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AI Literacy and Entrepreneurial Readiness among Economics Education Students: The Mediating Role of Digital Content Creation Skills

Nurliana[1]*, Maghfirah Sari Azis[2]
Email: nurliana@unm.ac.id, maghfirahazis@unm.ac.id*
[1,2] Universitas Negeri Makassar, Makassar, Indonesia

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Abstract

The rapid adoption of artificial intelligence (AI) technologies in higher education has created new opportunities for developing entrepreneurial competencies among university students. However, limited research has examined how AI Literacy contributes to Entrepreneurial Readiness and the mechanism through which this relationship occurs. This study investigates the relationships among AI Literacy, Digital Content Creation Skills, and Entrepreneurial Readiness among Economics Education students at Universitas Negeri Makassar. A quantitative survey design was employed, involving 300 undergraduate students selected through purposive sampling. Data were collected using a structured questionnaire and analyzed using Partial Least Squares Structural Equation Modeling (PLS-SEM) with SmartPLS 4. The findings revealed that AI Literacy positively and significantly influenced Digital Content Creation Skills ($\beta = 0.617$, $p < 0.001$) and Entrepreneurial Readiness ($\beta = 0.316$, $p < 0.001$). Furthermore, Digital Content Creation Skills significantly affected Entrepreneurial Readiness ($\beta = 0.424$, $p < 0.001$) and partially mediated the relationship between AI Literacy and Entrepreneurial Readiness ($\beta = 0.262$, $p < 0.001$). The study concludes that AI Literacy represents an important antecedent of Entrepreneurial Readiness, while Digital Content Creation Skills serve as a critical mechanism linking technological competence and entrepreneurial development among university students in the digital era.

Keywords: *AI Literacy, Digital Content Creation Skills, Entrepreneurial Readiness, Digital Entrepreneurship, Higher Education.*

INTRODUCTION

The rapid advancement of artificial intelligence (AI) technologies has fundamentally transformed educational environments and professional practices worldwide. The emergence of generative AI applications, including ChatGPT, Gemini, and other AI-powered platforms, has changed how students access information, generate ideas, solve problems, and create digital content. Higher education institutions are increasingly expected to prepare students not only to use these technologies but also to understand their capabilities, limitations, and ethical implications. Recent studies have highlighted that AI is becoming an integral component of contemporary learning ecosystems and will play a critical role in shaping future workforce competencies (Dwivedi et al., 2019; Zawacki-Richter et al., 2019; Chiu, 2023; Michel-Villarreal et al., 2023). Consequently, universities face growing pressure to develop graduates who are capable of navigating AI-driven environments effectively and responsibly.

Within this context, AI literacy has emerged as a crucial competency for students in higher education. AI literacy refers to the knowledge, skills, attitudes, and critical understanding required

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to effectively interact with AI systems, interpret AI-generated outputs, and make informed decisions regarding AI utilization (Long & Magerko, 2020). According to Ng et al. (2021), AI literacy extends beyond technical knowledge by incorporating ethical awareness, critical evaluation, and practical application. As AI technologies become increasingly accessible, students who possess higher levels of AI literacy are expected to demonstrate greater adaptability, technological confidence, and problem-solving capabilities. Furthermore, Kohnke et al. (2023) emphasized that AI preparedness has become an essential component of student readiness for future academic and professional environments.

The increasing importance of AI literacy is closely linked to broader discussions regarding digital competence and twenty-first-century skills. The Digital Competence Framework (DIGCOMP) identifies content creation as one of the core dimensions of digital competence required for effective participation in contemporary society (Ferrari, 2013). Digital competence encompasses the ability to access, evaluate, create, and communicate information through digital technologies. Previous studies have demonstrated that digital competence is associated with self-efficacy, learning performance, and technology utilization (Hatlevik et al., 2014). Moreover, digital skills have become increasingly important determinants of individual success in both educational and professional contexts (Van Laar et al., 2020). As AI technologies become embedded in daily learning activities, AI literacy may function as a catalyst that enhances broader digital competencies among university students.

Among the various dimensions of digital competence, digital content creation skills have received increasing scholarly attention. Digital content creation skills refer to the ability to design, develop, modify, and distribute digital materials through various technological platforms. These skills include the creation of textual, visual, audio, and multimedia content that effectively communicates ideas and engages audiences. In contemporary digital ecosystems, content creation has become an essential capability for personal branding, communication, marketing, and entrepreneurial activities. Casaló et al. (2018) found that digital content significantly influences audience engagement and online influence, particularly in social media environments. Similarly, Romero-Rodríguez et al. (2020) argued that technology-supported learning environments contribute substantially to students' capacity to produce and manage digital content effectively. Consequently, students who possess stronger digital content creation skills may be better equipped to leverage digital technologies for entrepreneurial purposes.

