

The Effect of Digital Literacy on Learning Motivation and Career Adaptability among Management Students in Jakarta

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ABSTRACT: *This study aims to examine the effect of digital literacy on learning motivation and career adaptability among final-year management students. Grounded in Career Construction Theory (CCT), the study employs a cross-sectional quantitative design with a survey of 250 students at a private university in Jakarta. Data were analyzed using simple linear regression for each hypothesis. Results confirm: (H1) digital literacy positively and significantly affects career adaptability ($\beta = .623$; $R^2 = .739$; $F(1,248) = 701.570$; $p < .001$); (H2) digital literacy positively and significantly affects learning motivation ($\beta = .557$; $R^2 = .559$; $F(1,248) = 314.785$; $p < .001$); and (H3) learning motivation positively and significantly affects career adaptability ($\beta = .840$; $R^2 = .744$; $F(1,248) = 720.068$; $p < .001$). All three hypotheses are statistically supported. These findings imply the importance of integrating digital literacy development into university curricula as a foundation for nurturing learning motivation and career adaptability in the digital era.*

Keywords: *digital literacy, career adaptability, learning motivation, linear regression, Career Construction Theory*

ABSTRAK: Penelitian ini bertujuan untuk menguji pengaruh literasi digital terhadap motivasi belajar dan adaptabilitas karier pada mahasiswa manajemen tingkat akhir. Berlandaskan Career Construction Theory (CCT), penelitian menggunakan pendekatan kuantitatif cross-sectional dengan survei terhadap 250 mahasiswa di sebuah perguruan tinggi swasta Jakarta. Analisis data dilakukan dengan uji regresi linear sederhana untuk masing-masing hipotesis. Hasil penelitian mengkonfirmasi bahwa: (H1) literasi digital berpengaruh positif dan signifikan terhadap adaptabilitas karier ($\beta = 0,623$; $R^2 = 0,739$; $F(1,248) = 701,570$; $p < 0,001$); (H2) literasi digital berpengaruh positif dan signifikan terhadap motivasi belajar ($\beta = 0,557$; $R^2 = 0,559$; $F(1,248) = 314,785$; $p < 0,001$); dan (H3) motivasi belajar berpengaruh positif dan signifikan terhadap adaptabilitas karier ($\beta = 0,840$; $R^2 = 0,744$; $F(1,248) = 720,068$; $p < 0,001$). Ketiga hipotesis terdukung secara statistik. Temuan ini mengimplikasikan pentingnya integrasi pengembangan literasi digital dalam kurikulum perguruan tinggi sebagai fondasi bagi tumbuhnya motivasi belajar dan adaptabilitas karier mahasiswa di era digital.

Kata Kunci: *literasi digital, adaptabilitas karier, motivasi belajar, regresi linear, Teori Konstruksi Karier*

I. INTRODUCTION

The acceleration of digital transformation in the global labor market has imposed new demands on university graduates. Students are required not only to possess technical skills, but also the psychological readiness to navigate rapid and often unpredictable career changes (Hänggli, n.d.). In this context, career adaptability has emerged as a critical competency to develop prior to entering the workforce (Savickas & Porfeli, 2012). Career adaptability refers to an individual's readiness to cope with career developmental tasks, occupational transitions, and uncertain work situations.

In Indonesia, the need for such competencies has grown alongside the increasing use of digital technologies and shifting skill requirements across various industry sectors. Digital literacy has become one of the most in-demand competencies, as it relates to an individual's ability to access, understand, and utilize digital technologies and information effectively (Van Laar et al., 2017). This capability is considered influential in shaping students' readiness for the challenges of the modern workplace. Nevertheless, the relationship between digital literacy and career adaptability remains underexplored, particularly in the Indonesian higher education context. Within this setting, digital literacy is understood not merely as a technical competency, but also as a dimension of facilitating learning-helping students access learning resources, cultivate independent learning, and enhance engagement in digital learning environments. The development of digital literacy is also linked to improving human performance, as it supports individuals in meeting work demands and adapting to changes in the professional landscape of the digital era.

