



## **Analysis of Digital Capability in Building Entrepreneurial Resilience among University Students**

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### **Abstract**

As agents of change, students of the Faculty of Economics at UNHASy are required not only to master conventional economic theories but also to adapt and compete in the constantly evolving digital ecosystem. Digital capability serves as a fundamental foundation that enables entrepreneurs to explore digital opportunities and adjust to market dynamics. Entrepreneurial resilience refers to the capacity of an entrepreneur not only to survive but also to actively adapt and grow. This study employed a descriptive method with a qualitative approach to gain an in-depth understanding of students' experiences and perceptions in building resilience through their digital capabilities. The findings reveal that digital capability constitutes a critical foundation in shaping entrepreneurial resilience and adaptability among students. The integration of digital capability with entrepreneurial resilience, reinforced by the pesantren values distinctive to UNHASy such as honesty, perseverance, and collaboration can serve as guiding principles in running a business.

**Keywords:** Entrepreneurship, Resilience, Digital, Capability

### **Introduction**

The digital economic transformation has introduced business patterns characterized by disruption, volatility, and unprecedented opportunities (Chaudhuri et al., 2022). In response to this reality, entrepreneurial resilience emerges as a fundamental competency that not only ensures business continuity but also drives growth and innovation amid pressure and uncertainty (Wang & Zhang, 2024). This competency is highly relevant for students, particularly those in the Faculty of

Economics at Hasyim Asy'ari University (UNHAS), who are being prepared to become prospective entrepreneurs and reliable economic actors in the digital era. As agents of change, UNHAS Faculty of Economics students are required not only to master conventional economic theories but also to adapt and compete within the ever-evolving digital ecosystem. Support for business development is facilitated through classroom learning and a structured entrepreneurship curriculum, offered progressively through courses in entrepreneurship theory, entrepreneurial planning, and entrepreneurial implementation (Rahayu Ningsih & Anah, 2021)

Intrinsically, student entrepreneurs occupy a strategic position as members of the digital native generation who have been familiar with and exposed to technology from an early age while academically, they are equipped with core theoretical knowledge such as management, accounting, and entrepreneurship (Nindi et al., 2025). However, it is important to note that exposure to technology does not automatically guarantee the full mastery of digital capability (Warner & Wäger, 2019). Digital capability is defined as the capacity to strategically mobilize and integrate digital resources to create value, innovate, and solve complex business problems (Maulida Khoirunisa et al., 2025). Hence, the main challenge lies in bridging the critical gap between the theoretical expertise acquired in the classroom and the applicative capacity to leverage digital technologies in building resilience and achieving competitive advantage in entrepreneurship.

Preliminary observations indicate that many students are already engaged in digital-based entrepreneurial activities or possess a significant interest in entrepreneurship. However, their adaptive capacity remains limited when confronted with external shocks such as market demand fluctuations, changes in social media platforms, and the increasing intensity of competition (Cahyani et al., 2023) (Ghosh et al., 2022). The digital initiatives they undertake tend to be reactive and sporadic, rather than forming part of an integrated and resilient business strategy (Warner & Wäger, 2019). Previous studies have extensively discussed digital capability within corporations or entrepreneurial resilience in general, yet few have specifically investigated the relationship between these two concepts among economics students in higher education institutions with pesantren values (Anah, 2020). The values of perseverance, independence, and work ethic instilled within the UNHAS environment are presumed to strengthen the relationship between digital capability and entrepreneurial resilience.

Digital capability serves as a foundational element that enables entrepreneurs to explore digital opportunities and adapt to market changes. Digital entrepreneurship can be defined as the creation of new ventures and the transformation of existing businesses through the utilization of digital technologies. (Fitriani Fitriani & Arfian Arfian, 2025) emphasizes that digital entrepreneurship is not merely about the use of technology but also about how technology reshapes opportunities, processes, and outcomes of entrepreneurial activities. Digital capability represents a manifestation of dynamic capabilities in the digital context, allowing entrepreneurs to innovate and remain resilient under disruptive conditions. The dynamic capabilities theory explains how organizations or individuals integrate, build, and reconfigure internal and external competencies to respond to rapidly

changing environments. According to Teece (2007), dynamic capabilities consist of three elements: sensing (identifying opportunities), seizing (exploiting opportunities), and transforming (continuous adaptation) (Akmal & Arifa, 2023).