Entrepreneurship has become another strategic objective of higher education institutions worldwide. Universities are increasingly expected to cultivate entrepreneurial competencies that enable graduates to recognize opportunities, create value, and adapt to dynamic economic environments. In this regard, entrepreneurial readiness represents an individual's preparedness to engage in entrepreneurial activities through the possession of relevant competencies, confidence, and behavioral intentions. The Theory of Planned Behavior suggests that entrepreneurial actions are preceded by favorable attitudes, perceived behavioral control, and behavioral intentions (Ajzen, 1991). Similarly, Social Cognitive Theory emphasizes the role of cognitive capabilities and self-efficacy in shaping behavioral outcomes (Bandura, 1986). These theoretical perspectives suggest that competencies developed during higher education may significantly influence students' readiness to pursue entrepreneurial careers.

Prior studies have consistently demonstrated the importance of competencies and educational experiences in fostering entrepreneurial readiness. Zhao et al. (2005) reported that self-efficacy plays a significant role in the development of entrepreneurial intentions. Likewise, entrepreneurship education has been found to positively influence entrepreneurial competencies,

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attitudes, and intentions among university students (Fayolle & Gailly, 2013; Sánchez, 2013). A systematic review conducted by Nabi et al. (2016) further confirmed that entrepreneurship education contributes positively to various entrepreneurial outcomes. Moreover, entrepreneurial intention has been identified as a strong predictor of future entrepreneurial behavior (Liñán & Fayolle, 2015), while entrepreneurial readiness is influenced by competence development, educational experiences, and environmental support (Shirokova et al., 2015; Obschonka et al., 2016).

Recent developments in digital entrepreneurship have expanded the range of competencies required for entrepreneurial success. Digital entrepreneurship emphasizes the utilization of digital technologies to identify opportunities, develop innovative business models, and create value within digital ecosystems (Nambisan, 2016). The emergence of digitally enabled entrepreneurial ecosystems has created new opportunities for innovation and business development (Autio et al., 2017). Furthermore, digital entrepreneurship has become increasingly relevant in modern economies characterized by technological disruption and digital transformation (Davidsson, 2015; Kraus et al., 2018; Ratten, 2021). In such environments, competencies related to AI utilization and digital content creation may play an increasingly important role in determining entrepreneurial readiness among university students.

From a technology adoption perspective, students' willingness to engage with AI technologies may also influence the development of entrepreneurial capabilities. The Unified Theory of Acceptance and Use of Technology proposes that technology utilization is influenced by performance expectancy, effort expectancy, social influence, and facilitating conditions (Venkatesh et al., 2003). Likewise, Teo and Lee (2010) found that technology acceptance significantly influences students' willingness to integrate digital technologies into learning activities. These perspectives suggest that AI literacy may not only enhance students' technological competence but also encourage productive technology utilization that supports entrepreneurial development.

Despite growing scholarly interest in AI literacy, digital competence, and entrepreneurship education, several important research gaps remain. First, existing AI literacy studies have primarily focused on learning outcomes, technology adoption, and educational performance, while relatively limited attention has been given to entrepreneurial outcomes. Second, previous entrepreneurship studies have largely emphasized traditional entrepreneurial competencies and educational interventions while overlooking emerging AI-related capabilities. Third, the mechanism through which AI literacy contributes to entrepreneurial readiness remains insufficiently understood. Specifically, empirical evidence concerning the mediating role of digital content creation skills remains scarce, particularly among Economics Education students in developing countries.

To address these gaps, this study proposes that AI literacy contributes to entrepreneurial readiness both directly and indirectly through digital content creation skills. Students who possess higher levels of AI literacy are expected to demonstrate stronger digital content creation capabilities, which subsequently enhance their readiness to engage in entrepreneurial activities. The proposed conceptual framework is presented in Figure 1.

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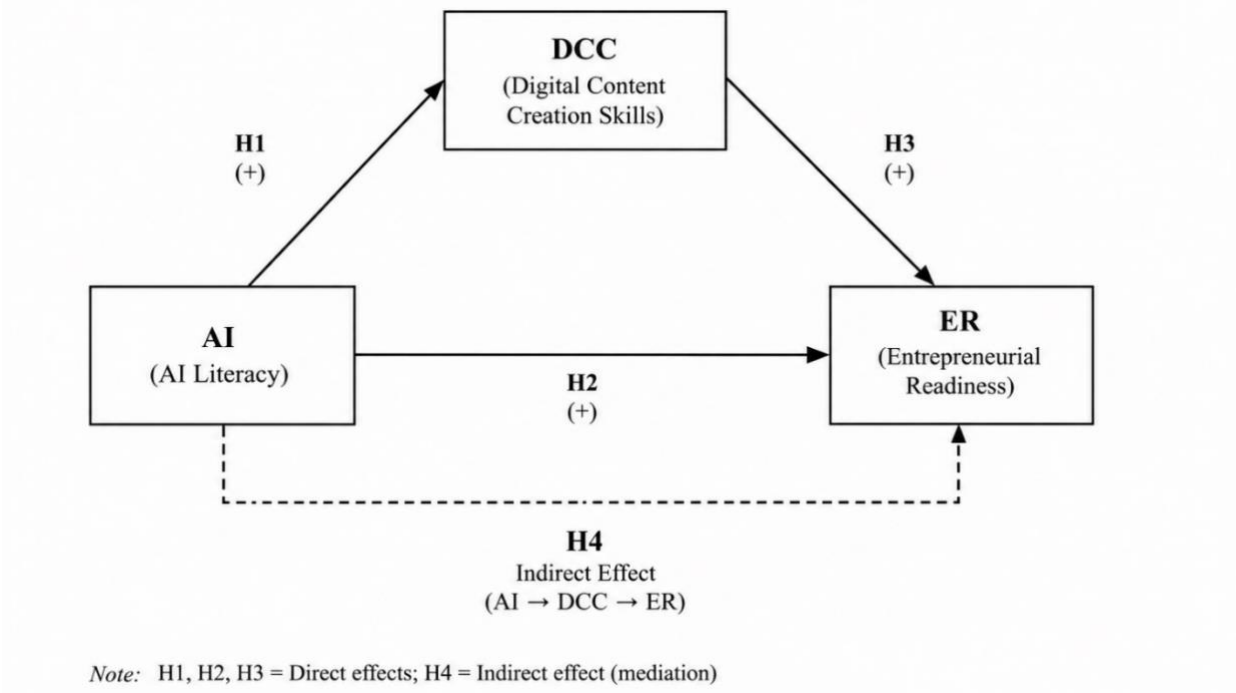