Learning motivation is hypothesized to play an important mediating role in this relationship. Students with higher levels of digital literacy tend to access diverse learning resources more readily and demonstrate greater awareness of the importance of skill development in the digital age. This condition may enhance their motivation to continuously learn and adapt to evolving workplace demands (Voogt & Roblin, 2012). A strong learning motivation, in turn, can help students more actively explore career options and develop the adaptive capacity needed to respond to future career changes (Deci & Ryan, 2000).

Grounded in Career Construction Theory (CCT) as developed by Savickas (2005), this study proposes and tests three hypotheses using simple linear regression analysis: (H1) digital literacy positively and significantly affects career adaptability; (H2) digital literacy positively and significantly affects learning motivation; and (H3) learning motivation positively and significantly affects career adaptability.

II. LITERATURE REVIEW

2.1 Career Construction Theory and Career Adaptability

Career Construction Theory (CCT), as formulated by Savickas (2005), views career development as an active construction process in which individuals build a self-narrative through meaningful experiences. Unlike traditional career development theories that emphasize linear maturation stages, CCT positions adaptability as a dynamic psychosocial capacity that can be developed throughout the lifespan. Savickas and Porfeli (2012) operationalized career adaptability into four dimensions: (1) concern-awareness and the ability to plan for one's career future; (2) control-confidence in taking responsibility for career decisions; (3) curiosity-inquisitiveness in exploring career possibilities; and (4) confidence-belief in one's ability to overcome obstacles and pursue career choices. Within the CCT framework, these adaptability resources develop through the interaction between environmental demands and an individual's psychosocial responses, suggesting that competency-based variables such as digital literacy may function as antecedents that activate these resources (Johnston, 2018).

2.2 Digital Literacy and Career Adaptability (H1)

Digital literacy is defined as the ability to use digital technology effectively and critically across various contexts, encompassing information management, digital communication, content production, cybersecurity, and technology-based problem-solving (European Commission. Joint Research Centre., 2017; Van Laar et al., 2017). Digital literacy may influence career adaptability through several mechanisms. First, individuals with high digital literacy are better able to access and evaluate career information digitally, thereby supporting the curiosity and concern dimensions. Second, the successful mastery of technology provides mastery experiences that build a sense of control and confidence (Bandura, 1986). Third, digital competence enables individuals to respond more nimbly to changes in the work environment. Based on these arguments, the following hypothesis is proposed:

H1: Digital literacy positively and significantly affects career adaptability.

2.3 Digital Literacy and Learning Motivation (H2)

Learning motivation refers to the psychological process that directs, activates, and sustains an individual's learning behavior (Pintrich & Schunk, 2002). Within the self-determination theory framework (Deci & Ryan, 2000), the most potent form of learning motivation stems from the internalization of values when learning activities are perceived as relevant and meaningful. Digital literacy can enhance learning motivation because digitally competent students have broader access to diverse and engaging learning resources, experience a sense of competence and autonomy from technology-based independent learning, and

recognize the direct relevance of digital competencies to future career demands (Voogt & Roblin, 2012). Based on these arguments, the following hypothesis is proposed:

H2: Digital literacy positively and significantly affects learning motivation.

2.4 Learning Motivation and Career Adaptability (H3)

Savickas (2013) emphasizes that developing career adaptability resources requires active individual engagement in learning-learning about oneself, about the world of work, and about how to navigate career transitions. Individuals with high learning motivation are more proactive in exploring career options, seeking information about new job opportunities, and developing relevant skills (Benedetti et al., 2015). A strong learning motivation also fosters a long-term perspective on personal development-positively correlated with the concern and curiosity dimensions-and enhances resilience in the face of failure, which underpins the control and confidence dimensions. Based on these arguments, the following hypothesis is proposed:

H3: Learning motivation positively and significantly affects career adaptability.

