




Design Thinking as a Business Model for Empowering Creative Entrepreneurs in the Digital Era

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Article Info

Article history:

Submission June 03, 2025

Revised August 28, 2025

Accepted September 09, 2025

Published September 26, 2025

Keywords:

Business Model
Creativepreneurs
Startuppreneurs
Digital Era



ABSTRACT

In the rapidly evolving digital economy, creativepreneurs individuals who transform artistic and creative ideas into marketable ventures face unique challenges in sustaining innovation, meeting user needs, and creating scalable value. Traditional business models often fall short in supporting the fluid, iterative, and user centric nature of creative industries. **This study explores** the integration of design thinking as a strategic business model to empower creativepreneurs in the digital era. The research aims to investigate how the principles of empathy, ideation, prototyping, and testing within design thinking can foster innovation, user engagement, and business growth among creative-driven entrepreneurs. **A qualitative research** methodology was adopted, employing in-depth interviews and case studies involving 25 selected creativepreneurs from various digital based industries, such as digital art, fashion, content creation, and digital product design. Data were analyzed using thematic analysis to identify common patterns and insights. **The findings indicate** that the application of design thinking significantly enhances creativepreneurs ability to identify user pain points, develop user centered solutions, and adapt quickly to market feedback. Moreover, design thinking promotes continuous innovation and resilience, two critical traits for success in the digital landscape. **In conclusion**, design thinking is not only a creative problem solving tool but also a robust business model that aligns with the values and needs of modern creativepreneurs. The study recommends incorporating design thinking frameworks into entrepreneurship education and incubator programs to support creative economy growth in the digital age.

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DOI: <https://doi.org/10.33050/sabda.v4i2.805>

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1. INTRODUCTION

In the evolving landscape of the 21st century economy, creativity and innovation have emerged as core drivers of growth. With the advancement of digital technologies, the barriers to entry for creative work have diminished, leading to the rise of creativepreneurs entrepreneurs who build ventures from artistic, cultural, or design based ideas [1]. These individuals, empowered by digital platforms, are reshaping traditional business paradigms by turning passion and creativity into economic value [2]. From independent artists selling NFTs, to digital fashion designers and content creators monetizing their personal brands, creativepreneurs are becoming an increasingly influential force in the global creative economy.

Journal homepage: <https://journal.pandawan.id/sabda/>

Despite the digital boom and increased access to online tools, creativepreneurs often encounter substantial challenges in sustaining and scaling their ventures [3]. Many lack formal business training and struggle to balance creative freedom with strategic planning. Furthermore, while they may excel in ideation and artistic execution, they frequently encounter obstacles in understanding user needs, validating their offerings, and adapting to rapidly changing markets. This imbalance between creative strength and business acumen often leads to stagnation or premature failure of promising creative ventures [4]. Compounding these challenges is the fact that traditional business models characterized by linear processes, rigid structures, and profit driven logic tend to clash with the fluid, exploratory, and empathetic nature of creative work. These models do not adequately support the iterative experimentation and user centered innovation that are critical to creativepreneurial success, especially in digital domains where user behavior, design trends, and platforms change at high speed.

In recent years, design thinking has emerged as a promising alternative approach. Rooted in fields such as architecture, engineering, and product design, design thinking is a human centered, iterative problem-solving methodology that emphasizes empathy, ideation, prototyping, and testing. It encourages entrepreneurs to deeply understand user pain points and co-create meaningful, innovative solutions [5]. While design thinking has been widely adopted in corporate innovation and service design, its potential as a business model for creative entrepreneurship remains underutilized and under researched. Several existing studies explore design thinking in the context of educational institutions, large firms, or innovation hubs. However, limited scholarly work has examined how design thinking can be embedded directly into the business strategies of independent creativepreneurs particularly those operating in digital ecosystems [6]. This presents a significant research gap, especially given the growing need for agile, user driven business models in today's fast paced digital environment [7].