Figure 1. Conceptual Framework

METHOD

Research Design

This study employed a quantitative research design using a survey approach to examine the relationships among AI Literacy, Digital Content Creation Skills, and Entrepreneurial Readiness among university students. A cross-sectional design was adopted, whereby data were collected from respondents at a single point in time. This design was considered appropriate because it enabled the investigation of direct and indirect relationships among latent variables within the proposed mediation framework. Furthermore, the quantitative approach facilitated the empirical testing of hypotheses and provided statistical evidence regarding the predictive relationships among the constructs included in the conceptual model.

Data

The study utilized primary data collected directly from undergraduate students of the Economics Education Study Program, Universitas Negeri Makassar, Indonesia. The target population consisted of students who had completed entrepreneurship-related learning activities and were familiar with the use of digital technologies, including artificial intelligence applications.

A total of 300 valid responses were obtained and included in the final analysis. The respondents consisted of 150 fourth-semester students and 150 sixth-semester students. In addition to semester level, demographic information regarding entrepreneurial experience, frequency of AI utilization, and preferred AI platform was collected to provide contextual information concerning students' exposure to entrepreneurship and AI technologies.

Data Collection Technique

Data were collected through an online survey using a structured questionnaire. The questionnaire was distributed electronically through academic communication channels commonly used by students, including class communication groups and institutional online

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learning platforms. Participation in the study was voluntary, and respondents were informed that the information provided would be used exclusively for academic research purposes.

The online survey method was selected because it enabled efficient data collection from a relatively large number of respondents while ensuring accessibility, convenience, and timely responses. Prior to the main data collection process, the questionnaire was reviewed to ensure clarity, readability, and suitability for the target respondents.

Instrument

The research instrument consisted of three latent constructs, namely AI Literacy (AI), Digital Content Creation Skills (DCC), and Entrepreneurial Readiness (ER). All constructs were measured using reflective indicators adapted from previous studies and modified to suit the context of Economics Education students. Responses were measured using a five-point Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree).

AI Literacy (AI)

AI Literacy refers to students' ability to understand, evaluate, and effectively utilize artificial intelligence technologies in academic and professional contexts. The construct was measured using five indicators:

1. Understanding fundamental AI concepts.
2. Evaluating AI-generated information critically.
3. Utilizing AI tools effectively for learning and problem-solving activities.
4. Understanding ethical considerations related to AI utilization.
5. Demonstrating confidence in using AI technologies.

Digital Content Creation Skills (DCC)

Digital Content Creation Skills refer to students' ability to create, modify, and communicate information through digital media and technological platforms. The construct was measured using five indicators:

1. Creating digital content independently.
2. Designing visually appealing digital content.
3. Adapting content for various digital platforms.
4. Utilizing digital tools for content production.
5. Communicating ideas effectively through digital content.

Entrepreneurial Readiness (ER)

Entrepreneurial Readiness refers to students' preparedness to engage in entrepreneurial activities through the possession of relevant competencies, confidence, and motivation. The construct was measured using five indicators:

1. Identifying business opportunities.
2. Demonstrating confidence in starting a business.
3. Solving entrepreneurial problems effectively.
4. Taking initiative in entrepreneurial activities.
5. Showing commitment to future entrepreneurial endeavors.

Procedure

The research procedure consisted of five stages. First, an extensive review of the literature was conducted to identify relevant theories and empirical findings concerning AI Literacy, Digital Content Creation Skills, and Entrepreneurial Readiness. Second, the conceptual framework and research hypotheses were developed based on the reviewed literature. Third, the questionnaire was

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designed and adapted to the context of Economics Education students at Universitas Negeri Makassar. Fourth, the questionnaire was distributed online to eligible respondents, and the collected responses were screened to ensure completeness and consistency. Finally, the validated dataset was analyzed to evaluate the proposed measurement and structural models and to test the research hypotheses.