III. METHOD

3.1 Research Design and Participants

This study employed a cross-sectional quantitative design using a survey method. The target population consisted of final-year undergraduate students (semester 7 and 8) in a management study program at a private university in Jakarta. Purposive sampling was applied with the following inclusion criteria: (1) currently enrolled as active students, (2) having completed a minimum of 120 credit hours, and (3) willing to participate voluntarily. A total of N = 250 eligible respondents were recruited, meeting the minimum sample size recommended for regression analysis (Hair et al., 2019).

3.2 Measurement Instruments

All variables were measured using a five-point Likert scale (1 = strongly disagree; 5 = strongly agree). Digital Literacy (DL) was measured using 11 items adapted from the DigComp 2.1 framework (European Commission. Joint Research Centre., 2017), covering five dimensions: information and data literacy, communication and collaboration, digital content creation, security, and problem-solving. Learning Motivation (LM) was measured using 12 items adapted from the Academic Motivation Scale (Vallerand et al., 1992). Career Adaptability (GAC) was measured using 24 items from the Career Adapt-Abilities Scale (Savickas & Porfeli, 2012), encompassing four subdimensions: concern, control, curiosity, and confidence. Reliability testing indicated very high internal consistency: Cronbach's Alpha DL = .974; LM = .983; GAC = .992-all exceeding the recommended threshold ($\alpha > .70$).

3.3 Data Analysis Technique

Each of the three hypotheses was tested using simple linear regression analysis. Simple linear regression measures the magnitude and direction of the effect of one independent variable on one dependent variable (Ghozali, 2018). The regression equation used was:

$$\hat{Y} = \beta_0 + \beta_1 X + \varepsilon$$

Where $\hat{Y}$ is the predicted dependent variable, β_0 is the constant (intercept), β_1 is the regression coefficient for independent variable X , and ε is the error term. Model significance was assessed using the F-test, coefficient significance using the t-test, and predictive strength using the coefficient of determination R^2 , with a significance level of $\alpha = .05$. The three hypotheses were tested separately in three independent regression models. Analyses were conducted using Python 3.10 with the NumPy and SciPy libraries.

IV. RESULTS

4.1 Descriptive Statistics

Table 1 presents the descriptive statistics for all three research variables. The mean scores for digital literacy ($M = 3.665$; $SD = .924$), learning motivation ($M = 3.707$; $SD = .687$), and career adaptability ($M = 3.708$; $SD = .670$) all fell within the moderate-to-high range on the 1-to-5 scale. This indicates that respondents generally demonstrated adequate digital competence, positive learning motivation, and satisfactory career adaptability. The wide range between minimum and maximum values indicates substantial variability among respondents, making the examination of inter-variable relationships statistically meaningful.

Table 1. Descriptive Statistics of Research Variables (N = 250)

Variabel	N	Min	Maks	Mean	SD	Cronbach's α
Literasi Digital (DL)	250	1,09	4,91	3,665	0,924	0,974
Motivasi Belajar (LM)	250	1,00	5,00	3,707	0,687	0,983
Adaptabilitas Karier (GAC)	250	1,58	4,92	3,708	0,670	0,992

Note: SD = Standard Deviation; α = Cronbach's Alpha; measurement scale 1–5.

4.2 Testing H1: Digital Literacy → Career Adaptability

H1 was tested by regressing digital literacy (DL) as a predictor on career adaptability (GAC). Results are presented in Table 2.

Table 2. Simple Linear Regression Results: Digital Literacy → Career Adaptability (H1)

Predictor	β	SE	t	p	R	R ²
Constant	1.424	.089	16.007	< .001		
Digital Literacy (DL)	.623	.024	26.487	< .001	.860	.739

$F(1,248) = 701.570$; $p < .001$

Note: β = unstandardized regression coefficient; SE = Standard Error; R = correlation coefficient; R² = coefficient of determination.

