

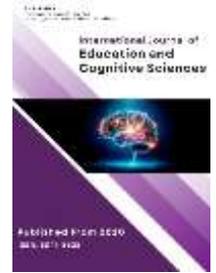


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Phenomenological Explanation of the Curriculum of Successful Startups in Iran

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ABSTRACT

Purpose: The present study aimed to clarify a structural equation model of health anxiety based on metacognitive beliefs, with anxiety sensitivity serving as a mediator among individuals with obsessive-compulsive symptoms.

Methods and Materials: This descriptive-correlational research utilized structural equation modeling. The statistical population consisted of all individuals exhibiting obsessive-compulsive symptoms who attended counseling centers, psychological clinics, and psychiatric clinics in Isfahan during 2024–2025. A convenience sample of 480 participants was selected. The research instruments included the Short Health Anxiety Inventory (SHAI) developed by Salkovskis and Warwick, the Metacognitions Questionnaire-30 (MCQ-30) by Wells and Cartwright-Hatton, and the Anxiety Sensitivity Index (ASI) by Floyd et al. Data analysis was performed using SPSS and AMOS software, and structural equation modeling with bootstrapping was applied to test the hypotheses.

Findings: The findings revealed that all direct paths among the study variables were statistically significant at $p < 0.05$. Anxiety sensitivity significantly mediated the relationship between metacognitive beliefs and health anxiety. The bootstrap analysis indicated that the indirect effect of metacognitive beliefs on health anxiety was 0.141, which was significant at the 0.05 level.

Conclusion: The results demonstrated that dysfunctional metacognitive beliefs contribute to the development of health anxiety by heightening anxiety sensitivity. Consequently, modifying maladaptive metacognitive beliefs and implementing interventions aimed at reducing anxiety sensitivity—such as interoceptive exposure and symptom reappraisal—can play a vital role in managing and alleviating health anxiety among individuals with obsessive-compulsive symptoms.

Keywords: Phenomenology, Curriculum, Startup

1. Introduction

In recent years, the entrepreneurial ecosystem in Iran and worldwide has undergone rapid and multidimensional transformations, particularly with the rise of knowledge-based economies and digital entrepreneurship. The emergence of startups as dynamic drivers of economic innovation and job creation has positioned them as critical agents in both developed and developing economies (Azeem & Khanna, 2024). Startups play an essential role in converting ideas into marketable products and services, accelerating technological progress, and reshaping traditional business structures (Aulet, 2024). However, despite their innovative potential, most startups face significant challenges in sustainability, scalability, and adaptability to environmental changes, highlighting the importance of structured learning processes and effective curriculum frameworks that foster entrepreneurial competence (Taqvifard et al., 2025).

The global literature on entrepreneurship emphasizes that success in startup ecosystems is closely tied to systematic entrepreneurial education and experiential learning models (Tiberius & Weyland, 2024). Entrepreneurship education aims not only to develop technical and managerial competencies but also to cultivate creative, adaptive, and opportunity-oriented thinking (Schultz, 2022). This process requires integrating entrepreneurship into formal curricula and applying real-world learning methods such as project-based and problem-based learning (Yazıcı, 2020). However, in many contexts—including Iran—entrepreneurship learning remains fragmented, emphasizing isolated skills rather than a holistic understanding of innovation processes (Fathi Vajarghah, 2018).

A key challenge in entrepreneurship education is bridging the gap between theoretical instruction and practical startup development. As (Popov, 2022) notes, the paradigm shift toward embedding entrepreneurship within university curricula rather than extracurricular incubator activities has improved continuity between academic learning and business application. Universities now serve as incubators where students transform ideas into viable ventures through structured mentorship and research-driven processes. Similarly, (Queen et al., 2024) emphasizes that designing digital business programs using Lean Startup methodology allows learners to engage in iterative innovation cycles that mirror real-world entrepreneurial dynamics. By applying rapid prototyping, testing, and feedback loops, the

curriculum becomes a living laboratory for innovation rather than a static educational program.

In the Iranian context, the move toward applied entrepreneurship education has faced unique institutional and cultural barriers. Traditional educational systems have often prioritized content reproduction over experiential problem-solving, leaving little room for creativity and business modeling. However, studies such as (Taheri Zadeh & Shabani, 2019) and (Fathi Vajarghah, 2018) argue that localization of curricula and incorporation of pluralistic learning paradigms can enhance relevance and responsiveness to contextual needs. Localized curriculum frameworks are particularly crucial for startups operating in emerging markets, where regulatory, financial, and infrastructural conditions differ substantially from those of advanced economies.

The sustainability of startups is not only a function of capital or innovation but also of learning orientation and adaptive capacity. (Azeem & Khanna, 2024) provides evidence that survival in volatile markets depends heavily on a startup's ability to institutionalize learning through structured knowledge acquisition and reflective practice. This finding aligns with (Chahreh et al., 2024), who developed a performance improvement model for startup accelerators emphasizing learning feedback, mentoring, and curriculum-based capacity building. Such models integrate strategic management education, continuous evaluation, and dynamic curriculum adjustment, thereby aligning startup learning with entrepreneurial performance outcomes.

Entrepreneurial readiness, as highlighted by (Bahaw et al., 2025), is another critical determinant of startup success. Using latent profile analysis, their study identified distinct typologies of university students based on entrepreneurial readiness and psychological orientation. This demonstrates that educational programs must go beyond mere technical training to encompass self-efficacy, opportunity recognition, and resilience under uncertainty. Accordingly, entrepreneurship curricula should foster both individual competencies and collective capacities for innovation.

Furthermore, the digital transformation era has fundamentally redefined how startups operate, compete, and learn. The integration of artificial intelligence (AI), blockchain, and data analytics into business operations requires entrepreneurs to possess a complex combination of technological and strategic literacy (Qasim & Kharbat, 2020). As (Joel et al., 2024) notes, startups navigating digital transformation must adopt adaptive learning strategies and innovative organizational cultures to thrive amid

technological disruption. This shift necessitates an entrepreneurial curriculum that not only transfers knowledge but also cultivates agility, continuous learning, and systemic thinking. In this regard, the work of (Jamshidi Naqani, 2024) on machine learning algorithms for predicting startup success underscores the growing convergence between technology management and entrepreneurship education. The integration of data-driven methods into entrepreneurial curricula enhances decision-making precision and allows for predictive modeling of market success probabilities.