Furthermore, as creative entrepreneurs often operate in highly personalized and emotionally invested domains, they require models that not only support profitability but also align with their values, visions, and identities. Design thinking, with its emphasis on empathy, experimentation, and continuous learning, holds strong potential to bridge this gap [8]. By framing design thinking not just as a process, but as a strategic business model, this research seeks to offer a new lens through which creativepreneurs can structure, sustain, and scale their ventures in the digital age. Therefore, this study aims to explore how design thinking principles can be leveraged as a business model to empower creativepreneurs enhancing their capacity for innovation, deepening user connection, and ensuring adaptability in the face of market shifts [9]. By addressing this research gap, the study hopes to contribute to the broader discourse on digital entrepreneurship and offer practical frameworks for creative individuals seeking to thrive in an increasingly complex and competitive economy.

2. LITERATURE REVIEW

2.1. Creativepreneurship in the Digital Era

Creativepreneurship, which involves transforming creative ideas into entrepreneurial ventures, has gained significant momentum alongside the rapid expansion of digital platforms. Digitalization has provided creativepreneurs with unprecedented opportunities to access global markets, build personal brands, and accelerate product and service innovation [10]. However, alongside these opportunities lie complex challenges, including the importance of sustainable business models for creative startups that can dynamically adapt to technological changes and evolving market trends. Adaptability and continuous innovation are critical for creative businesses to not only survive but also achieve exponential growth, aligning with SDG 8 (Decent Work and Economic Growth) and SDG 9 (Industry, Innovation, and Infrastructure).

Innovation and cross-disciplinary collaboration are effective strategies for fostering creative business growth. They argue that relying solely on individual creativity is insufficient; instead, a supportive ecosystem that facilitates open exchange of ideas, resources, and expertise is essential. This reflects the spirit of SDG 17 (Partnerships for the Goals), which emphasizes the importance of collaboration in achieving sustainable development. Nevertheless, many creativepreneurs still face resource constraints including capital, networks, and deep business knowledge that can hinder their business development.

Together, these studies provide a comprehensive picture of the realities faced by creativepreneurs in the digital age, positioning them at the intersection of technological innovation and the need for sustainable business practices. This intersection demands new approaches to managing and developing creative enterprises, in line with the goals of sustainable economic empowerment, innovation-driven growth, and inclusive collaboration promoted through the SDGs framework [11].

2.2. Design Thinking Principles and Applications

Design thinking is recognized as a human centered, iterative problem solving approach that encompasses stages such as empathy, problem definition, ideation, prototyping, and testing. This approach liberates creativity while ensuring solutions are relevant and user focused [12]. The implementation of online design thinking based learning significantly improves entrepreneurial intentions among vocational college students. This learning method not only increases student satisfaction but also strengthens their mindset and readiness to navigate the dynamic and uncertain entrepreneurial environment. The study suggests that design thinking equips students with essential innovation and problem-solving skills [13]. Competencies through design thinking helps students recognize market opportunities, manage risks, and sustain innovation. The human centered nature of this approach redefines entrepreneurship as a creative process oriented toward delivering genuine value to the market [14].

2.3. Design Thinking: A Business Model Framework

Beyond product innovation, design thinking is increasingly adopted as a framework for business model innovation. Key themes include co-creation with stakeholders and the utilization of design tools such as customer journey mapping and value proposition canvases to build iterative, market responsive business models [15]. Methodology with design thinking, proposing that integrating both approaches enhances innovation and entrepreneurial success. Design thinking facilitates idea exploration and problem identification, while lean startup emphasizes rapid validation and scaling [16]. This synergy enables startups and creative enterprises to reduce failure risks while accelerating the development of market-fit products and services [14]. Employing design thinking as a business model framework provides creativepreneurs with a solid foundation to not only innovate products but also develop sustainable, adaptive business strategies within a rapidly changing business environment [17].

2.4. Integration of AI and Design Thinking in Creative Entrepreneurship

Advances in Artificial Intelligence (AI) introduce a new dimension to the creative process and design thinking applications. UI/UX designers perceptions of AI as a creative partner during divergent thinking phases. They found that AI enhances creativity and efficiency by supporting research, idea generation, and prototyping. AI enables designers to push creative boundaries by leveraging intelligent algorithms capable of analyzing large datasets and identifying design trends [18]. AI usage can lead to increased design fixation and reduced originality, indicating that AI must be used judiciously with appropriate oversight to avoid hindering human creativity [19]. On generative AI's influence on entrepreneurship, highlighting themes of digital transformation and sustainable innovation. Their findings suggest AI accelerates creative processes and opens new opportunities for developing more personalized and efficient products and services.