The analysis yielded the regression equation: $GAC = 1.424 + .623 DL$. The regression coefficient for DL ($\beta = .623$) was positive and significant ($t(248) = 26.487$; $p < .001$), indicating that each one-unit increase in digital literacy was associated with a .623-unit increase in career adaptability. The overall model was significant ($F(1,248) = 701.570$; $p < .001$) with $R^2 = .739$, indicating that 73.9% of the variance in career adaptability was explained by digital literacy. H1 is supported.

4.3 Testing H2: Digital Literacy → Learning Motivation

H2 was tested by regressing digital literacy (DL) as a predictor on learning motivation (LM). Results are presented in Table 3.

Table 3. Simple Linear Regression Results: Digital Literacy → Learning Motivation (H2)

Predictor	β	SE	t	p	R	R ²
Constant	1.667	.119	14.056	< .001		
Digital Literacy (DL)	.557	.031	17.742	< .001	.748	.559

$F(1,248) = 314.785$; $p < .001$

Note: β = unstandardized regression coefficient; SE = Standard Error; R = correlation coefficient; R² = coefficient of determination.

The analysis yielded the regression equation: $LM = 1.667 + .557 DL$. The regression coefficient for DL ($\beta = .557$) was positive and significant ($t(248) = 17.742$; $p < .001$), indicating that each one-unit increase in digital literacy was associated with a .557-unit increase in learning motivation. The overall model was significant ($F(1,248) = 314.785$; $p < .001$) with $R^2 = .559$, indicating that 55.9% of the variance in learning motivation was explained by digital literacy. H2 is supported.

4.4 Testing H3: Learning Motivation → Career Adaptability

H3 was tested by regressing learning motivation (LM) as a predictor on career adaptability (GAC). Results are presented in Table 4.

Table 4. Simple Linear Regression Results: Learning Motivation → Career Adaptability (H3)

Predictor	β	SE	t	p	R	R ²
Constant	.593	.118	5.026	< .001		
Learning Motivation (LM)	.840	.031	26.834	< .001	.862	.744

$F(1,248) = 720.068$; $p < .001$

Note: β = unstandardized regression coefficient; SE = Standard Error; R = correlation coefficient; R² = coefficient of determination.

The analysis yielded the regression equation: $GAC = .593 + .840 LM$. The regression coefficient for LM ($\beta = .840$) was positive and significant ($t(248) = 26.834$; $p < .001$), indicating that each one-unit increase in learning motivation was associated with a .840-unit increase in career adaptability-the highest coefficient among the three models. The overall model was significant ($F(1,248) = 720.068$; $p < .001$) with $R^2 = .744$, indicating that 74.4% of the variance in career adaptability was explained by learning motivation. H3 is supported.

4.5 Summary of Hypothesis Testing Results

Table 5 summarizes the results of all three hypothesis tests to facilitate cross-hypothesis comparison.

Table 5. Summary of Hypothesis Testing Results

H	Path	β	t	F	R ²	p	Decision
H1	DL → Career Adaptability	.623	26.487	701.570	.739	< .001	Supported
H2	DL → Learning Motivation	.557	17.742	314.785	.559	< .001	Supported
H3	LM → Career Adaptability	.840	26.834	720.068	.744	< .001	Supported

Note: DL = Digital Literacy; LM = Learning Motivation; β = regression coefficient; $df = (1,248)$ for all models.

V. DISCUSSION

The results of the simple linear regression analyses indicate that all three hypotheses in this study are supported. The findings reveal a coherent pattern of relationships among digital literacy, learning motivation, and career adaptability among management students in Jakarta. In other words, students who possess stronger digital literacy tend to exhibit higher levels of both learning motivation and career adaptability.

The results of H1 ($\beta = .623$; $R^2 = .739$; $p < .001$) indicate that digital literacy exerts a strong effect on career adaptability. An R² value of .739 suggests that digital literacy accounts for a substantial proportion of the variance in career adaptability among students. This finding aligns with CCT, which posits that career adaptability develops through the individual's interaction with demands and opportunities in the surrounding environment (Savickas, 2013).