From a curriculum theory perspective, the startup learning environment can be understood as a “living curriculum,” one that continuously evolves through feedback and experiential interaction (Fathi Vajarghah, 2018). This aligns with the third wave of curriculum studies in Iran, which advocates pluralism and contextual adaptation rather than uniform prescriptive models. In this framework, the curriculum becomes a dynamic network of meanings, experiences, and practices through which entrepreneurs construct knowledge, reflect on failure, and develop adaptive expertise. (Serhan & Yannou-Lebris, 2020) extends this perspective by linking sustainable development goals (SDGs) to educational innovation, arguing that entrepreneurship curricula must integrate ethical and ecological considerations alongside economic objectives.

Globally, new pedagogical approaches are redefining entrepreneurship education in higher institutions. (Schultz, 2022) suggests that a balanced strategy employing multiple course modes—combining online, hybrid, and experiential components—can significantly enhance engagement and learning outcomes. Similarly, (Yazici, 2020) advocates project-based learning for teaching business analytics, emphasizing that students should acquire analytical thinking and data-driven decision-making skills within a startup-oriented curriculum. These pedagogies transform traditional academic environments into innovation ecosystems where experimentation, reflection, and collaboration are central learning mechanisms.

In Iran, recent studies have begun exploring model-based approaches to startup design and evolution. For instance, (Taqvifard et al., 2025) proposed a structured framework for changing startup business models through pattern-based modeling, illustrating how theoretical constructs can inform practical reconfiguration. Such frameworks help entrepreneurs identify scalable model archetypes and strategic fit with market realities. Complementarily, (Chahreh et al., 2024) showed that accelerator programs with integrated learning mechanisms and performance feedback

loops can improve startups’ survival rates. These approaches demonstrate the critical role of curriculum design in equipping startups with adaptive strategies that balance innovation and execution.

The evolution of entrepreneurial education also requires embedding interdisciplinary content that merges business strategy, digital technology, and human-centered innovation. According to (Joel et al., 2024), startups in the digital age must master both technological fluency and customer-centric design thinking. Likewise, (Queen et al., 2024) found that Lean Startup methodologies effectively structure the learning process by embedding iterative experimentation and customer feedback cycles into the curriculum. This convergence of educational design and business strategy ensures that startup founders develop both cognitive flexibility and practical competence to manage uncertainty.

Furthermore, studies indicate that effective startup curricula should reflect both micro- and macro-level dimensions of entrepreneurial learning. At the micro level, individual learning competencies—such as opportunity recognition, creative ideation, and resilience—form the foundation of entrepreneurial behavior (Bahaw et al., 2025). At the macro level, ecosystem-based learning connects startups to networks of mentors, investors, universities, and accelerators (Chahreh et al., 2024). The interaction between these levels creates a systemic model of entrepreneurial education that supports continuous innovation and learning-based adaptation.

The theoretical significance of curriculum development in entrepreneurship lies in its capacity to bridge cognitive, behavioral, and contextual learning domains (Fathi Vajarghah, 2018). The curriculum serves as a mediating structure that translates entrepreneurial intent into actionable practice through structured pedagogical processes. (Popov, 2022) emphasized that university-based incubation integrated into academic curricula has the potential to institutionalize entrepreneurship education, transforming it from optional extracurricular activity into a strategic educational function. This approach ensures that entrepreneurial learning is formalized, assessed, and continuously improved, aligning with modern pedagogical principles of competency-based education.

In addition to pedagogical innovation, startups require systematic performance assessment mechanisms embedded within their learning structures. (Chahreh et al., 2024) proposed the inclusion of reflective monitoring systems that evaluate learning outcomes, strategic adjustments, and

innovation performance. Such evaluative mechanisms resonate with (Tiberius & Weyland, 2024), who argued that curriculum improvement must be informed by practitioner insights to ensure practical relevance and adaptability. This integration of practitioner feedback enhances the authenticity of entrepreneurship education, grounding theoretical frameworks in the realities of startup practice.

Finally, as (Jamshidi Naqani, 2024) and (Azeem & Khanna, 2024) suggest, the future of startup education lies in data-informed entrepreneurship models that combine human creativity with analytical intelligence. Artificial intelligence, machine learning, and digital ecosystems are transforming how startups learn, decide, and scale. This transformation underscores the need for an adaptive, evidence-based, and context-sensitive entrepreneurship curriculum that aligns with Iran's evolving innovation landscape and global trends.

In summary, the current research aims to *phenomenologically explain the curriculum of successful startups in Iran*, exploring its structural elements, learning mechanisms, and contextual adaptations.

2. Methods and Materials

In terms of purpose, the research is classified as fundamental–applied, and in terms of data type, it is qualitative. From a paradigmatic perspective, it belongs to the interpretivist paradigms. It is worth noting that this study is a philosophical inquiry into the structures of lived experience and consciousness regarding the phenomenon under investigation from the perspective of first-hand participants. Its objective is to provide an explicit explanation and identification of phenomena as they are perceived by individuals in a specific context.

The statistical population of the present research consisted of scientific and academic documents, including specialized books, completed studies, theses, and articles retrieved from domestic and international databases on the curriculum of successful startups from 2010 to 2024. The population also included university professors (during 2023–2025) and experienced managers of successful startups in the country—such as Digikala, Snapp, Cafe Bazaar, Divar, NovinHub, Raychat, Alibaba, Aparat, eSeminar, and Torob. A non-random purposive sampling method was used to select interviewees based on the study's inclusion criteria. In this method, the selection of sample cases by the researcher is based on the study's objectives and the nature of the research. It is noteworthy that a total of 19

interviewees were included in the study according to the principle of theoretical saturation, meaning that interviewees number 20 and 21 did not contribute any new codes, and the interview process was therefore stopped.

To collect information, two methods were used: documentary (library-based) and field methods. In the documentary method, data were gathered through the study of books, journals, internet resources, and scientific databases; after selecting the relevant sources, note-taking and translation of the target texts were performed. The field method involved semi-structured interviews. In the individual interviews with participants, three preliminary interview questions were used for exploratory purposes. To ensure the validity of the instrument, four criteria were applied: credibility, dependability, transferability, and confirmability (Melnik & Fineout-Overholt, 2011).

To calculate reliability, the test–retest reliability method was applied. A few interviews were selected as samples and re-coded after a short and specific time interval. Moreover, for calculating reliability through inter-coder agreement, one of the professors familiar with coding was invited to participate as a secondary coder in the research. The researcher and this colleague jointly coded five interviews. Ultimately, the validity and reliability of the instruments were confirmed.

In this study, data collection and analysis were conducted through hermeneutic (interpretive) phenomenology, emphasizing Van Manen's perspective and method, to uncover the lived experiences of managers and experts in startups regarding the phenomenon of the startup curriculum. Phenomenological data analysis involved the reduction of significant statements into thematic structures, followed by the preparation of textual and structural descriptions.