Data Analysis Method

Data were analyzed using Partial Least Squares Structural Equation Modeling (PLS-SEM) with SmartPLS 4 software. PLS-SEM was selected because it is suitable for examining complex relationships among latent variables, assessing mediation effects, and predicting target constructs within a theoretical framework (Hair et al., 2021). The method is particularly appropriate for predictive and exploratory research involving multiple constructs and indirect relationships.

The analysis was conducted in two stages. The first stage involved evaluating the measurement model. Indicator reliability was assessed using outer loadings, internal consistency reliability was examined through Cronbach's Alpha and Composite Reliability (CR), convergent validity was evaluated using Average Variance Extracted (AVE), and discriminant validity was assessed using the Heterotrait-Monotrait Ratio (HTMT).

The second stage involved evaluating the structural model. Path coefficients were examined to assess the relationships among constructs, while the coefficient of determination (R^2) was used to evaluate the explanatory power of the model. The mediating role of Digital Content Creation Skills was assessed through indirect effect analysis. Hypothesis testing was conducted using a bootstrapping procedure with 5,000 resamples. Statistical significance was determined based on t-values and p-values. Finally, model fit was evaluated using the Standardized Root Mean Square Residual (SRMR) and the Normed Fit Index (NFI).

The application of SmartPLS 4 enabled a comprehensive assessment of both the measurement and structural models, thereby ensuring the reliability, validity, and predictive capability of the proposed relationships among AI Literacy, Digital Content Creation Skills, and Entrepreneurial Readiness.

FINDINGS AND DISCUSSION

Findings

1. Demographic Characteristics of Respondents

To provide contextual information regarding the study participants, the demographic characteristics of the respondents were analyzed. The analysis included semester level, entrepreneurial experience, frequency of AI utilization, and preferred AI platform. Understanding these characteristics is important because they reflect the respondents' exposure to entrepreneurship education and AI technologies, which are directly related to the variables examined in this study. The results are presented in Table 1.

Table 1. Demographic Characteristics of Respondents

Characteristics	Category	Frequency	Percentage (%)
Semester	Semester 4	150	50.0
	Semester 6	150	50.0
Entrepreneurial Experience	Ever	118	39.3
	Never	182	60.7

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Frequency of AI Use	Rarely	21	7.0
	Occasionally	69	23.0
	Frequently	132	44.0
	Very Frequently	78	26.0
AI Platform Used	ChatGPT	192	64.0
	Gemini	58	19.3
	DeepSeek	28	9.3
	Copilot	14	4.7
	Claude	8	2.7

As shown in Table 1, the respondents consisted of an equal proportion of fourth-semester and sixth-semester students, each representing 50.0% of the sample. Most respondents reported having no prior entrepreneurial experience (60.7%), whereas 39.3% had previously engaged in entrepreneurial activities. Regarding AI utilization, frequent and very frequent users accounted for 70.0% of the respondents, indicating a relatively high level of exposure to AI technologies. ChatGPT emerged as the most widely used AI platform, followed by Gemini, DeepSeek, Copilot, and Claude. These findings indicate that the respondents were generally familiar with AI technologies and actively engaged in digital learning environments, making them suitable for examining the relationships among AI Literacy, Digital Content Creation Skills, and Entrepreneurial Readiness.

2. Descriptive Statistics and Correlation Analysis

Descriptive statistics and correlation analysis were conducted to obtain an overview of the respondents' perceptions regarding AI Literacy, Digital Content Creation Skills, and Entrepreneurial Readiness. In addition, correlation analysis was performed to provide preliminary evidence regarding the relationships among the study constructs before proceeding to structural model evaluation. The results are presented in Table 2.

Table 2. Descriptive Statistics and Correlation Matrix

Construct	Mean	SD	AI	DCC	ER
AI	3.900	0.460	1.000		
DCC	3.900	0.460	0.608	1.000	
ER	3.890	0.470	0.524	0.614	1.000

As shown in Table 2, AI Literacy achieved a mean score of 3.900 (SD = 0.460), indicating that respondents generally possessed a relatively high level of AI-related competence. Digital Content Creation Skills also recorded a mean score of 3.900 (SD = 0.460), suggesting that students perceived themselves as capable of creating and managing digital content effectively. Entrepreneurial Readiness obtained a mean score of 3.890 (SD = 0.470), reflecting a moderate to high level of preparedness for entrepreneurial activities. Furthermore, all constructs were positively correlated. AI Literacy exhibited positive correlations with Digital Content Creation

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Skills (r = 0.608) and Entrepreneurial Readiness (r = 0.524), while Digital Content Creation Skills showed a positive correlation with Entrepreneurial Readiness (r = 0.614). These findings provide preliminary support for the proposed relationships among the study variables.

3. Measurement Model Assessment

The measurement model was evaluated to ensure that the indicators used in this study were reliable and valid for measuring their respective constructs. The assessment included indicator reliability, internal consistency reliability, convergent validity, and discriminant validity.

3.1. Indicator Reliability

Indicator reliability was assessed through outer loading values. Outer loadings indicate the extent to which individual indicators represent their corresponding latent constructs. The results of the indicator reliability assessment are presented in Table 3.