Entrepreneurial resilience refers to an entrepreneur's capacity not only to survive but also to actively adapt and grow amid challenges, adversity, and uncertainty inherent in the entrepreneurial journey (Nindi et al., 2025). (Cahyani et al., 2023) identify resilience as a key characteristic that serves as a mediating mechanism between external challenges and long-term business success. A resilient entrepreneur is not only able to recover from failure but also to return stronger by engaging in transformative learning, leveraging internal resources such as optimism and self-efficacy, and building strong external support networks (Manajerial et al., 2025)

### **Research Methodology**

This study aims to describe the entrepreneurial resilience of students, particularly those who have applied digital capability in their entrepreneurial experiences. It also seeks to examine the extent to which practical experiences in utilizing digital skills influence the formation and level of entrepreneurial resilience among university students. The research employed a descriptive study with a qualitative approach to gain an in-depth understanding of students' experiences and perceptions in building resilience through their digital capabilities.

The participants selected for this study were students who had taken entrepreneurship, business applications, or business planning courses at the Faculty of Economics, UNHAS, and met the following criteria: (1) active students from various study programs, (2) completion of at least one entrepreneurship course, (3) willingness to participate voluntarily, (4) prior use of social media, (5) ownership of a business operating for a minimum of two years, and (6) active use of social media or marketplace platforms for their business. Data were collected through in-depth interviews using a semi-structured guide that focused on three main aspects: (1) experiences in developing digital capability, (2) entrepreneurial challenges encountered, and (3) strategies to overcome emerging obstacles. The data collected were analyzed using Braun and Clarke's (2006) thematic analysis technique, involving transcription, coding, and pattern identification, to understand how digital capability shapes entrepreneurial resilience among students in the Faculty of Economics at Hasyim Asy'ari University.

### **Findings and Discussion**

#### **Findings**

##### **Description of Students' Digital Capability at the Faculty of Economics, UNHAS**

The digital capability of entrepreneurial students at the Faculty of Economics, UNHAS can be described as relatively high, yet still facing challenges in integrating theoretical knowledge with

practical application as well as adapting to ongoing changes. The following section presents the description of digital capability based on the analysis of interview data with the research participants:

**Table 1:** Description of Digital Capability

No	Category	Description
1	Knowledge	<p>Students' knowledge of digital capability is demonstrated through their use of various social media platforms such as WhatsApp and Instagram, as well as e-commerce platforms including Shopee, TikTok, and websites. In terms of knowledge, they understand how to operate these applications along with their respective functions and advantages. As noted by research participant DP, even simple features have been utilized, such as Instagram Insights, Google Analytics, and live features on Instagram and TikTok, including the use of available advertising services. The use of supporting tools such as Canva or Adobe was also reported for creating product content. Moreover, students have anticipated security measures, such as payment verification and customer data protection.</p> <p>Strategic knowledge is applied by building a consistent brand identity across the various platforms used, managing customer purchasing preferences, and formulating marketing strategies based on available data. Students also demonstrate an understanding of algorithmic trend changes, which informs their promotional strategies. In addition, they conduct evaluations of their business models to make improvements and adjust to consumer needs.</p> <p>The understanding of digital values is reflected in the internalization of honesty and transparency. This is considered essential, as student entrepreneurs prioritize business sustainability, ensuring that the products displayed are accurate and capable of satisfying consumers. Digital marketing ethics are also emphasized by consistently safeguarding the privacy of customers, competitors, and the public at large.</p>
2	Digital Capability Skills	<p>Operational digital skills are demonstrated through the direct utilization of e-commerce platforms to manage business activities and sales. Skills in creating promotional content are consistently applied by using supporting tools (such as Canva or Adobe) to deliver a more professional appearance. These also include the ability to analyze purchasing data, visitor data, and insights.</p> <p>Digital data management skills are reflected in the handling of customer data, where the knowledge acquired is used to predict product demand and overall consumer demand trends. The ability to apply digital strategies is shown by aligning the platforms or applications used in business operations with the designed business model strategy.</p>
3	Innovation	<p>Product or service innovation is carried out by student entrepreneurs through the active modification of products or services based on customer analyses communicated via digital platforms, whether through feedback, suggestions, or buyer testimonials. The development of new features is also undertaken with the aim of enhancing consumer experience, such as digital payment services, bonuses, or loyalty programs. Additionally, the creation of new product variants is frequently pursued to align with consumer preferences, trends, and needs.</p> <p>Product or service innovation is carried out by student entrepreneurs through the active modification of products or services based on customer analyses provided via digital platforms, whether through feedback, suggestions, or buyer testimonials. The development of new features is also undertaken to enhance consumer experience, such as digital payment services, bonuses, or loyalty programs. Additionally, the creation of new product variants is frequently pursued to align with consumer preferences, trends, and needs.</p> <p>Business model innovation is regarded as essential, as student entrepreneurs are aware of the rapid pace of change and recognize that they cannot rely indefinitely on outdated models. Examples of business model innovations</p>