2.5. Research Gap and Contribution

Although existing literature highlights the benefits of design thinking in entrepreneurship and its promising potential when combined with digital technologies, there remains a notable gap in understanding its specific application as a business model framework tailored to empower creativepreneurs in the digital era [20]. Most studies focus on product development or entrepreneurship education broadly, without deeply addressing the unique challenges and needs of creative entrepreneurs operating within digital platforms. Furthermore, the integration of artistic creativity and business logic within a design thinking based business model as a means to empower creativepreneurs has been underexplored [21]. This study aims to fill this gap by investigating how design thinking can be strategically employed to foster innovation, enhance user engagement, and drive sustainable business growth in the digital creative economy [22].

3. METHOD

3.1. Research Design

This study adopts an exploratory qualitative research design to investigate the application of design thinking as a business model framework for empowering creativepreneurs in the digital era [23]. The choice of qualitative research is grounded in the need to explore complex, subjective phenomena such as creativity, innovation, and user engagement that cannot be fully captured through numerical data alone.

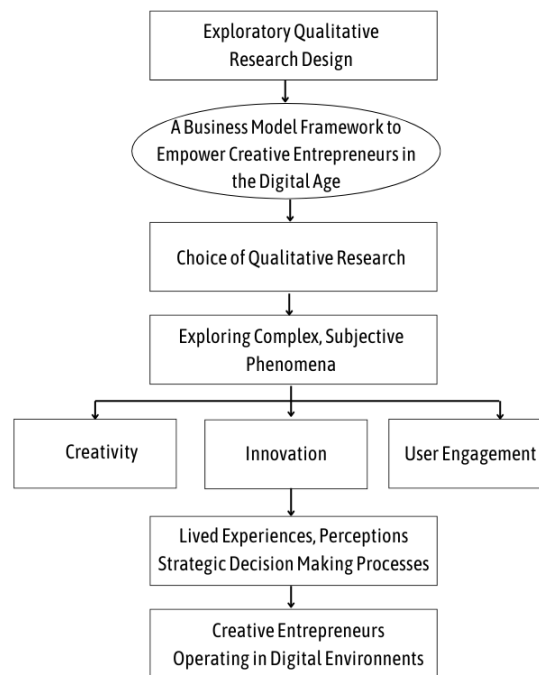


Figure 1. Research Model

As show in Figure 1 Qualitative research enables the researcher to access the lived experiences, perceptions, and strategic decision making processes of creative entrepreneurs operating in digital environments, such as digital art, fashion technology, content creation, and digital product design [24]. By adopting an exploratory design, the research seeks to uncover new insights, generate rich descriptions, and build a grounded understanding of how design thinking principles are interpreted, adapted, and implemented within creative digital business contexts [25]. This is especially relevant given the limited number of prior studies that explore design thinking as a holistic business model in the context of creative digital entrepreneurship [26].

3.2. Research Approach

The study follows a constructivist paradigm, which posits that knowledge is co-constructed through interaction between the researcher and participants [27]. A qualitative exploratory approach is particularly suitable for addressing "how" and "why" questions such as how design thinking is being employed, why creativepreneurs choose to adopt it, and what contextual factors influence its effectiveness. This approach facilitates the discovery of patterns and relationships that may not be immediately apparent and allows for flexibility in uncovering emergent themes [28].

3.3. Participant Selection

Participants are selected using a purposive sampling technique, focusing on individuals who meet the following criteria:

- Actively engaged in creative entrepreneurial ventures within digital-based industries.
- Demonstrate a practical understanding or application of design thinking principles.
- Have experience in developing innovative products, services, or business models within the creative digital economy.

Demographic variation (in terms of gender, business size, years of experience, and geographical context) is considered to ensure that findings reflect a broad spectrum of perspectives and experiences.

3.4. Data Collection Methods

- In-depth semi structured interviews: Interviews are conducted using a flexible interview guide to allow participants to share their stories in their own words, while ensuring that core themes such as design thinking awareness, implementation, challenges, and perceived outcomes are consistently addressed. Interviews last between 45 to 60 minutes and are conducted either in person or via video conferencing platforms, depending on participants availability.
- Case studies: Complementary case studies are used to provide detailed, context rich descriptions of how design thinking has been integrated into specific creative business practices. Each case includes background information about the business, its innovation process, design thinking application, and impact on user experience and business outcomes. These case studies support triangulation of data sources, increasing the credibility of the findings.