In the digital context, students with strong digital literacy are better positioned to access career-related information online, utilize self-development media, and adjust to technological changes in the work environment. This finding is also consistent with Van Laar et al. (2017), who identified positive associations between digital skills and readiness for career change.

The results of H2 indicate that digital literacy significantly affects students' learning motivation ($\beta = .557$; $R^2 = .559$; $p < .001$). An R^2 of .559 suggests that a substantial portion of students' learning motivation can be accounted for by their level of digital literacy. This finding is consistent with Self-Determination Theory (Deci & Ryan, 2000), which explains that competence and autonomy in learning can enhance individual motivation: digitally competent students have broader access to diverse and engaging learning resources, and experience a direct sense of relevance between their digital competencies and future career demands. This creates a psychologically conducive environment for the development of autonomous and sustained learning motivation. The positive direction of this effect is also consistent with findings by Voogt and Roblin (2012) regarding the relationship between 21st-century competencies and students' learning drive.

The results of H3 indicate that learning motivation is the strongest predictor of career adaptability ($\beta = .840$; $R^2 = .744$; $p < .001$). These values suggest that the higher students' learning motivation, the higher their career adaptability. This finding reinforces the CCT perspective, which emphasizes the active role of individuals in career construction through engagement in learning activities (Savickas, 2013). Students with high learning motivation consistently invest time and energy in career exploration, developing new skills, and expanding their knowledge of the world of work—all processes that directly build career adaptability resources. This finding also aligns with Benedetti et al. (2015), who demonstrated that active engagement in personal development is positively correlated with career adaptability.

When viewed collectively, the three regression results reveal an interconnected pattern of relationships. Digital literacy not only directly affects career adaptability (H1), but also influences learning motivation (H2), which in turn further enhances career adaptability (H3). These findings suggest that the development of digital literacy can serve as a facilitating learning strategy in higher education, as it encourages students to be more active and self-directed in the learning process. Moreover, the enhancement of both learning motivation and career adaptability reflects digital literacy's contribution to improving human performance among students as they prepare to enter the digital workforce.

Practically, these findings carry implications for curriculum development and career programming in higher education institutions. The strengthening of digital literacy within

management curricula should not be limited to technical skill-building, but should also incorporate pedagogical approaches designed to enhance students' learning motivation. Furthermore, campus-based career development programs can be designed to incorporate digital activities that connect technological competencies with real-world career needs and opportunities.

This study has several limitations. The cross-sectional design precludes strong causal inference, and longitudinal research is needed to establish directionality more definitively. In addition, the sample drawn exclusively from a single private university in Jakarta limits the generalizability of the findings. The use of self-report instruments also carries the potential for response bias, although the high reliability values ($\alpha > .97$) indicate strong measurement consistency. Future research is encouraged to involve a broader range of institutions, employ longitudinal designs, and incorporate additional variables such as self-efficacy, growth mindset, and institutional support.

VI. CONCLUSION

This study successfully tested all three hypotheses using simple linear regression analysis with 250 management students in Jakarta. The results indicate that digital literacy positively and significantly affects career adaptability ($H1: \beta = .623; R^2 = .739; F(1,248) = 701.570; p < .001$). Digital literacy also positively and significantly affects learning motivation ($H2: \beta = .557; R^2 = .559; F(1,248) = 314.785; p < .001$). Furthermore, learning motivation was found to have a positive and significant effect on career adaptability, with the highest effect size among the three models ($H3: \beta = .840; R^2 = .744; F(1,248) = 720.068; p < .001$).

Overall, these findings demonstrate that digital literacy plays an important role in enhancing students' career adaptability, both directly and through the enhancement of learning motivation. Accordingly, universities are encouraged to develop digital literacy not merely as a technical skill, but as an integral dimension of the learning process capable of fostering student motivation and preparing graduates for the demands of the digital workplace.

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