		include the adoption of cash-on-delivery (COD) systems, dropshipping, reseller arrangements, or consignment sales. These business model innovations are consistently grounded in the principles of prudence, honesty, and transparency. Process innovation in the digital context is reflected in the development of creative digital marketing strategies, such as creating viral challenges, engaging in collaborations, and working with digital creators. In addition, leveraging available data enables students to analyze new market segments and experiment with the presentation of uploaded content.
4	Adaptive Capability	Technological adaptation is carried out rapidly by students, which is considered appropriate given their age and ability to quickly learn new things, supported by a focused learning environment and entrepreneurial activities. Another form of adaptation occurs in response to market changes, where students are able to anticipate emerging trends by observing shifts in consumer data and interests. Intense competition is also addressed by identifying new market opportunities, utilizing advertisements, offering bonuses, and producing more tailored content, as noted by LL and several other research participants. Adaptation to ever-changing economic conditions is demonstrated through the enhancement of entrepreneurial skills by engaging with mentors and participating in digital training programs. In addition, students join online communities and leverage digital knowledge for business improvement and sustainability. The integration of local values also plays a role in adaptation, such as instilling perseverance, effort, and trust in divine providence (ikhtiar and tawakkal). Moreover, the values of thought promoted by Hadratus Syaikh KH Hasyim Asy'ari, acquired during classroom learning, have had a meaningful influence on entrepreneurial activities.

Source: Analyzed by the researcher, 2025

Based on the table above, it can be concluded that the description of digital capability can be analyzed using four main indicators: knowledge, application skills, innovation, and adaptive capacity. The knowledge component can be elaborated into knowledge of technology use, strategic knowledge, business model knowledge, and knowledge of value implementation. Application skills can be described through operational digital skills, digital data management skills, and digital strategy skills. Innovation also forms an integral part of digital capability, consisting of product or service innovation, business process innovation, and digital process innovation. Finally, adaptive capacity is reflected in the ability to adapt to technological changes and the ability to adapt to changing economic conditions (Siahaan & Tan, 2022).

### **Description of Entrepreneurial Resilience among Student Entrepreneurs at the Faculty of Economics, UNHAS**

Entrepreneurial resilience can be described across several categories derived from the experiences and narratives of the research participants. The entrepreneurial resilience of students is at a fairly good level, with the analysis results outlined as follows:

**Table 2:** Description of Entrepreneurial Resilience

No	Category	Description
1	The Ability to Recover from Failure	The ability to refocus on running a business after experiencing failure can be effectively managed by student entrepreneurs. The forms of failure they encountered varied, ranging from difficulties in transitioning from

		<p>an online business model to opening an offline store—requiring adjustments and changes in areas such as product availability, payment systems, and sales mechanisms. This challenge was experienced by nearly all research participants, including LL, DP, IN, GH, and RZ. Other failures involved the launch of new products, not all of which received positive consumer responses. Failures were also observed in employee or human resource management, financial management, and promotional systems.</p> <p>The ability to correct mistakes can also be described within this category. It is reflected in the preparation of evaluations of past errors, including mismatches between capital and profit, assessments of product quality, and evaluations of customer service, whether conducted through WhatsApp, marketplaces, or social media platforms.</p>
2	Stress Management	<p>In this regard, stress management is demonstrated through the ability to remain calm and consistently productive despite internal and external turbulence within the business. Respondent IN also emphasized that maintaining good productivity is essential to ensure the continuous delivery of high-quality and consistent products. Various strategies were employed for stress management, including discussions with mentors, effective time management, and reflection on leadership capabilities exercised thus far. Stress management was also evident in efforts to maintain balance between academic life, business activities, and family responsibilities.</p>
3	Perseverance in Entrepreneurship	<p>Perseverance in entrepreneurship is demonstrated through the ability to seek solutions when obstacles arise in business development. These obstacles vary; for instance, respondent LL noted that the most common challenge is maintaining consistency in managing social media to ensure the continuity of its content delivery. Another participant, KF, highlighted that the primary challenge lies in adjusting bargaining positions and aligning real products with those often compared on other social media platforms. Another form of perseverance is reflected in maintaining consistency to keep the business running. As GH stated, the current economic conditions require the team to remain solid and consistent in operating the business, including expanding into new market segments, particularly by leveraging social media.</p>