3.5. Data Analysis

Thematic analysis is employed to systematically code and interpret the data, extracting meaningful themes and patterns related to innovation, user engagement, and business sustainability driven by design thinking [29].

4. RESULTS AND DISCUSSION

As show in Figure 2, this section presents a comprehensive analysis of the findings obtained from in-depth interviews and case studies involving 25 creativepreneurs working in various digital sectors, including fashion design, digital art, content creation, and digital product development. These findings highlight the key strategies and practices adopted by creative entrepreneurs to remain competitive and innovative in an increasingly dynamic digital economy [30].

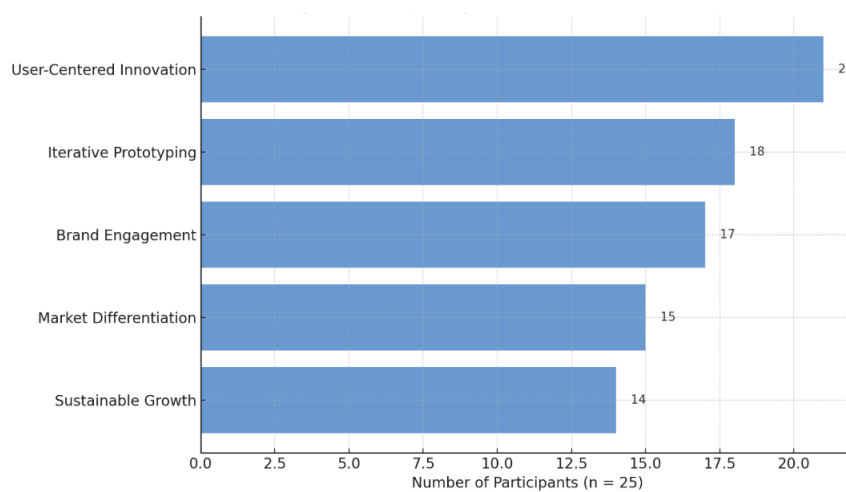


Figure 2. Shows the flowchart of the AI-based models and experimental methods applied

The horizontal bar chart illustrates the frequency with which participants mentioned specific strategic themes in their responses. The most prominent theme identified is User Centered Innovation, cited by 21 out of 25 participants. This indicates a strong emphasis among creativepreneurs on understanding and addressing user needs, preferences, and feedback throughout the innovation process. It underscores the critical role of empathy and human-centered design in developing digital products that are not only functional but also emotionally resonant and market relevant.

A total of 25 creativepreneurs from sectors such as digital illustration, fashion design, multimedia content production, UI/UX design, and digital crafts are included, as show in Table 1. This sample size provides enough diversity and depth for thematic analysis, while remaining manageable for in-depth qualitative exploration.

Table 1. Respondent Profile

Category	Details
Total Respondents	25 Creativepreneurs
Industry Sectors	- Digital Illustration (5) - Fashion Design (5) - Multimedia Content Production (5) - UI/UX Design (5) - Digital Crafts (5)
Gender	- Male: 13 - Female: 12
Business Size	- Micro-enterprises: 12 - Small enterprises: 9 - Medium enterprises: 4
Years of Experience	- Less than 2 years: 6 - 2 to 5 years: 12 - More than 5 years: 7
Geographical Context	- Urban: 17 - Suburban: 6 - Rural: 2
Data Collection Method	- In-depth Interviews - Case Studies
Analysis Approach	Thematic Analysis

The second most mentioned theme is Iterative Prototyping (18 participants), reflecting agile and flexible development practices. By refining ideas and testing prototypes, creativepreneurs adapt quickly, reduce risks, and improve quality. Brand Engagement (17 participants) highlights building authentic connections, trust, and loyalty through brand identity and storytelling. Market Differentiation (15 participants) emphasizes creating unique value propositions via innovation, niche targeting, visual identity, or customer experience. Sustainable Growth (14 participants) underscores balancing profitability with social and environmental responsibility as consumers grow more conscious of ethical issues. Overall, these insights show that design thinking helps creativepreneurs innovate, meet market demands, enhance user experiences, and build sustainable ventures, forming a framework for future research on design-driven entrepreneurial strategies in digital contexts.