3. Findings and Results

Analysis of the first sub-question: How is the curriculum of successful startups, based on the lived experiences of experts?

To answer this question, after reviewing the theoretical foundations and prior studies, 19 experts were interviewed. Then, using thematic analysis with a flexible approach, the themes of the curriculum of successful startups in Iran were identified, developed, named, and interpreted. Finally, based on the sub-themes (meaning units) extracted from the interview transcripts, the dimensions, components, and

indicators of the curriculum of successful startups in Iran are presented in the table below.

Table 1

Dimensions, components, and indicators of the curriculum of successful startups in Iran

Element	Dimension	Component	Indicator	Meaning Unit	Interviewee Code
Learning Orientation	Entrepreneurial Skill Development	Managerial skills	Ability to plan and organize sales activities at Digikala	“Faculty members said we should be able to plan sales activities well so everything proceeds smoothly and customers are satisfied.”	I2, I3, I8, I11, I16
			Decision-making skills in facing challenges in the online market	“Experts emphasized that in the online market we must make quick and accurate decisions because conditions can change at any moment.”	I4, I9, I11
			Time management for optimizing buying and selling processes	“Specialists said we need to manage time well so the buying and selling process happens faster and better.”	I1, I8, I13
			Problem-solving ability when facing customer issues	“Faculty noted that we must be able to quickly solve customers’ problems so they are satisfied with our services and return.”	I6, I10, I12
			Communication skills for effective interaction with the team and customers	“Experts said good communication with the team and customers is very important because it makes everything go better.”	I1, I8, I19
		Financial skills	Ability to analyze Digikala’s financial statements	“Specialists emphasized that we must be able to analyze financial statements well to understand Digikala’s financial standing.”	I5, I10, I14
			Budget management for advertising and marketing campaigns	“Faculty said we should manage our budget for advertising and marketing well to achieve the best outcome.”	I9, I11, I16
	Knowledge of financing and investment methods at Digikala		“Experts emphasized that we need to know financing methods so we can help Digikala grow better.”	I12, I14, I16	
	Assessing financial risks arising from market changes		“Specialists said we must assess financial risks so we won’t be harmed by market changes.”	I1, I4, I9, I15, I18	
	Financial negotiation skills with suppliers and business partners		“Faculty emphasized that negotiation skills are very important because we must be able to reach good agreements with suppliers.”	I3, I7, I15	
	Increasing Market Knowledge		Market familiarity	Understanding trends in the online shopping market and Digikala customer behavior	“Experts said we should understand market trends and customer behavior to deliver better services.”
		Analyzing customer needs and wants at Digikala		“Specialists emphasized that we must thoroughly analyze customers’ needs and wants to provide better services.”	I6, I10, I13, I15, I19
		Identifying competitors and their strengths and weaknesses in the online market		“Faculty said we must know our competitors and analyze their strengths and	I5, I8, I10

				weaknesses so we can perform better.”		
			Ability to forecast market changes and their impact on Digikala	“Experts emphasized that we should be able to forecast market changes so Digikala always stays on the right track.”	I1, I2, I7	
			Familiarity with market research tools and analysis of customer data	“Specialists said we must be familiar with market research tools to analyze customer data.”	I2, I5, I14	
		Familiarity with cutting-edge technologies	Knowledge of new technologies such as AI and machine learning at Digikala	“Faculty emphasized that we should be familiar with new technologies like artificial intelligence to keep Digikala up to date.”	I1, I3, I12	
			Ability to use digital tools to improve user experience	“Experts said we need to use digital tools to improve user experience.”	I4, I8, I15	
			Familiarity with Digikala’s sales and inventory management software	“Specialists emphasized that we must be familiar with sales and inventory management software to make tasks easier.”	I7, I9, I16	
			Ability to analyze sales data and customer behavior	-----	-----	
			Knowledge of online platforms and their application in service improvement	“Experts emphasized that we must be familiar with online platforms to provide better services.”	I5, I9, I13	
Strengthening Customer Experience	Customer service		Quality of after-sales service and product warranties at Digikala	“Specialists said after-sales service must be high-quality so customers feel secure.”	I14, I16, I17	
			Response time to customer complaints and requests	“Faculty emphasized that response time to complaints must be short so customers feel their needs are addressed.”	I2, I8, I10, I16, I19	
			Ability to advise customers in product selection	“Experts said we must be able to advise customers so they make the best choice.”	I6, I10, I13, I14	
			Creating a sense of satisfaction and loyalty among Digikala customers	“Specialists emphasized that we must ensure customers are satisfied with our services so they return.”	I1, I4, I15, I19	
			Tracking and evaluating customer feedback to improve services	“Faculty said we must follow up on customer feedback to improve services.”	I2, I6, I8, I12	
		User experience		Ease of navigation and access to information on Digikala’s website and app	“Experts emphasized that easy site navigation is very important so users can easily access information.”	I1, I10, I16
				Attractive and user-friendly design to improve the shopping experience	“Specialists said the site and app design should be attractive to draw more customers.”	I4, I9, I10
				Page load speed of the website and app	-----	-----
				Easy access to information and various services at Digikala	“Experts said easy access to information and services can greatly improve user experience.”	I7, I9, I11
				Personalization of user experience based on customer interests and behavior	“Specialists emphasized that we should personalize user experience based on customer interests so they are more satisfied.”	I3, I5, I14
Learning Domains	Products and Services	Product variety	Number of product categories at Digikala	“Faculty said the variety of categories on Digikala is very	I4, I6, I10	