Source: Analyzed by the researcher, 2025

Based on the table above, the description of entrepreneurial resilience refers to several key indicators. The ability to recover from failure is demonstrated through maintaining focus on business activities during setbacks, developing corrective strategies, and showing perseverance. The stress management category is reflected in the capacity to remain calm and productive under pressure, adopt effective strategies to manage stress, and strive to maintain balance between business and personal life. The final category, perseverance in entrepreneurship, is characterized by the ability to find solutions to problems and obstacles that arise, maintaining consistency in running the business, and demonstrating commitment to endure despite internal or external turbulence within the enterprise (Abu-Rumman et al., 2021)

## **Discussion**

### **Digital Capability as a Foundation for Adaptation among Student Entrepreneurs**

Based on the research findings presented above, digital capability can serve as a foundation for building resilience and adapting to digital technological changes for business development. The results also indicate that mastery of digital technologies for business, ranging from social media to e-commerce, can significantly enhance the adaptive capacity of student entrepreneurs in responding to ongoing disruptions. Student entrepreneurs who are able to leverage digital technologies for business advancement possess greater opportunities to better understand the market through data acquisition, algorithm analysis, and consumer demand fluctuations (Yuan & Pan, 2023).

Adaptation to technology must be accompanied by strong digital literacy. As shown in the findings above, components such as knowledge, digital technology skills, innovation, and adaptive capacity provide student entrepreneurs with valuable insights for managing their businesses. Another important finding highlights the uniqueness expressed by student entrepreneurs in applying pesantren values, which serve as guiding principles to minimize the potential negative impacts of digital technology implementation. The internalization of pesantren values and the teachings of KH Hadratus Syaikh KH Hasyim Asy'ari are, to some extent, integrated into business management. These include aspects related to entrepreneurial ethics, honesty, perseverance, and upholding proper conduct (adab).

### **Integration of Digital Capability in Entrepreneurial Resilience**

The integration of digital capability into entrepreneurial resilience can form a strategic framework that enables students not only to sustain their businesses but also to grow and withstand both economic and technological disruptions affecting their ventures. Digital capability can serve as a driver in strengthening entrepreneurial resilience, beginning with the ability to recover from failure, the capacity for adaptation, and innovation in entrepreneurial activities.

Entrepreneurial resilience provides both a mental foundation and a strategic basis that enhance the ability to leverage digital technology amid uncertainty. Synergy across these aspects contributes to strengthening digital capability, which in turn reinforces entrepreneurial resilience. Conversely, a high level of entrepreneurial resilience also creates opportunities for the further development of digital capability. To achieve this integration, several stages are required: first, through digital capability knowledge, operational skills, innovation, and adaptability; followed by the development of entrepreneurial resilience characterized by the ability to recover from failure, stress management, and perseverance in entrepreneurship. The implications of this integration emphasize the importance of strong literacy in digital capability and entrepreneurship education. Furthermore, the integration of pesantren values and the teachings of Hadratus Syaikh KH Hasyim Asy'ari into learning serves as valuable guidance for student entrepreneurs to balance general knowledge while becoming resilient and value-driven entrepreneurs.

## Conclusion and Suggestion

Digital capability has been proven to serve as a critical foundation in shaping the resilience and adaptability of student entrepreneurs. Mastery of digital technologies through e-commerce, social media, and data analysis enhances students' ability to respond to market disruptions, identify consumer trends, and innovate in business management. The findings indicate that digital literacy—encompassing knowledge, skills, innovation, and adaptability—constitutes the key to entrepreneurial success in the digital era. The integration of digital capability and entrepreneurial resilience is reinforced by the distinctive pesantren values of UNHASY, such as honesty, perseverance, and collaboration. These values not only strengthen the relationship between digital capability and entrepreneurial resilience but also provide guidance for student entrepreneurs in minimizing the negative impacts of technology. Entrepreneurship education that integrates digital literacy, resilience training, and the internalization of local values represents a strategic solution for cultivating entrepreneurs who are resilient, adaptive, and value-driven.

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