4.1. User Centered Innovation

User Centered Innovation was the most dominant theme, highlighted by 21 out of 25 participants. This reflects a deep commitment among digital creativepreneurs to align their products and services with the evolving needs, expectations, and experiences of their users. The “Empathize” and “Define” stages of the Design Thinking framework served as critical phases, enabling entrepreneurs to explore users’ underlying motivations, frustrations, and behavioral patterns before any solution was conceptualized.

Table 2. Tools and Methods Used by Creativepreneurs for User-Centered Research

Method/Tool Used	Frequency of Use (out of 25)	Purpose/Outcome
Digital Feedback Forms	16	Gather structured input on features and satisfaction
Social Media Polls (e.g., Instagram)	13	Quick validation of ideas or features with broad audience
Open-ended Comment Sections	8	Capture spontaneous user sentiments
User Interviews	10	Deep dive into user motivations and behaviors

Based on the Table 2, participants noted a significant shift in mindset from relying on personal intuition or assumptions (“creating based on gut feeling”) to making design decisions rooted in real evidence (“designing

based on data”). This evidence was often gathered through a combination of low-cost and interactive tools, such as digital feedback forms, social media polls (Instagram stories), open-ended comment sections, and targeted user interviews. These methods allowed creativepreneurs to develop empathy maps and user personas that guided more strategic decision making and product development.

Importantly, user centeredness was not just a phase but an ongoing principle. Entrepreneurs who practiced this approach reported not only higher product relevance but also increased customer retention due to deeper emotional connections formed through the iterative engagement process.

4.2. Iterative Prototyping and Testing

A significant 18 participants highlighted the iterative nature of design thinking particularly the Ideate, Prototype, and Test stages as critical for product refinement. Rather than launching polished products all at once, participants embraced experimentation and feedback loops. The use of rapid prototyping tools (low-fidelity wireframes, mockups, and MVPs) enabled quick user feedback loops. Participants acknowledged that early failures and revisions were essential learning points that prevented costly errors later in development. In this sense, design thinking was not merely a methodology but a cultural shift toward “failing fast and learning faster”. This iterative strategy also fostered team collaboration and cross-functional innovation, as it often involved continuous dialogue among designers, developers, marketers, and users. As a result, the final products were more user-aligned and market ready.

4.3. Enhanced Brand Engagement and Loyalty

17 creativepreneurs reported that applying design thinking led to greater user engagement, particularly by involving users in co-creation and feedback-based refinement. Customers felt heard, valued, and invested in the creative journey, which improved brand loyalty. By incorporating user feedback into brand touchpoints (such as product aesthetics, messaging, user interface, and social media presence), businesses were able to cultivate authenticity and inclusivity. This resulted in customers feeling acknowledged, respected, and valued leading to higher brand affinity and repeat interaction. Some participants also leveraged storytelling and participatory design as tools to humanize the brand experience. Feedback based refinement processes ensured that customer voices were genuinely integrated, making users feel like active stakeholders in the brand’s journey, which in turn reinforced long-term loyalty and advocacy.

4.4. Market Differentiation through Creative Strategy

15 participants expressed that design thinking enabled them to develop differentiated value propositions in saturated digital markets. This was especially important in visual-driven industries, where competition is intense. This differentiation was especially critical in visual-dominated industries such as digital content, fashion, and branding where consumer attention spans are short and competition is intense. Participants often cited the importance of aesthetic innovation, personalized user experience, and storytelling-driven branding as key differentiators. Design thinking empowered entrepreneurs to move beyond generic offerings and instead deliver niche solutions tailored to specific user groups. These strategic choices helped them capture unique market segments and stand out among more conventional competitors.