			important because it helps users find their desired product more easily.”	
		Number of products available in each category	“Specialists emphasized that the number of products in each category is crucial; the more there are, the better the choices.”	I7, I10, I12
		Percentage of new and updated products	“Experts said the percentage of new and updated products should always be high so customers feel freshness.”	I1, I9, I15
		Product quality and standards	-----	-----
Product information	Accuracy and clarity of product descriptions	“Faculty said product descriptions must be accurate and clear so users can purchase without confusion.”	I6, I13, I18	
		Quality of product images and videos	“Specialists said high-quality images and videos can greatly influence purchase decisions.”	I2, I8, I13
		Number and quality of user reviews on products	“Experts noted that user reviews should be numerous and high-quality so buyers can decide better.”	I2, I9, I17
		Average product rating based on user reviews	-----	-----
		Ability to compare similar products	“Specialists said the option to compare similar products greatly helps users choose the best.”	I4, I8, I17
Pricing	Price competitiveness relative to competitors	“Policymakers emphasized that prices must be competitive to attract customers and make them choose Digikala.”	I1, I8, I19	
		Price transparency and clarity for users	“Faculty said prices must be clear and transparent so users purchase without ambiguity.”	I3, I9, I10
		Percentage of discounts and special offers	“Experts noted that discounts and special offers can encourage customers to buy more.”	I6, I10, I15
		Date of product price updates	-----	-----
After-sales service	Length of product warranty	“Faculty said warranty periods should be appropriate so customers feel secure.”	I15, I17, I19	
		Conditions and process for product returns	-----	-----
		Quality of customer service and support	“Specialists said customer service quality must be high so customers feel satisfied and return.”	I3, I4, I11
		Percentage of customer satisfaction with after-sales services	“Faculty emphasized that we should keep the percentage of customer satisfaction high so the Digikala brand becomes stronger.”	I2, I8, I10
User Experience	Website design	Ease of navigation and access to information on Digikala’s website	“Experts said easy site navigation is very important because the user must easily access information.”	I4, I9, I15
		Website page load speed	“Specialists emphasized that page load speed must be high so users don’t get bored and leave the site.”	I6, I14, I19
		Responsive design and compatibility with various devices	-----	-----
		Quality of product search and filtering tools	“Experts emphasized that search and filter tools must be	I2, I5, I12

			efficient so users reach results faster.”	
		Easy access to various information and services	“Specialists said easy access to various information and services can greatly improve user experience.”	I9, I10, I13
Mobile app	Usability and ease of use	“Faculty emphasized the app must be user-friendly so customers will use it and be satisfied.”	I6, I9, I11	
		App performance and loading speed	-----	-----
		Visual design and app appeal	“Specialists emphasized that the app’s visual design must be attractive to draw users.”	I6, I7, I19
		Data security and user privacy	“Faculty said user data security must be a priority to earn customer trust.”	I2, I9, I13
Customer service	Response time to customer requests and complaints	“Experts emphasized that response time to complaints must be short so customers feel their needs are addressed.”	I5, I8, I12	
		Quality of customer consultation and guidance	-----	-----
		First-contact resolution rate in customer service	“Faculty emphasized that first-contact resolution must be high so customers are satisfied with the service.”	I7, I10, I19
		Customer satisfaction with provided services	“Experts said we must always seek to increase customer satisfaction with services to have a stronger brand.”	I8, I10, I19
Personalization	Accuracy and quality of personalized recommendations	“Specialists emphasized that personalized recommendations must be accurate and aligned with user interests.”	I3, I10, I11	
		Number of personalized recommendations and discounts	“Faculty said the more personalized recommendations and discounts we offer, the more customers will be attracted.”	I8, I14, I16
		Conversion rate of recommendations to purchases	“Experts emphasized that we must keep the conversion rate of recommendations to purchases high to increase sales.”	I9, I11, I19
		Continuous updating of personalization algorithms	“Specialists said personalization algorithms must always be up to date to provide the best experience.”	I5, I9, I12
Marketing	Digital strategy	Percentage of new users acquired through digital campaigns	“Faculty emphasized that we must increase the percentage of new users acquired through campaigns to expand the market.”	I5, I13, I15
		Visitor-to-buyer conversion rate	“Experts said the visitor-to-buyer conversion rate is very important and we must examine optimization methods.”	I4, I12, I19
		Customer acquisition cost and cost-benefit analysis	-----	-----
		User feedback and opinions about advertising	“Faculty said user opinions about advertising can help us design better campaigns.”	I9, I11, I14
Education	Number of educational articles and videos related to products	“Experts emphasized that we should increase the number of educational articles and videos so customers have more information.”	I6, I12, I16	

			Quality of educational and informational content	“Specialists said educational content must be high-quality and useful so customers can decide better.”	I9, I14, I18
			Percentage of views of educational content	“Faculty emphasized that we should increase the percentage of views of educational content to enhance impact.”	I1, I3, I5, I14, I19
			User feedback on educational content	“Experts said user feedback on educational content can help us produce better content.”	I2, I6, I8, I10, I15
			Diversity of educational topics and guides	“Specialists emphasized that educational topics should be diverse to cover all user needs.”	I3, I12, I13, I18
			Studying and benchmarking best-in-class	“In this work, we look at successful experiences and best examples to see how we can perform better.”	I2, I8, I15, I19
			Using international experiences and knowledge	-----	-----
	Social media	Number of followers on social media	“Faculty said the number of social media followers indicates the popularity of the Digikala brand.”	I1, I6, I9, I11	
			Level of user interactions and engagement	“Experts emphasized that the level of user interaction on social media is very important and must be attended to.”	I4, I5, I10, I16
			Percentage of content sharing on social media	“Specialists said the higher the content-sharing percentage, the more attractive the content.”	I2, I3, I14, I17
			Conversion rate from social media to purchase	“Faculty emphasized that we must raise the conversion rate from social media to purchase to increase sales.”	I4, I7, I9, I12, I18
	Branding	Brand recognition and awareness of Digikala	“Experts said Digikala’s brand recognition must be at a high level to attract customers.”	I1, I8, I12, I15	
			Brand credibility and trust among users	“Specialists emphasized that brand credibility must be high so customers purchase with confidence.”	I5, I9, I11, I19
			Level of awareness of the brand and products	“Faculty said the level of awareness of the brand and products must be good so customers make better choices.”	I3, I4, I10, I13
Data Analysis	Data collection	Accuracy and correctness in collecting user information	“Experts emphasized that accuracy in collecting user information is very important so analyses are correct.”	I6, I8, I10	
			Variety of collected data for analysis	-----	-----
			Data and information update frequency	“Faculty emphasized that data updates must be quick so information is always fresh and valid.”	I3, I8, I12, I15
			Data-analysis and reporting tools	“Experts said we must use appropriate data-analysis and reporting tools to make better decisions.”	I1, I4, I9, I11
			Security and privacy of user data	“Specialists emphasized that data security must be a priority to maintain user trust.”	I2, I5, I13, I18