Table 3. Indicator Reliability

Construct	Indicator	Outer Loading
AI Literacy	AI1	0.831
	AI2	0.862
	AI3	0.847
	AI4	0.878
	AI5	0.855
Digital Content Creation Skills	DCC1	0.846
	DCC2	0.861
	DCC3	0.851
	DCC4	0.873
	DCC5	0.857
Entrepreneurial Readiness	ER1	0.852
	ER2	0.869
	ER3	0.858
	ER4	0.882
	ER5	0.864

The results presented in Table 3 indicate that all indicators achieved loading values ranging from 0.831 to 0.882, exceeding the recommended threshold of 0.70. These findings demonstrate that each indicator adequately represented its corresponding construct and contributed significantly to the measurement model. Therefore, all indicators were retained for subsequent analysis.

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3.2. Reliability and Convergent Validity

Following the assessment of indicator reliability, the reliability and convergent validity of the constructs were evaluated. Reliability was assessed using Cronbach's Alpha and Composite Reliability (CR), while convergent validity was evaluated using Average Variance Extracted (AVE). The results are presented in Table 4.

Table 4. Reliability and Convergent Validity

Construct	Cronbach's Alpha	Composite Reliability	AVE
AI Literacy	0.911	0.934	0.738
Digital Content Creation Skills	0.914	0.936	0.744
Entrepreneurial Readiness	0.921	0.940	0.759

As shown in Table 4, Cronbach's Alpha values ranged from 0.911 to 0.921, while Composite Reliability values ranged from 0.934 to 0.940. All values exceeded the recommended threshold of 0.70, indicating strong internal consistency reliability. Furthermore, AVE values ranged from 0.738 to 0.759, exceeding the minimum threshold of 0.50. These findings confirm that all constructs achieved satisfactory convergent validity and were appropriate for further structural model evaluation.

3.3. Discriminant Validity

Discriminant validity was examined to ensure that each construct was empirically distinct from the others. The Heterotrait-Monotrait Ratio (HTMT) was used for this purpose. The results are presented in Table 5.

Table 5. Discriminant Validity (HTMT)

Constructs	HTMT
AI Literacy – Digital Content Creation Skills	0.667
AI Literacy – Entrepreneurial Readiness	0.614
Digital Content Creation Skills – Entrepreneurial Readiness	0.660

The HTMT values ranged from 0.614 to 0.667, all of which were below the recommended threshold of 0.85. These results indicate that AI Literacy, Digital Content Creation Skills, and Entrepreneurial Readiness represent distinct constructs and do not exhibit problematic overlap. Consequently, the measurement model demonstrated satisfactory discriminant validity.

Following the satisfactory evaluation of the measurement model, the structural model was assessed to examine the proposed relationships among the constructs. Figure 2 presents the structural model results, including path coefficients and coefficients of determination.

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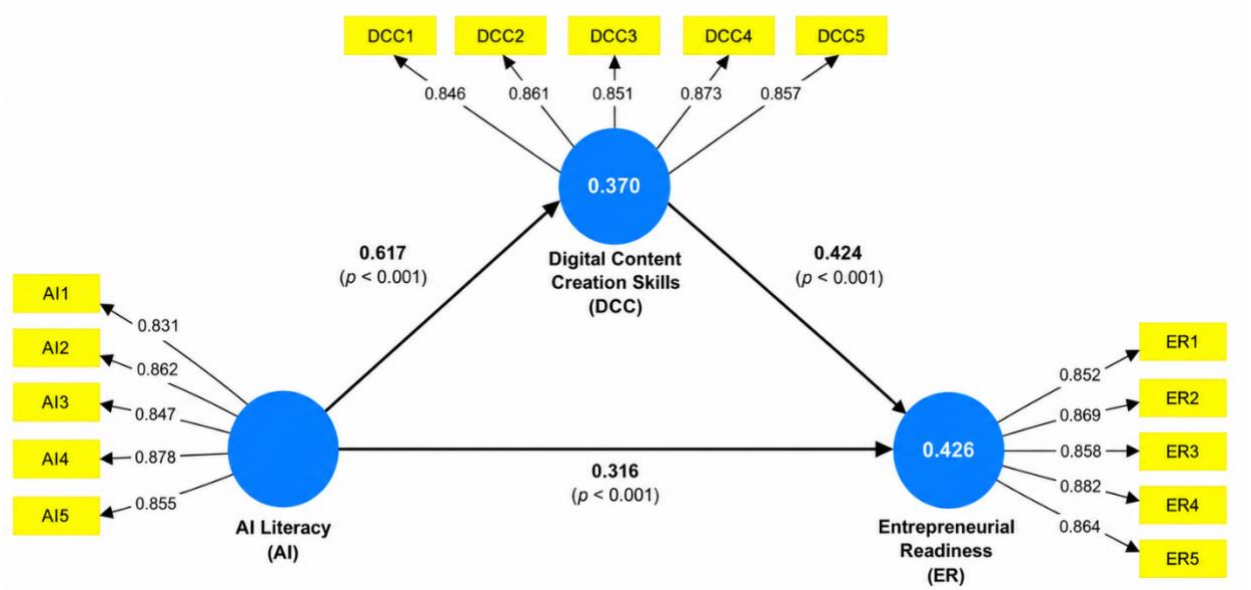

Figure 2. Structural Model Results

Figure 2 illustrates the standardized path coefficients and explanatory power of the proposed model. AI Literacy demonstrated a strong positive effect on Digital Content Creation Skills, while both AI Literacy and Digital Content Creation Skills significantly contributed to Entrepreneurial Readiness. Furthermore, the coefficient of determination values indicate that the model explained 37.0% of the variance in Digital Content Creation Skills and 42.6% of the variance in Entrepreneurial Readiness. These findings provide preliminary evidence supporting the proposed hypotheses and justify further structural model evaluation.