4.5. Sustainable Growth and Business Adaptability

Finally, 14 participants linked design thinking to their long-term business adaptability and sustainability. This included adapting to changes in consumer behavior, platform algorithms, and market disruptions such as the COVID-19 pandemic. Many participants described how the pandemic (COVID-19) forced them to rethink their operations, pivot their offerings, and adapt to changes in consumer behavior, digital platforms, and algorithm-driven content visibility. Those who had already adopted design thinking were more agile and better prepared to experiment, respond, and recover. Furthermore, sustainability was not only interpreted as environmental responsibility but also as business resilience. This included the ability to scale mindfully, preserve brand integrity over time, and maintain user relevance despite ongoing market disruption.

5. MANAGERIAL IMPLICATIONS

The findings of this study provide several important implications for managers, business leaders, and policymakers seeking to empower creativepreneurs in the digital era. First, integrating design thinking as a

business model offers managers a structured yet flexible approach to addressing uncertainty, fostering innovation, and enhancing user centric strategies in highly dynamic digital markets. Managers should adopt design thinking not merely as a problem-solving tool, but as a strategic framework that encourages empathy driven decision making, experimentation, and iterative development processes. Second, by embracing design thinking, managers can create more sustainable business models that prioritize customer experience and engagement.

This has practical relevance for digital creative industries such as content creation, fashion technology, and digital product design, where consumer preferences evolve rapidly. Leaders should institutionalize a culture of creativity and collaboration, enabling multidisciplinary teams to co-create solutions with stakeholders. Third, design thinking empowers managers to identify new value propositions and revenue streams by aligning innovation with digital transformation. This requires a mindset shift from traditional managerial control toward adaptive leadership, where learning from failures and iterating quickly become core strategies. Finally, the study highlights the importance of investing in training programs and digital tools that facilitate the adoption of design thinking in entrepreneurial ecosystems. Policymakers and incubators should support capacity building and knowledge-sharing platforms to strengthen the competitiveness of creativepreneurs and ensure their resilience in navigating the challenges of the digital economy.

6. CONCLUSION


This study aimed to investigate the impact of innovation strategies on business growth among startupreneurs, particularly in the digital industry. The results showed a significant positive correlation between the adoption of innovation strategies such as product, process, and business model innovation—and business growth. Specifically, the implementation of these strategies led to increased revenue, expanded market share, and enhanced customer retention. These findings underscore the critical role of innovation in driving competitive advantage, enabling startupreneurs to stay ahead in a rapidly evolving digital marketplace. By actively innovating across various business aspects, startupreneurs are better positioned to navigate challenges and seize emerging opportunities, ensuring long-term success.


Despite the valuable insights provided by this study, there are several limitations that should be considered. The research involved only 100 respondents, all from different sectors within the digital industry, which may limit the generalizability of the findings to the broader entrepreneurial ecosystem. Furthermore, the study employed a quantitative approach, relying on numerical data analysis to measure the impact of innovation strategies. This approach, while effective in identifying trends, lacks the depth that qualitative methods such as in-depth interviews or case studies could provide. Qualitative insights could uncover the underlying factors, challenges, and decision-making processes that influence the success or failure of innovation strategies at the individual or company level.

For future research, it is recommended to expand the sample size and include a more diverse set of respondents from various industries to obtain a more comprehensive understanding of how innovation strategies impact business growth across different sectors. Additionally, incorporating qualitative research methods, such as interviews with startupreneurs or industry experts, could provide a richer, more nuanced view of the innovation process. Focusing on specific industry sectors in future studies could also highlight sector-specific challenges and opportunities, offering tailored recommendations for startupreneurs. This approach would provide valuable, context-specific insights, helping to refine innovation strategies for different types of businesses in diverse environments.

7. DECLARATIONS

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7.2. Author Contributions

Conceptualization: DA; Methodology: KS; Software: MY; Validation: DA and KS; Formal Analysis: MY; Investigation: MY; Resources: KS; Data Curation: DA; Writing Original Draft Preparation: MY and KS;

Writing Review and Editing: KS and DA; Visualization: MY; All authors, DA, KS and MY, have read and agreed to the published version of the manuscript.

7.3. Data Availability Statement

The data presented in this study are available on request from the corresponding author.

7.4. Funding

The authors received no financial support for the research, authorship, and/or publication of this article.

7.5. Declaration of Conflicting Interest

The authors declare that they have no conflicts of interest, known competing financial interests, or personal relationships that could have influenced the work reported in this paper.

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