	Customer behavior analysis	Customer return rate and analysis of its reasons	“Faculty said we must analyze the customer return rate to understand what brings them back.”	I6, I7, I10, I19	
			Analyzing shopping baskets and user purchasing patterns	“Experts emphasized that basket analysis can help us identify user purchasing patterns.”	I3, I8, I14, I16
			Examining purchasing patterns and predicting customer behavior	“Specialists said we should examine purchasing patterns so we can predict customer behavior.”	I3, I5, I11, I13, I17
			Identifying customer needs and improving services	“Faculty emphasized that identifying customer needs is very important so we can provide better services.”	I3, I9, I10, I18
Optimization	Improving purchasing processes and user experience	“Experts said we must improve purchasing processes to provide a better user experience.”	I4, I5, I11, I16		
		Analyzing sales performance and identifying strengths and weaknesses	“Specialists emphasized that we must analyze sales performance to identify strengths and weaknesses.”	I1, I2, I14, I17	
		Optimizing user experience based on feedback	“Faculty said we must optimize user experience based on feedback so customers are more satisfied.”	I5, I6, I10, I19	
		Continuous updates based on data analysis	“Experts emphasized that updates should be made based on data analysis so we are always current.”	I2, I4, I12, I15	
Reporting	Accuracy and correctness of generated reports	“Specialists said the accuracy and correctness of reports are very important to make better decisions.”	I1, I9, I11, I17		
		Timeliness of preparing and delivering reports	“Faculty emphasized that the time to prepare reports must be appropriate so we receive information on time.”	I5, I6, I8, I19	
		Variety of generated reports for analysis	“Experts said we should increase the variety of reports so analyses are more comprehensive and complete.”	I4, I7, I10, I14	
		KPI analysis and performance evaluation	-----	-----	
Learning Mechanisms	Training and active learning	Workshops	Number of workshops held for Digikala staff	“Faculty said holding workshops for Digikala employees is very important because it improves their skills.”	I1, I4, I7, I14, I17
			Percentage of employees who participated in workshops and learned new skills	“Experts emphasized that the higher the percentage of employees attending workshops, the greater the workshops’ impact.”	I2, I8, I10, I16
			Evaluating the quality of workshop content and instructors’ teaching	“Specialists said we must assess the quality of workshop content and instructors’ teaching to ensure training was useful.”	I1, I4, I9, I17
			Workshops’ impact on improving employees’ job performance	“Faculty noted that workshops should positively influence employees’ job performance to prove their value.”	I5, I7, I12, I19
	Project-based learning	Number of operational projects employees participate in	“Experts emphasized that the number of projects employees join	I2, I3, I8, I11	

			indicates their activity and motivation.”		
			Evaluating project outcomes and their impact on improving Digikala’s services	“Specialists said we must examine project outcomes to see how much they helped improve Digikala’s services.”	I4, I8, I12
			Degree of teamwork in various projects	“Faculty emphasized that teamwork in projects is very important because it makes things go better.”	I3, I10, I13
			Project success rate in achieving set objectives	-----	-----
Online training	Number of online courses provided for Digikala staff		“Experts emphasized that we should offer more online courses for Digikala employees to keep them up to date.”		I5, I7, I12, I14, I19
			Level of employee participation in online courses	“Faculty said the greater the employee participation in online courses, the more attractive the training.”	I9, I12, I17
			Impact of online training on improving employees’ digital skills	“Experts emphasized that online training should positively affect employees’ digital skills.”	I1, I4, I19
			Evaluating the quality of online course content	“Specialists said we must review the quality of online course content to ensure it is useful and practical.”	I7, I10, I13
Trial-and-error approach	Number of experiments and pilot projects executed by employees		“Faculty emphasized that experiments and pilot projects can aid learning and innovation, so we should increase their number.”		I2, I9, I15
			Evaluating the results and learnings from the trial-and-error approach	“Experts said we must review the results and learnings from trial and error to support improvement.”	I3, I12, I18
			Degree of risk acceptance and creativity in experimental processes	“Specialists emphasized that we should strengthen risk-taking and creativity in experimental processes to boost innovation.”	I4, I6, I17
			Impact of the trial-and-error approach on improving innovation and creativity at Digikala	“Faculty said the trial-and-error approach can help improve innovation and creativity at Digikala, so we should attend to it.”	I12, I15, I19
Inclusive and Adaptive Learning	Flexible learning (UDL)	Degree of resource diversity, use of digital tools, and experience- and data-based instruction	“According to experts, diversity of resources and digital, multimedia tools, along with experience- and data-based instruction, constitute digital knowledge assets and agile learning components.”		I1, I4, I9
		Multiple participation (team coaching and stand-up meetings)	“Faculty said indirect guidance, gamification, team coaching, and stand-up meetings foster participation and co-reflection.”		I2, I7, I13
	Product-oriented assessment	Multiple action and expression	“Experts emphasized project-based learning, trial and error, self-regulation, professional development, and entrepreneurial skills.”		I3, I6, I10
		Learning through real projects	Experts emphasized the importance of learning through real projects, trial-and-error processes, self-regulation, professional development, and entrepreneurial skills.		I9, I12, I13

Use of Technology	Training in new technologies	Number of training courses on new technologies such as AI	-----	-----	
Use of Technology	Training in new technologies	Number of training courses on new technologies such as AI	Percentage of employees familiarized with new technologies	“Experts emphasized that the higher the percentage of employees familiarized with new technologies, the more effective the training.”	I3, I8, I10
			Impact of training in new technologies on improving Digikala’s processes	“Faculty said training in new technologies should positively affect the improvement of Digikala’s processes.”	I1, I6, I10
			Degree of use of new technologies in customer services	-----	-----
	Use of digital tools	Number of digital tools used for sales management	“Experts said we should increase the number of digital tools for sales management to make tasks easier.”	I1, I3, I5, I12	
			Evaluating the effectiveness of digital tools in improving customer experience	“Faculty emphasized that we must assess the effectiveness of digital tools in improving customer experience to ensure they work.”	I2, I6, I8, I14
			Customer satisfaction with Digikala’s online services	“Experts said customer satisfaction with online services is very important because it indicates our service quality.”	I4, I7, I9, I15
			Impact of digital tools on customer response speed	“Specialists emphasized that digital tools should increase customer response speed so customers remain satisfied.”	I3, I5, I11, I18
			Customer data analytics	Number of analytical tools used for analyzing customer data	“Faculty said we should increase the number of analytical tools for customer data analysis to know them better.”
	Customer data analytics	Number of analytical tools used for analyzing customer data	Accuracy of customer-data analysis using digital tools	“Experts emphasized that the accuracy of data analysis with digital tools is very important because it helps us make better decisions.”	I3, I11, I18
			Impact of data analysis on Digikala’s strategic decision-making	“Specialists said data analysis should positively influence Digikala’s strategic decisions.”	I5, I8, I19
			Use of analyzed data to improve services	“Faculty emphasized that we must use analyzed data to improve services so customers are more satisfied.”	I1, I10, I17
			Learning Monitoring	Learning evaluation	Assessing acquired skills
Learning Monitoring	Learning evaluation	Assessing acquired skills	Degree of improvement in employees’ job performance after training	“Experts emphasized that we must see how much employees’ performance improved after training and whether it had a positive effect.”	I6, I13, I19
			Assessing the extent of employees’ mastery of new skills	“Specialists said we must examine how much employees have mastered new skills and whether they are truly applicable.”	I3, I7, I15
			Reviewing employee feedback on applying new skills in daily work	-----	I5, I9, I14