4. Structural Model Assessment and Hypothesis Testing

After establishing the validity and reliability of the measurement model, hypothesis testing was conducted to evaluate the proposed direct relationships among the constructs. The results of the structural model assessment are presented in Table 6.

Table 6. Structural Model Assessment and Hypothesis Testing

Hypothesis	Relationship	β	t-value	p-value	Decision
H1	AI Literacy → Digital Content Creation Skills	0.617	13.284	< 0.001	Supported
H2	AI Literacy → Entrepreneurial Readiness	0.316	4.862	< 0.001	Supported
H3	Digital Content Creation Skills → Entrepreneurial Readiness	0.424	6.711	< 0.001	Supported

The findings indicate that AI Literacy had a significant positive effect on Digital Content Creation Skills ($\beta = 0.617$, $t = 13.284$, $p < 0.001$), supporting H1. AI Literacy also exerted a significant positive influence on Entrepreneurial Readiness ($\beta = 0.316$, $t = 4.862$, $p < 0.001$), supporting H2. Furthermore, Digital Content Creation Skills positively affected Entrepreneurial Readiness ($\beta = 0.424$, $t = 6.711$, $p < 0.001$), supporting H3. These findings demonstrate that both

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AI Literacy and Digital Content Creation Skills are important determinants of Entrepreneurial Readiness among Economics Education students.

To evaluate the explanatory power of the structural model, the coefficient of determination (R^2) was examined. The results are presented in Table 7.

Table 7. Coefficient of Determination (R^2)

Endogenous Construct	R^2
Digital Content Creation Skills	0.370
Entrepreneurial Readiness	0.426

The results show that AI Literacy explained 37.0% of the variance in Digital Content Creation Skills. In addition, AI Literacy and Digital Content Creation Skills jointly explained 42.6% of the variance in Entrepreneurial Readiness. These findings indicate that the model possesses moderate explanatory power and provides meaningful insights into the factors influencing entrepreneurial readiness among university students.

5. Indirect Effect Analysis

In addition to examining the direct relationships among the constructs, this study also evaluated the mediating role of Digital Content Creation Skills in the relationship between AI Literacy and Entrepreneurial Readiness. Mediation analysis was conducted to determine whether AI Literacy influences Entrepreneurial Readiness indirectly through the enhancement of students' digital content creation capabilities. The results of the indirect effect analysis are presented in Table 8.

Table 8. Indirect Effect Analysis

Hypothesis	Indirect Relationship	β	t-value	p-value	Decision
H4	AI Literacy → Digital Content Creation Skills → Entrepreneurial Readiness	0.262	5.438	< 0.001	Supported

The results indicate that the indirect effect of AI Literacy on Entrepreneurial Readiness through Digital Content Creation Skills was positive and statistically significant ($\beta = 0.262$, $t = 5.438$, $p < 0.001$). Therefore, H4 was supported. The significant indirect effect demonstrates that Digital Content Creation Skills serve as a mediating mechanism through which AI Literacy contributes to Entrepreneurial Readiness.

This finding suggests that students who possess stronger AI Literacy are more capable of utilizing AI technologies to develop meaningful digital content, and these enhanced content creation capabilities subsequently increase their readiness to engage in entrepreneurial activities. In other words, AI Literacy does not merely contribute directly to entrepreneurial readiness but also strengthens entrepreneurial preparedness through the development of practical digital competencies.

The presence of both significant direct and indirect effects indicates a partial mediation relationship. This means that AI Literacy influences Entrepreneurial Readiness through two pathways. The first pathway is direct, whereby AI-related knowledge and competencies enhance students' confidence, adaptability, and readiness to pursue entrepreneurial opportunities. The

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second pathway is indirect, whereby AI Literacy improves Digital Content Creation Skills, which subsequently contribute to higher levels of Entrepreneurial Readiness.

The finding highlights the strategic role of digital content creation capabilities in contemporary entrepreneurial environments. As entrepreneurial activities increasingly rely on digital platforms for communication, marketing, branding, and customer engagement, students who are capable of transforming AI-assisted knowledge into valuable digital content are more likely to feel prepared to initiate entrepreneurial ventures. Therefore, Digital Content Creation Skills represent an important bridge connecting technological competence and entrepreneurial development.

6. Model Fit Assessment

After evaluating the direct and indirect relationships among the constructs, the overall model fit was assessed to determine the extent to which the proposed model adequately represented the observed data. Model fit was evaluated using the Standardized Root Mean Square Residual (SRMR) and the Normed Fit Index (NFI). The results are presented in Table 9.

