather than direct influence with a mediating effect partial mediation.

## 5 Discussion

In the industrial era 4.0, companies of all sizes, from MSME to large scale, need skilled human resources in the digital field to do digital-related jobs, such as managing social media, creating content for websites, and promoting various activities and products. The company makes a lot of job opportunities available in the digital field today [3]. Digital skill advantage, directly and indirectly, affects work readiness through competence. This is to the results of research van [23] stating that digital skills positively affect work readiness. Communication and content creation indicators are the main factors influencing work readiness. Communication forms an individual need, and it is essential for gen z to prepare for this ability because communication is the ability to establish good relations with the work environment and enhance individual careers. Content creation for Gen Z is a skill that they usually use every day because this generation is the generation of social media. The ability to create content will help Gen Z to work in a digital workplace because future work will be related to content creation, namely creating content and contributing information to digital media.

Digital skill advantage has a significant effect on competence. These results follow [25], stating that digital skills positively affect competence. Communication and content creation indicators are the main factors influencing competence. [10] Saying that Gen Z has high communication and content creation skills, which is necessary to increase the competencies needed to improve their work readiness. In the industrial era 4.0 and the future digital workplace, communication needs to be owned so that individuals can issue their competence. Because individual competence can be seen in the ability to communicate, competence has a positive effect on the work readiness of Indonesian Gen Z students. These results align with research conducted by [32], who said that competency positively affects work readiness. Interpersonal ability indicators are

the main factors influencing work readiness. This follows the opinion of [21], stating that the ability to communicate and socialize will create high competence in individuals is a fundamental thing that must be possessed by Gen Z students for future work readiness, especially in the future. The digital workplace desperately needs this ability to keep good relationships between employees. Because with good mastery of competence, students are ready physically and mentally to enter the world of work [34].

## 6 Conclusion

The results of research that the author has done show that all the hypotheses tested are accepted. This is a conclusion that (1) Digital skill advantage directly affects job readiness. (2) Digital skill advantage indirectly affects job readiness through competence as a mediating variable. We conclude that the digital skills advantage possessed by Indonesian gen z students is a foundation for building work readiness in the future digital workplace. Digital skill advantage will build individual personality in communicating, behaving, and working. Another advantage is the indicator content creation shows the role of technology in increasing work readiness and provides a new position that digital elements within individuals play a role in improving work readiness. In essence, Digital skill advantage is valuable in building competency in each individual. The digital skills advantage Gen Z students possess is expected to make individuals become professionals at work effectively and efficiently.

Our recommendations for further research are that investigations into aspects of digital skill advantage can be further investigated, and how about deeper investigations regarding content creation indicators. To be relevant in further developing the skills and competencies of the z generation, there are still many studies that have not examined generation z students, especially in their career preparation in the world of work in the future.

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