	Experiential learning evaluation	Number of operational projects employees participated in	“Experts emphasized that the number of projects employees joined indicates their activity and motivation.”	I8, I11, I16	
			Evaluating project outcomes and their impact on improving Digikala’s services	“Specialists said we must examine project outcomes and see how much they helped improve Digikala’s services.”	I6, I7, I12
			Degree of teamwork in various projects	“Faculty emphasized that teamwork in projects is very important because it makes tasks proceed better and with higher quality.”	I6, I15, I17
			Project success rate in achieving set objectives	“Experts said we must see how much projects achieved their goals and what their success rate was.”	I11, I14, I18
	Online learning evaluation	Number of online courses offered for Digikala employees	“Specialists emphasized that we should hold more online courses for Digikala employees to keep them up to date.”	I5, I9, I10	
			Level of employee participation in online courses	“Faculty said the greater the participation in online courses, the more attractive the training.”	I3, I10, I17
			Evaluating the quality of online course content	-----	-----
			Impact of online training on improving employees’ digital skills	“Experts said online training should have a positive impact on employees’ digital skills.”	I1, I4, I7
Program Evaluation	Educational content evaluation	Assessing the alignment of educational content with Digikala employees’ job needs	“Faculty emphasized that educational content must align with the job needs of Digikala employees.”	I2, I9, I12	
			Evaluating the quality of educational resources used	“Experts said we must assess the quality of educational resources to ensure we use the best ones.”	I10, I14, I17
			Degree of up-to-dateness of educational content	“Specialists emphasized that educational content must be up to date so employees are familiar with the latest information and technologies.”	I11, I14, I19
			Impact of educational content on employee motivation and satisfaction	“Faculty said educational content should increase employees’ motivation and satisfaction so they are more interested in learning.”	I1, I14, I17
	Teaching methods evaluation	Evaluating the quality of instructors’ teaching	“Experts emphasized that instructors’ teaching quality is very important because it greatly affects employee learning.”	I3, I9, I19	
			Degree of employee interaction and participation in classes	“Specialists said we must see how much employees participate in classes, because interaction helps learning.”	I2, I8, I12
			Use of innovative teaching methods in training courses	“Faculty emphasized that we should use innovative teaching methods to make learning more engaging for employees.”	I5, I10, I13
			Impact of teaching methods on employee learning	“Experts said we must examine how much teaching methods affect employee learning and whether they are effective.”	I3, I9, I10



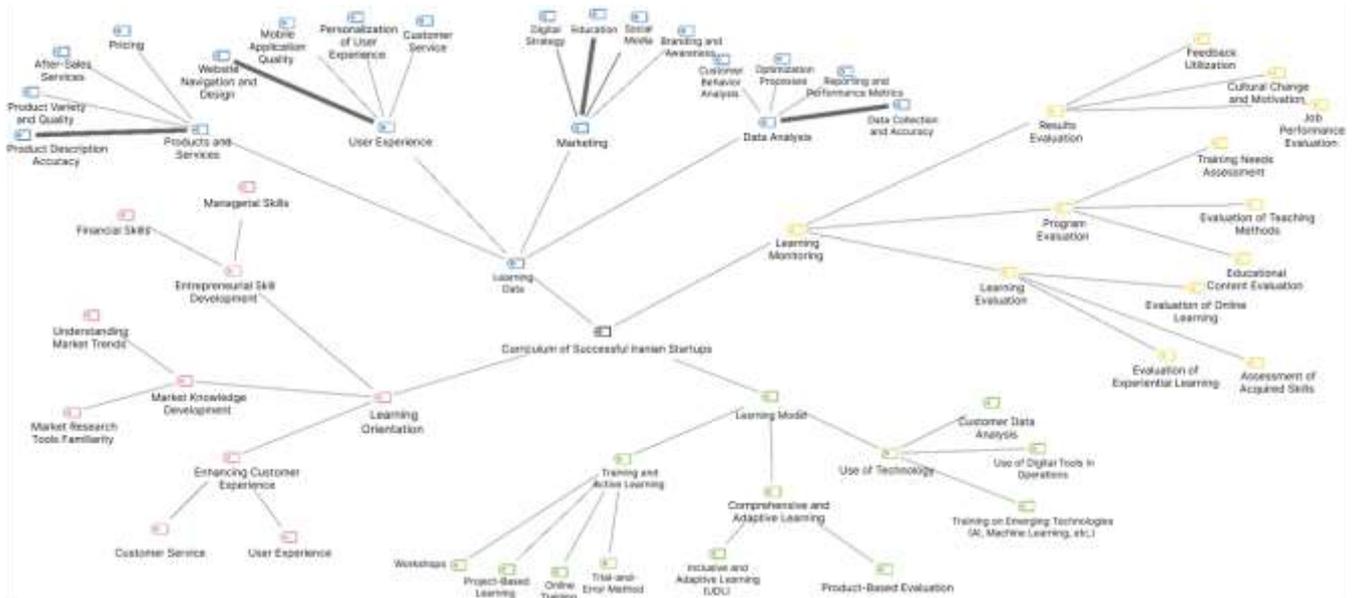
	Training needs assessment evaluation	Identifying employee training needs through surveys	<p>“Specialists emphasized that we must identify employees’ training needs through surveys to design better programs.”</p> <p>Degree of alignment between training programs and Digikala’s job needs</p> <p>Evaluating changes in training needs over time</p> <p>Impact of needs assessment on training program design</p>	<p>I1, I8, I12</p> <p>“Faculty said training programs must align with Digikala’s job needs to be useful.”</p> <p>“Experts emphasized that we must examine changes in training needs over time so programs are always up to date.”</p> <p>“Specialists said needs assessment must directly influence training program design to address real needs.”</p>	<p>I11, I16, I17</p> <p>I15, I16, I19</p> <p>I3, I9, I10</p>	
Results Evaluation	Assessing impacts on performance	Examining the impact of training programs on improving Digikala’s overall performance	<p>“Faculty emphasized that we must see how much training programs have helped improve Digikala’s overall performance.”</p> <p>Evaluating changes in customer satisfaction after implementing training programs</p>	<p>I4, I7, I12</p> <p>“Experts said we must examine how much customer satisfaction changed after employee training.”</p>	<p>I8, I11, I14</p>	
			<p>Examining the impact of training on reducing errors and service issues</p> <p>Evaluating the extent of increased sales and customer satisfaction after trainings</p>	<p>-----</p> <p>“Faculty said we must examine how much sales and customer satisfaction increased after the trainings.”</p>	<p>-----</p> <p>I12, I15, I19</p>	
			<p>Examining changes in Digikala’s organizational culture after implementing training programs</p>	<p>“Experts emphasized that we must see how much training programs have affected Digikala’s organizational culture.”</p> <p>Evaluating the degree of collaboration and interaction among employees after training</p>	<p>I10, I16, I18</p> <p>“Specialists said we must examine how much collaboration and interaction among employees increased after training.”</p>	<p>-----</p> <p>I4, I7, I9</p>
			<p>Impact of training programs on employee motivation and morale</p> <p>Examining changes in employees’ attitudes toward learning and personal development</p>	<p>“Faculty emphasized that training programs should raise employees’ morale and motivation so work proceeds better.”</p> <p>-----</p>	<p>I2, I10, I18</p> <p>-----</p>	
	Feedback evaluation	Collecting employees’ self-evaluations and feedback on training programs	<p>“Experts emphasized that we must collect employees’ views on training programs so they can be improved.”</p> <p>Reviewing customer opinions about services after employee training</p>	<p>I5, I13, I18</p> <p>“Faculty said we must examine customer opinions about services provided after employee training.”</p>	<p>I2, I5, I7</p>	
			<p>Evaluating the impact of feedback on improving training programs</p> <p>Using continuous feedback to design future training programs</p>	<p>“Specialists emphasized that we must see how much feedback has influenced the improvement of training programs.”</p> <p>“Experts said we must use collected feedback to design future training programs.”</p>	<p>I8, I10, I12</p> <p>I6, I9, I15</p>	