Table 9. Model Fit Assessment

Index	Value	Threshold
SRMR	0.056	< 0.080
NFI	0.921	> 0.900

The results indicate that the SRMR value was 0.056, which is below the recommended threshold of 0.080. This finding suggests that the discrepancy between the observed covariance matrix and the model-implied covariance matrix was relatively small, indicating an acceptable level of model fit. Furthermore, the NFI value was 0.921, exceeding the recommended threshold of 0.900. This result indicates that the proposed model demonstrated a good level of fit compared with the null model.

Overall, the model fit assessment confirms that the proposed structural model adequately represents the relationships among AI Literacy, Digital Content Creation Skills, and Entrepreneurial Readiness. The satisfactory model fit provides additional support for the validity of the hypothesized relationships and strengthens confidence in the interpretation of the empirical findings.

Discussion

1. AI Literacy and Digital Content Creation Skills

The findings revealed that AI Literacy positively and significantly influences Digital Content Creation Skills among Economics Education students. This result indicates that students who possess stronger competencies in understanding, evaluating, and utilizing artificial intelligence technologies are more capable of producing, modifying, and communicating digital content effectively. The positive relationship suggests that AI Literacy functions not only as a technological competency but also as an enabling capability that enhances broader digital skills.

This finding supports the conceptualization of AI Literacy proposed by Long and Magerko (2020), who argued that AI Literacy encompasses the competencies required to understand, interact with, and critically evaluate AI technologies. Similarly, Ng et al. (2021) emphasized that AI Literacy extends beyond technical knowledge and includes practical abilities that facilitate effective technology utilization. Students who understand how AI systems operate and how AI-

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generated information should be evaluated are more likely to utilize these technologies productively during content creation activities.

The result is also consistent with the Digital Competence Framework developed by Ferrari (2013), which identifies content creation as a fundamental dimension of digital competence. According to this framework, individuals who possess stronger technological understanding are generally better equipped to generate and communicate information through digital platforms. Furthermore, Hatlevik et al. (2014) found that digital competence is closely associated with technological self-efficacy and effective technology use. Therefore, students with higher levels of AI Literacy are likely to demonstrate greater confidence when utilizing digital tools to create content.

Another explanation can be derived from the perspective of twenty-first-century digital skills. Van Laar et al. (2020) argued that modern digital environments require individuals to integrate technological knowledge with communication and content development capabilities. In the context of higher education, AI technologies provide students with opportunities to generate ideas, organize information, improve content quality, and enhance creative processes. Consequently, students who are capable of utilizing AI effectively may experience significant improvements in their digital content creation performance.

The finding also reflects current developments in higher education, where AI technologies have become increasingly integrated into students' academic activities. Studies conducted by Chiu (2023), Kohnke et al. (2023), and Michel-Villarreal et al. (2023) suggest that AI tools can enhance creativity, productivity, and digital engagement when utilized appropriately. Therefore, AI Literacy appears to be an important prerequisite for developing digital content creation capabilities in contemporary learning environments.

2. AI Literacy and Entrepreneurial Readiness

The results further demonstrated that AI Literacy has a significant positive influence on Entrepreneurial Readiness. This finding indicates that students who possess greater knowledge and confidence in utilizing AI technologies tend to be more prepared to engage in entrepreneurial activities. As digital technologies increasingly shape business environments, AI-related competencies appear to become valuable resources that contribute to entrepreneurial preparedness.

This finding can be explained through Social Cognitive Theory (Bandura, 1986), which emphasizes that individuals' beliefs regarding their capabilities influence their behavioral readiness. Students who possess strong AI Literacy may perceive themselves as more capable of utilizing technological resources to identify opportunities, solve problems, and respond to challenges. Consequently, they are likely to exhibit greater confidence in pursuing entrepreneurial activities.

The finding is also consistent with the Theory of Planned Behavior proposed by Ajzen (1991). According to this theory, perceived behavioral control significantly influences behavioral readiness and intention. Students who are competent in utilizing AI technologies may perceive entrepreneurship as more manageable because technological tools can assist in information gathering, decision-making, market analysis, and business planning. As a result, their readiness to engage in entrepreneurial activities increases.

The present finding supports previous research emphasizing the importance of competencies and self-efficacy in entrepreneurship. Zhao et al. (2005) demonstrated that competence-related factors significantly contribute to entrepreneurial intentions through increased self-efficacy. Likewise, Sánchez (2013) found that competence development enhances students' entrepreneurial

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outcomes. In the context of the present study, AI Literacy may function as a contemporary entrepreneurial competency that enables students to navigate increasingly digitalized business environments.

Furthermore, recent developments in digital entrepreneurship suggest that technological competence is becoming an essential entrepreneurial resource. Nambisan (2016) argued that digital technologies create new opportunities for innovation and entrepreneurial value creation. Similarly, Autio et al. (2017) emphasized that digitally enabled environments provide new mechanisms through which entrepreneurial opportunities emerge. Therefore, students who possess higher levels of AI Literacy may be better prepared to recognize and exploit entrepreneurial opportunities in technology-driven markets.