Following the above items, the conceptual map generated by the software is presented below in the form of a thematic network. The thematic network is a visual representation

tool that illustrates the relationships among themes and codes, helping researchers identify and analyze the interconnections and interactions among different themes.

Figure 1

Thematic network of relationships and interactions among the identified themes in the model



4. Discussion and Conclusion

The findings of the present study revealed that the curriculum of successful startups in Iran is composed of four major elements: learning orientation, learning domains, learning mechanisms, and learning monitoring. Each of these elements encompasses several subdimensions that collectively illustrate how startups build and sustain their learning-based growth models. The phenomenological analysis demonstrated that the curriculum of startups is not merely a linear instructional framework but rather an adaptive, multidimensional system that integrates experiential learning, reflective practice, and technological innovation. The identified elements align with the argument that startup success depends on continuous learning, strategic adaptability, and structured knowledge management (Azeem & Khanna, 2024).

The first key finding indicated that learning orientation—encompassing entrepreneurial skill development, market knowledge, and customer experience enhancement—is a critical dimension of the startup curriculum. Participants described that successful startups such as Digikala, Snapp, and Cafe Bazaar prioritize the cultivation of entrepreneurial competencies, including decision-making, time

management, financial negotiation, and customer relationship skills. This finding supports the claim of (Tiberius & Weyland, 2024), who emphasized that entrepreneurship curricula in higher education must be designed around real-world problem-solving and opportunity recognition to enhance entrepreneurial self-efficacy. Similarly, (Bahaw et al., 2025) found that entrepreneurial readiness among university students depends not only on technical knowledge but also on behavioral and psychological traits developed through authentic learning experiences. In line with these findings, the Iranian startup ecosystem demonstrates that entrepreneurship education must transcend classroom instruction and instead promote experiential learning that strengthens adaptability and creativity in dynamic markets.

Moreover, the study revealed that increasing market knowledge is a key subdimension of learning orientation. Successful startups invest heavily in analyzing customer data, understanding market trends, and applying advanced technologies such as artificial intelligence and machine learning to predict behavioral patterns. This result aligns with (Jamshidi Naqani, 2024), who found that the integration of machine learning algorithms significantly improves startups' ability to forecast market outcomes and enhance

decision-making efficiency. In the same vein, (Joel et al., 2024) highlighted that digital-era startups must establish adaptive learning frameworks that integrate data analytics with strategic agility to survive technological disruption. Therefore, the results of this study reaffirm that successful startups in Iran adopt a data-driven learning orientation, merging analytical intelligence with entrepreneurial insight to maintain competitiveness in fast-changing environments.

The findings also confirmed the significance of strengthening customer experience as an integral component of learning orientation. Startups emphasize customer-centric design thinking, personalization, and post-sale feedback integration. Such practices are consistent with the model proposed by (Aulet, 2024), who viewed customer discovery and validation as essential stages of disciplined entrepreneurship. Furthermore, (Queen et al., 2024) emphasized that Lean Startup methodology provides an iterative feedback system that enables startups to refine value propositions and optimize customer experiences. The present study's participants noted that startups like Digikala actively monitor customer satisfaction indices, integrating them into strategic learning loops. These results demonstrate that customer experience is not an outcome but a learning mechanism embedded in the startup curriculum.

The second major finding involved learning domains, which include products and services, user experience, marketing, and data analysis. This dimension reflects the operational breadth of learning that occurs within startups. The emphasis on product innovation and service diversification indicates that startups treat each product iteration as a learning opportunity. This observation aligns with (Azeem & Khanna, 2024), who argued that the survival of startups depends on continuous product and process innovation driven by reflective learning. Furthermore, (Chahreh et al., 2024) confirmed that startup accelerators achieving performance improvement prioritize feedback systems that facilitate iterative design and service innovation. The current study's findings expand this understanding by showing that Iranian startups use real-time analytics and market feedback to adapt their product lines, demonstrating how data analysis bridges technical and experiential learning.

In terms of marketing and digital strategy, the study found that successful startups in Iran leverage social media engagement, digital branding, and data-driven marketing analytics as learning tools rather than mere promotional tactics. This result supports (Joel et al., 2024), who noted that digital transformation reshapes startups' learning culture by

embedding technology-mediated reflection within daily operations. Likewise, (Qasim & Kharbat, 2020) highlighted that integrating artificial intelligence, blockchain, and business analytics into entrepreneurial curricula fosters critical digital skills and analytical reasoning among future entrepreneurs. Therefore, startups that institutionalize marketing as a continuous learning process are more likely to achieve sustainable market adaptability.

The study also identified learning mechanisms—including active learning, project-based learning, online learning, and trial-and-error experimentation—as essential components of the startup curriculum. These mechanisms create the procedural framework through which startups internalize knowledge and transform experiences into organizational competence. Participants repeatedly emphasized that the Iranian startup ecosystem thrives on iterative experimentation, reflecting the principles of Lean Startup methodology outlined by (Queen et al., 2024) and the disciplined learning process proposed by (Aulet, 2024). The results further reinforce (Schultz, 2022), who asserted that multi-modal learning environments that combine experiential, collaborative, and reflective modes enhance entrepreneurship education outcomes. Thus, the observed learning mechanisms in Iranian startups exemplify a hybrid pedagogical model—blending project-based, digital, and experiential learning—that aligns theory with practice.

Moreover, the trial-and-error approach identified in the study reflects a high tolerance for risk and uncertainty, which is central to entrepreneurial learning. This finding is consistent with (Bahaw et al., 2025), who found that students with higher entrepreneurial readiness exhibit greater resilience and problem-solving ability in ambiguous contexts. Similarly, (Tiberius & Weyland, 2024) emphasized that startup education must intentionally design learning experiences that simulate uncertainty and encourage iterative problem-solving. By embracing experimentation and reflective failure, Iranian startups transform setbacks into critical sources of knowledge, demonstrating the embodiment of learning-by-doing principles.

The fourth major finding involved learning monitoring, which includes the evaluation of learning, programs, and results. This element provides the feedback infrastructure necessary to ensure alignment between learning activities and performance outcomes. The study found that successful startups use continuous feedback systems to assess skill acquisition, employee training effectiveness, and post-training business performance. This reflects the balanced

approach proposed by (Tiberius & Weyland, 2024), who highlighted the necessity of feedback loops in entrepreneurship education to maintain relevance and responsiveness. Similarly, (Chahreh et al., 2024) emphasized that monitoring mechanisms in accelerator programs strengthen startups' adaptive capacity by linking performance assessment with curriculum revision. Therefore, learning monitoring serves as the reflective backbone of the startup curriculum, connecting experiential learning to strategic decision-making.

The results further revealed that Iranian startups integrate digital tools and data analytics into their learning monitoring systems, enabling real-time performance evaluation and data-driven innovation. This finding is aligned with (Jamshidi Naqani, 2024), who demonstrated the predictive potential of machine learning in assessing startup success. It also complements the argument of (Joel et al., 2024), who emphasized the role of digital ecosystems in facilitating continuous organizational learning. As such, startups that institutionalize digital feedback mechanisms achieve superior agility and adaptability—core attributes of entrepreneurial learning organizations.

Comparing these findings to global literature, it becomes evident that the Iranian startup curriculum shares several similarities with international entrepreneurial learning models while exhibiting unique contextual adaptations. Studies by (Popov, 2022) and (Schultz, 2022) have shown that embedding entrepreneurship within academic curricula enhances the alignment between education and practice. The present study extends this insight by demonstrating that successful Iranian startups function as de facto “learning institutions,” where education, experimentation, and reflection are integrated into daily operations. However, as (Fathi Vajarghah, 2018) and (Taheri Zadeh & Shabani, 2019) note, contextualizing curriculum frameworks to local cultural, regulatory, and market realities is essential for achieving meaningful learning outcomes. This contextualization is evident in the Iranian ecosystem, where startups have localized international models such as Lean Startup and Design Thinking to match domestic challenges and consumer behavior patterns.

Furthermore, the findings corroborate (Azeem & Khanna, 2024), who emphasized that startup longevity depends on structured learning and adaptation processes. Iranian startups appear to adopt what (Taqvifard et al., 2025) termed a *model-based approach* to business evolution, where pattern recognition and feedback analysis drive business model transformation. This conceptual overlap suggests that

the startup curriculum functions as both a learning and strategic planning framework, linking individual development with organizational renewal. Similarly, the findings align with (Serhan & Yannou-Lebris, 2020), who argued that curricula should integrate sustainable development goals and social responsibility to ensure long-term viability. Startups that combine economic performance with ethical and sustainable practices demonstrate greater resilience in volatile markets.

In synthesis, the results of this study demonstrate that the curriculum of successful startups in Iran represents a hybrid system combining local contextual understanding with global pedagogical and managerial models. It integrates cognitive, behavioral, and technological dimensions of learning through iterative experimentation, feedback-driven adaptation, and digitalization. The curriculum functions as a *learning ecosystem* that transforms entrepreneurial experience into structured knowledge, aligning with (Schultz, 2022) and (Popov, 2022), who regard entrepreneurship education as an evolving, multi-level process. Ultimately, the study provides empirical support for the proposition that startup success depends not only on innovation and funding but also on the design of comprehensive learning systems that institutionalize knowledge, foster agility, and promote reflective growth.

This study, while extensive, has certain limitations that must be acknowledged. First, the qualitative design, although rich in depth, limits the generalizability of findings to the broader population of startups. The reliance on phenomenological interviews may introduce interpretive bias, as participants' reflections are influenced by their subjective experiences. Second, the sample was limited to successful startups in Iran, excluding early-stage ventures or failed startups whose learning trajectories might provide contrasting insights. Additionally, the study's focus on digital and technology-based enterprises may not fully capture the learning dynamics of startups in traditional sectors such as manufacturing or agriculture. Lastly, while the thematic analysis provided comprehensive insights, quantitative validation of the identified curriculum dimensions was beyond the scope of this research.

Future research should extend this study through mixed-method designs that integrate qualitative insights with quantitative modeling to test the relationships between learning dimensions and startup performance. Longitudinal studies could be conducted to trace how startup curricula evolve over different growth stages. Comparative cross-national research would also enrich understanding by

examining how cultural, economic, and regulatory environments shape startup learning systems. Furthermore, applying advanced machine learning and social network analysis could reveal deeper patterns in startup knowledge diffusion. Future scholars may also explore how gender, leadership style, and organizational culture interact with entrepreneurial learning mechanisms within the startup curriculum framework.

Practically, startup founders and ecosystem policymakers should use the findings of this study to design structured learning frameworks that integrate continuous feedback, reflective practice, and technological tools. Startup accelerators and incubators should adopt curriculum-based approaches that go beyond mentorship to include formalized learning assessments and adaptive training modules. Universities and educational institutions could embed entrepreneurship within academic programs through experiential learning labs and data-driven entrepreneurship modules. Finally, policymakers should support entrepreneurship education by establishing collaborative platforms between academia, industry, and government to enhance knowledge exchange, curriculum innovation, and startup sustainability.

Authors' Contributions

All authors significantly contributed to this study.

Declaration

In order to correct and improve the academic writing of our paper, we have used the language model ChatGPT.

Transparency Statement

Data are available for research purposes upon reasonable request to the corresponding author.

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Declaration of Interest

The authors report no conflict of interest.

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Ethical Considerations

In this study, to observe ethical considerations, participants were informed about the goals and importance of the research before the start of the interview and participated in the research with informed consent.

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