3. Digital Content Creation Skills and Entrepreneurial Readiness

The findings also revealed that Digital Content Creation Skills positively influence Entrepreneurial Readiness. This result indicates that students who possess stronger abilities to create, modify, and communicate digital content are more prepared to participate in entrepreneurial activities. The finding highlights the growing importance of digital communication and content development capabilities within contemporary entrepreneurial ecosystems.

One possible explanation is that digital content has become a critical instrument for entrepreneurial communication. Entrepreneurs increasingly rely on digital platforms to promote products, communicate value propositions, build customer relationships, and establish brand identities. Students who possess stronger content creation capabilities may therefore feel more confident about their ability to manage entrepreneurial activities in digital environments.

The result supports the arguments advanced by Casaló et al. (2018), who found that digital content significantly influences online engagement and audience interaction. Effective content creation enables individuals to communicate information more persuasively and establish stronger digital visibility. Such capabilities are particularly valuable for aspiring entrepreneurs operating within digital markets.

The finding is also consistent with the digital entrepreneurship perspective proposed by Nambisan (2016), Kraus et al. (2018), and Ratten (2021). These scholars emphasized that digital technologies have transformed entrepreneurial processes by creating new opportunities for communication, innovation, and value creation. In this context, content creation capabilities represent important entrepreneurial resources because they enable individuals to participate actively in digital ecosystems.

Furthermore, the finding aligns with previous studies concerning entrepreneurship education and entrepreneurial competence development. Nabi et al. (2016) argued that higher education institutions should equip students with practical competencies that support entrepreneurial success. Likewise, Obschonka et al. (2016) highlighted the importance of developing contemporary competencies that facilitate entrepreneurial behavior. The present study suggests that Digital Content Creation Skills constitute one such competency within the context of digital entrepreneurship.

4. The Mediating Role of Digital Content Creation Skills

The most important contribution of this study lies in the finding that Digital Content Creation Skills partially mediate the relationship between AI Literacy and Entrepreneurial Readiness. The mediation result indicates that AI Literacy contributes to Entrepreneurial Readiness not only directly but also indirectly through the enhancement of students' content creation capabilities.

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This finding extends previous AI Literacy research, which has predominantly focused on educational outcomes, learning performance, and technology adoption (Long & Magerko, 2020; Ng et al., 2021; Chiu, 2023). The present study demonstrates that AI Literacy also possesses entrepreneurial implications. Students who understand and utilize AI technologies effectively can transform technological knowledge into practical digital outputs, thereby enhancing their readiness for entrepreneurial engagement.

The mediation effect may be explained by the fact that AI technologies facilitate content development processes. Students who possess strong AI Literacy can utilize AI tools to generate ideas, improve communication quality, create marketing materials, and produce digital content more efficiently. These enhanced content creation capabilities subsequently strengthen entrepreneurial preparedness because students become more capable of communicating business ideas, promoting products, and interacting with potential customers.

The finding also contributes to the literature on digital entrepreneurship. Previous studies have highlighted the importance of technological competencies and digital capabilities in entrepreneurial development (Davidsson, 2015; Nambisan, 2016; Autio et al., 2017; Kraus et al., 2018). However, limited research has examined the mechanism through which AI-related competencies contribute to entrepreneurial readiness. The present study addresses this gap by identifying Digital Content Creation Skills as an important explanatory pathway linking AI Literacy and Entrepreneurial Readiness.

From a practical perspective, the findings suggest that universities should integrate AI Literacy development with digital content creation training within entrepreneurship education programs. Rather than focusing solely on technological knowledge, educational institutions should provide opportunities for students to apply AI technologies in content development, communication, and entrepreneurial projects. Such initiatives may strengthen students' preparedness to participate in increasingly digitalized entrepreneurial ecosystems.

Overall, the findings demonstrate that AI Literacy represents an important antecedent of Entrepreneurial Readiness among university students. However, its influence becomes substantially stronger when students possess the ability to transform AI-related knowledge into valuable digital content. Consequently, Digital Content Creation Skills serve as a crucial bridge connecting technological competence and entrepreneurial preparedness in the era of artificial intelligence.

CONCLUSION

This study examined the relationships among AI Literacy, Digital Content Creation Skills, and Entrepreneurial Readiness among Economics Education students at Universitas Negeri Makassar. The findings revealed that AI Literacy significantly and positively influenced both Digital Content Creation Skills and Entrepreneurial Readiness. In addition, Digital Content Creation Skills were found to have a significant positive effect on Entrepreneurial Readiness. The mediation analysis further demonstrated that Digital Content Creation Skills partially mediated the relationship between AI Literacy and Entrepreneurial Readiness, indicating that students with higher levels of AI Literacy tend to develop stronger content creation capabilities, which subsequently enhance their entrepreneurial preparedness. These findings highlight the importance of integrating AI-related competencies and digital content creation capabilities within entrepreneurship education to better prepare students for participation in increasingly digitalized entrepreneurial ecosystems. The study contributes to the emerging literature on AI-enabled entrepreneurship by demonstrating that AI Literacy represents an important antecedent of

Entrepreneurial Readiness and that Digital Content Creation Skills serve as a critical mechanism linking technological competence and entrepreneurial development among university students.

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